Financial summary

The management commentary included in the Report of the Directors: 'Overview' and 'Operating and Financial Review', together with the 'Employees' and 'Corporate sustainability' sections of 'Corporate Governance' and the 'Directors' Remuneration Report' is presented in compliance with the IFRS Practice Statement 'Management Commentary' *issued by the IASB.*

Use of non-GAAP financial measures

Our reported results are prepared in accordance with IFRSs as detailed in the Financial Statements starting on page 372. There are times when we measure our performance internally, using financial measures which have been derived from our reported results, in order to eliminate factors which distort year-on-year comparisons so we can view our results on a more like-for-like basis; these are considered non-GAAP measures. 'Constant currency' and 'underlying' performance are non-GAAP measures that we use throughout our Operating and Financial Review and are described below. Other non-GAAP financial measures are described and reconciled to the closest reported financial measure when used.

Constant currency

The constant currency measure adjusts for the year-on-year effects of foreign currency translation differences by comparing reported results for 2012 with reported results for 2011 retranslated at 2012 exchange rates. Except where stated otherwise, commentaries are on a constant currency basis, as reconciled in the table overleaf.

The foreign currency translation differences reflect the movements of the US dollar against most major currencies during 2012.

We exclude the translation differences when monitoring progress against operating plans and past results because management believes the like-for-like basis of constant currency financial measures more appropriately reflects changes due to operating performance.

Constant currency

Constant currency comparatives for 2011 referred to in the commentaries are computed by retranslating into US dollars for non-US dollar branches, subsidiaries, joint ventures and associates:

- the income statements for 2011 at the average rates of exchange for 2012; and
- the balance sheet at 31 December 2011 at the prevailing rates of exchange on 31 December 2012.

No adjustment has been made to the exchange rates used to translate foreign currency denominated assets and liabilities into the functional currencies of any HSBC branches, subsidiaries, joint ventures or associates. When reference is made to 'constant currency' in tables or commentaries, comparative data reported in the functional currencies of HSBC's operations have been translated at the appropriate exchange rates applied in the current period on the basis described above.

Report of the Directors: Operating and Financial Review (continued)

Reconciliation of reported and constant currency profit before tax

	2012 compared with 2011					
HSBC	**2011 as reported US\$m**	**Currency translation adjustment[24] US\$m**	**2011 at 2012 exchange rates US\$m**	**2012 as reported US\$m**	**Reported change[25] %**	**Constant currency change[25] %**
Net interest income	40,662	(1,151)	39,511	37,672	(7)	(5)
Net fee income	17,160	(436)	16,724	16,430	(4)	(2)
Own credit spread[26]	3,933	(35)	3,898	(5,215)		
Gains on disposal of US branch network, US cards business and Ping An	–	–	–	7,024		
Other income[27]	10,525	(446)	10,079	12,419	18	23
Net operating income[21]	72,280	(2,068)	70,212	68,330	(5)	(3)
Loan impairment charges and other credit risk provisions	(12,127)	277	(11,850)	(8,311)	31	30
Net operating income	60,153	(1,791)	58,362	60,019	–	3
Operating expenses	(41,545)	1,273	(40,272)	(42,927)	(3)	(7)
Operating profit	18,608	(518)	18,090	17,092	(8)	(6)
Share of profit in associates and joint ventures	3,264	55	3,319	3,557	9	7
Profit before tax	21,872	(463)	21,409	20,649	(6)	(4)
By global business[28]						
Retail Banking and Wealth Management	4,270	(71)	4,199	9,575	124	128
Commercial Banking	7,947	(180)	7,767	8,535	7	10
Global Banking and Markets	7,049	(200)	6,849	8,520	21	24
Global Private Banking	944	(8)	936	1,009	7	8
Other	1,662	(4)	1,658	(6,990)		
Profit before tax	21,872	(463)	21,409	20,649	(6)	(4)
By geographical region[28]						
Europe	4,671	(130)	4,541	(3,414)		
Hong Kong	5,823	20	5,843	7,582	30	30
Rest of Asia-Pacific	7,471	(79)	7,392	10,448	40	41
Middle East and North Africa	1,492	(7)	1,485	1,350	(10)	(9)
North America	100	(14)	86	2,299	2,199	2,573
Latin America	2,315	(253)	2,062	2,384	3	16
Profit before tax	21,872	(463)	21,409	20,649	(6)	(4)

For footnotes, see page 120.

Underlying performance

Underlying performance:

- adjusts for the year-on-year effects of foreign currency translation;
- eliminates the fair value movements on our long-term debt attributable to credit spread ('own credit spread') where the net result of such movements will be zero upon maturity of the debt (see footnote 26 on page 120); and
- adjusts for acquisitions, disposals and changes of ownership levels of subsidiaries, associates and businesses (see footnote 29 on page 120).

For disposals, acquisitions and changes of ownership levels of subsidiaries, associates and businesses, we eliminate the gain or loss on disposal in the period incurred and remove the operating profit or loss of the acquired and disposed of businesses from all periods presented. Previously, this adjustment for the results of operations was effected by removing the time-equivalent component of operating profit or loss from the comparative period. During 2012 we changed this adjustment to better reflect the results of the ongoing business. Had we maintained our previous approach, underlying profit before tax would have been US\$1.7bn higher in 2012. This was mainly due to the elimination of the US Card and Retail Services business.

We use underlying performance when monitoring progress against operating plans and past results because we believe that this basis more appropriately reflects operating performance. We use underlying performance in our commentaries to explain year-on-year changes when the effect of fair value movements on own debt, acquisitions, disposals or dilution is significant.

The following acquisitions, disposals and changes to ownership levels affected the underlying performance:

Disposal gains/(losses) affecting underlying performance

	Date	Disposal gain/(loss) US$m
HSBC Financial Services (Middle East) Limited's disposal of majority stake in HSBC Private Equity Middle East Limited	Jun 2011	**(7)**
Dilution gain on our holding in Ping An following the issue of share capital to a third party	Jun 2011	**181**
Grupo Financiero HSBC, S.A. de C.V.'s disposal of HSBC Afore S.A. de C.V.[30]	Aug 2011	**83**
Dilution gain as a result of the merger between HSBC Saudi Arabia Limited and SABB Securities Limited	Dec 2011	**27**
HSBC Bank Canada's disposal of HSBC Securities (Canada) Inc's full service retail brokerage business[30]	Jan 2012	**83**
The Hongkong and Shanghai Banking Corporation Limited's disposal of RBWM operations in Thailand[30]	Mar 2012	**108**
HSBC Finance Corporation, HSBC USA Inc. and HSBC Technology and Services (USA) Inc.'s disposal of US Card and Retail Services business[30]	May 2012	**3,148**
HSBC Bank USA, N.A.'s disposal of 138 non-strategic branches[30]	May 2012	**661**
HSBC Argentina Holdings S.A.'s disposal of its general insurance manufacturing subsidiary[30]	May 2012	**102**
The Hongkong and Shanghai Banking Corporation Limited's disposal of its private banking business in Japan[30]	Jun 2012	**67**
The Hongkong and Shanghai Banking Corporation Limited's disposal of its shareholding in a property company in the Philippines	Jun 2012	**130**
HSBC Bank USA, N.A.'s disposal of 57 non-strategic branches[30]	Aug 2012	**203**
Hang Seng Bank Limited's disposal of its general insurance manufacturing subsidiary[30]	Jul 2012	**46**
HSBC Asia Holdings B.V.'s investment loss on a subsidiary[30]	Aug 2012	**(85)**
HSBC Bank plc's disposal of HSBC Securities SA	Aug 2012	**(11)**
HSBC Europe (Netherlands) B.V.'s disposal of HSBC Credit Zrt	Aug 2012	**(2)**
HSBC Europe (Netherlands) B.V.'s disposal of HSBC Insurance (Ireland) Limited	Oct 2012	**(12)**
HSBC Europe (Netherlands) B.V.'s disposal of HSBC Reinsurance Limited	Oct 2012	**7**
HSBC Private Bank (UK) Limited's disposal of Property Vision Holdings Limited	Oct 2012	**(1)**
HSBC Investment Bank Holdings Limited's disposal of its stake in Havas Havalimanlari Yer Hizmetleri Yatirim Holding Anonim Sirketi	Oct 2012	**18**
HSBC Insurance (Asia) Limited's disposal of its general insurance portfolios[30]	Nov 2012	**117**
HSBC Bank plc's disposal of HSBC Shipping Services Limited	Nov 2012	**(2)**
HSBC Bank (Panama) S.A.'s disposal of its operations in Costa Rica, El Salvador and Honduras[30]	Dec 2012	**(62)**
HSBC Insurance Holdings Limited and The Hongkong and Shanghai Banking Corporation Limited's disposal of their shares in Ping An[30]	Dec 2012	**3,012**
The Hongkong and Shanghai Banking Corporation Limited's disposal of its shareholding in Global Payments Asia-Pacific Limited[30]	Dec 2012	**212**

For footnote, see page 120.

Acquisition gains/(losses) affecting the underlying performance

	Date	Fair value gain on acquisition US$m
Our share of the loss recorded by Ping An on re-measurement of its previously held equity interest in Ping An bank (formerly known as Shenzhen Development Bank) when Ping An took control and fully consolidated Ping An Bank	Jul 2011	**(48)**
Gain on the merger of Oman International Bank S.A.O.G. and the Omani operations of HSBC Bank Middle East Limited	Jun 2012	**3**
Gain on the acquisition of the onshore retail and commercial banking business of Lloyds Banking Group in the UAE by HSBC Bank Middle East Limited	Oct 2012	**18**

Report of the Directors: Operating and Financial Review (continued)

The following table reconciles our reported revenue, loan impairment charges, operating expenses and profit before tax for 2012 and 2011 to an underlying basis. Throughout this *Annual Report and Accounts*, we reconcile other reported results to underlying results when doing so results in a more useful discussion of operating performance. Equivalent tables are provided for each of our global businesses and geographical segments in the Form 20-F filed with the Securities and Exchange Commission ('SEC'), which is available on www.hsbc.com.

Reconciliation of reported and underlying items

	2012 US$m	2011 US$m	Change[25] %
Revenue[21]			
Reported revenue	**68,330**	72,280	(5)
Currency translation adjustment[24]		(2,033)	
Own credit spread[26]	**5,215**	(3,933)	
Acquisitions, disposals and dilutions	**(10,048)**	(6,976)	
Underlying revenue	**63,497**	59,338	7
Loan impairment charges and other credit risk provisions ('LIC's)			
Reported LICs	**(8,311)**	(12,127)	31
Currency translation adjustment[24]		277	
Acquisitions, disposals and dilutions	**338**	1,619	
Underlying LICs	**(7,973)**	(10,231)	22
Operating expenses			
Reported operating expenses	**(42,927)**	(41,545)	(3)
Currency translation adjustment[24]		1,273	
Acquisitions, disposals and dilutions	**1,004**	2,666	
Underlying operating expenses	**(41,923)**	(37,606)	(11)
Underlying cost efficiency ratio	**66.0%**	63.4%	
Profit before tax			
Reported profit before tax	**20,649**	21,872	(6)
Currency translation adjustment[24]		(428)	
Own credit spread[26]	**5,215**	(3,933)	
Acquisitions, disposals and dilutions	**(9,479)**	(3,650)	
Underlying profit before tax	**16,385**	13,861	18
By global business[28]			
Retail Banking and Wealth Management	**4,001**	871	359
Commercial Banking	**7,941**	7,691	3
Global Banking and Markets	**8,371**	6,735	24
Global Private Banking	**954**	945	1
Other	**(4,882)**	(2,381)	(105)
Underlying profit before tax	**16,385**	13,861	18
By geographical region[28]			
Europe	**699**	1,629	(57)
Hong Kong	**7,162**	5,761	24
Rest of Asia-Pacific	**6,403**	6,249	2
Middle East and North Africa	**1,380**	1,417	(3)
North America	**(1,499)**	(3,076)	51
Latin America	**2,240**	1,881	19
Underlying profit before tax	**16,385**	13,861	18

For footnotes, see page 120.

Consolidated income statement

Five-year summary consolidated income statement

	2012 US$m	2011 US$m	2010 US$m	2009 US$m	2008 US$m
Net interest income	**37,672**	40,662	39,441	40,730	42,563
Net fee income	**16,430**	17,160	17,355	17,664	20,024
Net trading income	**7,091**	6,506	7,210	9,863	6,560
Net income/(expense) from financial instruments designated at fair value	**(2,226)**	3,439	1,220	(3,531)	3,852
Gains less losses from financial investments	**1,189**	907	968	520	197
Dividend income	**221**	149	112	126	272
Net earned insurance premiums	**13,044**	12,872	11,146	10,471	10,850
Gains on disposal of French regional banks	**–**	–	–	–	2,445
Gains on disposal of US branch network, US cards business and Ping An	**7,024**	–	–	–	–
Other operating income	**2,100**	1,766	2,562	2,788	1,808
Gains arising from dilution of interests in associates and joint ventures	**–**	208	188	–	–
Other	**2,100**	1,558	2,374	2,788	1,808
Total operating income	**82,545**	83,461	80,014	78,631	88,571
Net insurance claims incurred and movement in liabilities to policyholders	**(14,215)**	(11,181)	(11,767)	(12,450)	(6,889)
Net operating income before loan impairment charges and other credit risk provisions	**68,330**	72,280	68,247	66,181	81,682
Loan impairment charges and other credit risk provisions	**(8,311)**	(12,127)	(14,039)	(26,488)	(24,937)
Net operating income	**60,019**	60,153	54,208	39,693	56,745
Total operating expenses[34]	**(42,927)**	(41,545)	(37,688)	(34,395)	(49,099)
Operating profit	**17,092**	18,608	16,520	5,298	7,646
Share of profit in associates and joint ventures	**3,557**	3,264	2,517	1,781	1,661
Profit before tax	**20,649**	21,872	19,037	7,079	9,307
Tax expense	**(5,315)**	(3,928)	(4,846)	(385)	(2,809)
Profit for the year	**15,334**	17,944	14,191	6,694	6,498
Profit attributable to shareholders of the parent company	**14,027**	16,797	13,159	5,834	5,728
Profit attributable to non-controlling interests	**1,307**	1,147	1,032	860	770

Five-year financial information

	2012	2011	2010	2009	2008
	US$	US$	US$	US$	US$
Basic earnings per share[35]	**0.74**	0.92	0.73	0.34	0.41
Diluted earnings per share[35]	**0.74**	0.91	0.72	0.34	0.41
Basic earnings excluding goodwill impairment per share[34,35]	**0.74**	0.92	0.73	0.34	1.19
Dividends per ordinary share[1]	**0.41**	0.39	0.34	0.34	0.93
	%	%	%	%	%
Dividend payout ratio[36]					
– reported	**55.4**	42.4	46.6	100.0	226.8
– excluding goodwill impairment[34]	**55.4**	42.4	46.6	100.0	78.2
Post-tax return on average total assets	**0.6**	0.65	0.57	0.27	0.26
Return on average ordinary shareholders' equity	**8.4**	10.9	9.5	5.1	4.7
Average foreign exchange translation rates to US$:					
US$1: £	**0.631**	0.624	0.648	0.641	0.545
US$1: €	**0.778**	0.719	0.755	0.719	0.684

For footnotes, see page 120.

Reported profit before tax of US$20.6bn in 2012 was US$1.2bn, or 6%, lower than in 2011. This was primarily due to adverse fair value movements on own debt attributable to credit spreads of US$5.2bn, compared with favourable movements of US$3.9bn in 2011. The variance was partially offset by US$7.5bn of gains (net of losses) on disposals, in particular in respect of the US Card and Retail Services business and our associate, Ping An. Our remaining shareholding in Ping An has been reclassified as a financial investment (see Note 26 on the Financial Statements), the sale of which was completed on 6 February 2013.

We expect disposal of the Card and Retail Services business in North America and of our associate shares in Ping An in Rest of Asia-Pacific to have a significant impact on our profits in each of these regions for the foreseeable future. In addition, future profits in Rest of Asia-Pacific are expected to be affected by the dilution of our shareholding in Industrial Bank Co. Limited ('Industrial Bank'), following its issue of additional share capital to third parties on 7 January 2013. Our shareholding in Industrial Bank has now been classified as a financial investment.

On an underlying basis, profit before tax rose by 18%, primarily due to higher net operating income before loan impairment charges and other credit risk provisions ('revenue') and lower loan impairment charges and other credit risk provisions, which were partially offset by an increase in operating expenses. The latter was primarily driven by fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws of US$1.9bn, and a higher provision for UK customer redress programmes of US$1.4bn.

The following commentary is on an underlying basis, except where otherwise stated. The difference between reported and underlying results is explained and reconciled on page 26.

Revenue of US$63.5bn was US$4.2bn, or 7%, higher than in 2011, primarily due to lower adverse movements on non-qualifying hedges which accounted for US$1.1bn of the increase, and revenue growth in GB&M and CMB.

Revenue growth in GB&M mainly reflected higher Rates and Credit income, notably in Europe, as spreads tightened and investor sentiment improved following stimuli by central banks globally.

In CMB, revenue growth primarily reflected increased net interest income as a result of average balance sheet growth. Customer loans and advances grew in all regions, with over half this growth coming from our faster-growing regions of Hong Kong, Rest of Asia-Pacific and Latin America, driven by trade-related lending. In Europe, lending balances increased, notably in the UK, despite muted demand for credit. Customer deposits also rose as we continued to attract deposits through our Payments and Cash Management products.

Revenue growth in RBWM reflected increased insurance income, mainly in Hong Kong and Latin America, which benefited from higher investment returns and increased sales of life insurance products. In addition, net interest income grew, mainly in Hong Kong and Latin America, reflecting higher average lending and deposit balances. These factors were partially offset by the continued run-off of our Consumer and Mortgage Lending ('CML') portfolio in the US.

Loan impairment charges and other credit risk provisions were US$2.3bn lower than in 2011. This primarily reflected a decrease in North America, mainly due to the continued decline in lending balances and lower delinquency rates in the CML portfolio. In addition, in Europe there were lower credit risk provisions on available-for-sale asset-backed securities ('ABS's) driven by an improvement in underlying asset prices, and lower loan impairment charges in RBWM, most notably in the UK, as delinquency rates improved across both unsecured and secured lending portfolios. These factors were partially offset by increased loan impairment charges and other credit risk provisions in Latin America, particularly in Brazil, which were primarily due to higher delinquency rates in RBWM and in Business Banking in CMB. In Rest of Asia-Pacific, there were also higher individually assessed loan impairments on a small number of customers in CMB.

Operating expenses were higher than in 2011, primarily from fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws of US$1.9bn, as well as an increase in provisions relating to UK customer redress programmes of US$1.4bn. In addition, in 2011 operating expenses included a credit of US$570m relating to defined benefit pension obligations in the UK, which did not recur.

The charges for UK customer redress programmes include estimates in respect of possible mis-selling in previous years of payment protection insurance ('PPI') policies of US$1.7bn and interest rate protection products of US$598m. The additional provision relating to PPI reflects our recent claims experience. The provision in relation to interest rate protection products reflects an estimate of possible customer redress requirements following an independent review carried out at the request of the Financial Services Authority ('FSA'). There are many factors which affect these estimated liabilities and there remains a high degree of uncertainty as to the eventual cost of redress for these matters.

Operating expenses also increased due to inflationary pressures, for example, on wages and salaries, in certain of our Latin American and Asian markets. Other increases arose from investment in strategic initiatives including certain business expansion projects, enhanced processes and technology capabilities, and increased investment in regulatory and compliance infrastructure, primarily in the US. These factors were partly offset by US$2.0bn of sustainable cost savings achieved across all regions, as we continued with our organisational effectiveness programmes during 2012. The number of full time equivalent staff numbers ('FTEs') fell by more than 27,700, reflecting the planned net reduction of staff numbers across the Group from organisational effectiveness initiatives and business disposals.

On a constant currency basis, *income from associates* increased, mainly driven by strong results in our mainland China associates. The contribution from Bank of Communications Co., Limited ('BoCom') and Industrial Bank rose due to loan growth and higher fee income. These factors were partially offset by a decline in income from Ping An due to market valuation losses on equity securities held by their insurance business, reflecting volatile domestic equity markets.

The reported *profit after tax* was US$2.6bn or 15% lower than in 2011, reflecting a decrease in taxable profits, and a higher tax charge in 2012. The increased tax charge included the effect of the non-tax deductible charge for fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws, together with the non-recognition of the tax benefit in respect of the accounting charge associated with negative fair value movements on own debt. The lower tax charge in 2011 included the benefit of US foreign tax credits. The effective tax rate in 2012 was 26% compared with 18% in 2011.

Notable revenue items by geographical region

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
Non-qualifying hedges	**(51)**	**(31)**	**(20)**	**–**	**(194)**	**–**	**(296)**
Ping An contingent forward sale contract[37]	**–**	**–**	**(553)**	**–**	**–**	**–**	**(553)**
Gain on sale of non-core investments in India	**–**	**314**	**–**	**–**	**–**	**–**	**314**
Loss recognised following the classification of businesses to held for sale	**–**	**–**	**–**	**–**	**–**	**(96)**	**(96)**
2011							
Non-qualifying hedges	(291)	(14)	(20)	–	(1,067)	–	(1,392)
Refinement of PVIF calculation	95	135	11	–	–	2	243
2010							
Non-qualifying hedges	(691)	(17)	4	–	(353)	–	(1,057)

Notable revenue items by global business

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
Non-qualifying hedges	**(193)**	**–**	**(42)**	**4**	**(65)**	**(296)**
Ping An contingent forward sale contract[37]	**–**	**–**	**–**	**–**	**(553)**	**(553)**
Gain on sale of non-core investments in India	**–**	**–**	**–**	**–**	**314**	**314**
Loss recognised following the classification of businesses to held for sale	**(26)**	**(35)**	**(27)**	**–**	**(8)**	**(96)**
2011						
Non-qualifying hedges	(1,038)	–	90	(5)	(439)	(1,392)
Refinement of PVIF calculation	181	62	–	–	–	243
2010						
Non-qualifying hedges	(310)	–	(309)	1	(439)	(1,057)

For footnote, see page 120.

Report of the Directors: Operating and Financial Review (continued)

Notable cost items by geographical region[38]

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
Restructuring and other related costs	**299**	**31**	**131**	**27**	**221**	**167**	**876**
UK customer redress programmes	**2,338**	**–**	**–**	**–**	**–**	**–**	**2,338**
UK bank levy	**472**	**–**	**–**	**–**	**–**	**–**	**472**
Fines and penalties for inadequate compliance with anti-money laundering and sanction laws	**375**	**–**	**–**	**–**	**1,546**	**–**	**1,921**
US mortgage foreclosure and servicing costs	**–**	**–**	**–**	**–**	**104**	**–**	**104**
2011							
Restructuring and other related costs	404	68	45	31	236	338	1,122
UK customer redress programmes	898	–	–	–	–	–	898
UK bank levy	570	–	–	–	–	–	570
UK pension credit	(587)	–	–	–	–	–	(587)
Payroll tax	(13)	–	–	–	–	–	(13)
US mortgage foreclosure and servicing costs	–	–	–	–	257	–	257
2010							
Restructuring and other related costs	87	15	36	–	13	3	154
UK customer redress programmes	78	–	–	–	–	–	78
US accounting gain on change in staff benefits	–	–	–	–	(148)	–	(148)
Payroll tax	324	–	–	–	–	–	324

Notable cost items by global business[38]

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
Restructuring and other related costs	**266**	**62**	**63**	**58**	**427**	**876**
UK customer redress programmes	**1,751**	**258**	**331**	**(2)**	**–**	**2,338**
UK bank levy	**–**	**–**	**–**	**–**	**472**	**472**
Fines and penalties for inadequate compliance with anti-money laundering and sanction laws	**–**	**–**	**–**	**–**	**1,921**	**1,921**
US mortgage foreclosure and servicing costs	**104**	**–**	**–**	**–**	**–**	**104**
2011						
Restructuring and other related costs	405	122	158	38	399	1,122
UK customer redress programmes	875	23	–	–	–	898
UK bank levy	–	–	–	–	570	570
UK pension credit	(264)	(212)	(111)	–	–	(587)
Payroll tax	–	–	(13)	–	–	(13)
US mortgage foreclosure and servicing costs	257	–	–	–	–	257
2010						
Restructuring and other related costs	22	1	4	–	127	154
UK customer redress programmes	78	–	–	–	–	78
US accounting gain on change in staff benefits	(99)	(16)	(19)	(5)	(9)	(148)
Payroll tax	5	3	307	9	–	324

For footnote, see page 120.

Group performance by income and expense item

Net interest income

	2012 US$m	2011 US$m	2010 US$m
Interest income	**56,702**	63,005	58,345
Interest expense	**(19,030)**	(22,343)	(18,904)
Net interest income[39]	**37,672**	40,662	39,441
Average interest-earning assets	**1,625,068**	1,622,658	1,472,294
Gross interest yield[40]	**3.49%**	3.88%	3.96%
Less: cost of funds	**(1.36%)**	(1.56%)	(1.41%)
Net interest spread[41]	**2.13%**	2.32%	2.55%
Net interest margin[42]	**2.32%**	2.51%	2.68%

Summary of interest income by type of asset

	2012			2011			2010		
	Average balance US$m	**Interest income US$m**	**Yield %**	Average balance US$m	Interest income US$m	Yield %	Average balance US$m	Interest income US$m	Yield %
Short-term funds and loans and advances to banks	**275,979**	**4,307**	**1.56**	261,749	5,860	2.24	236,742	4,555	1.92
Loans and advances to customers	**934,656**	**41,043**	**4.39**	945,288	45,250	4.79	858,499	44,186	5.15
Financial investments	**387,329**	**9,078**	**2.34**	384,059	10,229	2.66	378,971	9,375	2.47
Other interest-earning assets[43]	**27,104**	**2,274**	**8.39**	31,562	1,666	5.28	(1,918)	229	(11.94)
Total interest-earning assets	**1,625,068**	**56,702**	**3.49**	1,622,658	63,005	3.88	1,472,294	58,345	3.96
Trading assets and financial assets designated at fair value[44,45]	**368,406**	**6,931**	**1.88**	410,038	8,671	2.11	385,203	7,060	1.83
Impairment provisions	**(17,421)**			(18,738)			(22,905)		
Non-interest-earning assets	**730,901**			752,965			664,308		
Total assets and interest income	**2,706,954**	**63,633**	**2.35**	2,766,923	71,676	2.59	2,498,900	65,405	2.62

Summary of interest expense by type of liability and equity

	2012			2011			2010		
	Average balance US$m	**Interest expense US$m**	**Cost %**	Average balance US$m	Interest expense US$m	Cost %	Average balance US$m	Interest expense US$m	Cost %
Deposits by banks[46]	**92,803**	**1,160**	**1.25**	106,099	1,591	1.50	111,443	1,136	1.02
Financial liabilities designated at fair value – own debt issued[47]	**75,016**	**1,325**	**1.77**	73,635	1,313	1.78	66,706	1,271	1.91
Customer accounts[48]	**1,052,812**	**10,878**	**1.03**	1,058,326	13,456	1.27	962,613	10,778	1.12
Debt securities in issue	**161,348**	**4,755**	**2.95**	181,482	5,260	2.90	189,898	4,931	2.60
Other interest-bearing liabilities	**19,275**	**912**	**4.73**	14,024	723	5.16	8,730	788	9.03
Total interest-bearing liabilities	**1,401,254**	**19,030**	**1.36**	1,433,566	22,343	1.56	1,339,390	18,904	1.41
Trading liabilities and financial liabilities designated at fair value (excluding own debt issued)	**318,883**	**3,445**	**1.08**	355,345	4,564	1.28	275,804	3,780	1.37
Non-interest bearing current accounts	**177,085**			162,369			142,579		
Total equity and other non-interest bearing liabilities	**809,732**			815,643			741,127		
Total equity and liabilities	**2,706,954**	**22,475**	**0.83**	2,766,923	26,907	0.97	2,498,900	22,684	0.91

For footnotes, see page 120.

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The commentary in the following sections is on a constant currency basis unless otherwise stated.

Reported net interest income decreased by 7%. On a constant currency basis, it declined by 5%.

On an underlying basis, excluding net interest income earned by the businesses sold during 2012 (see page 29) from all periods presented (2012: US$1.6bn; 2011: US$4.8bn) and currency translation movements of US$1.2bn, net interest income rose by 4%. This reflected strong balance sheet growth in Hong Kong and Rest of Asia-Pacific, together with a lower cost of funds in Latin America driven by a decline in interest rates in Brazil.

The decrease in both net interest spread and net interest margin compared with 2011 was attributable to significantly lower yields on customer lending and on our surplus liquidity, partly offset by a reduction in our cost of funds, notably on customer accounts.

Interest income was lower than in 2011. This was driven by lower interest income on customer lending, including loans classified within 'Assets held for sale', due in part to the loss of interest income from disposals during 2012, principally in the US. These disposals also led to a change in the composition of our lending book as the decline in higher yielding card balances was replaced by volume growth in relatively lower yielding products, mainly residential mortgages and term lending, in Hong Kong, Rest of Asia-Pacific and Europe. Growth in average residential mortgage balances reflected the success of marketing campaigns and competitive pricing in the UK, the continued strength in the property market in Hong Kong and the expansion of our distribution network in Rest of Asia-Pacific. Average term lending balances increased in Hong Kong and Rest of Asia-Pacific as we capitalised on trade and capital flows, while the rise in Europe was in spite of muted demand for credit. As a result of the change in composition of the lending book, the gross yield on customer lending fell.

Revenue in Balance Sheet Management also decreased, principally in Europe as yield curves continued to flatten and liquidity arising from maturities and sales of available-for-sale debt securities was re-invested at lower prevailing rates. In addition, we placed a greater portion of our liquidity with central banks. This was partly offset by higher revenue in Rest of Asia-Pacific, notably mainland China, as strong customer deposit growth led to a rise in the size of the available-for-sale debt securities portfolio.

The decline in interest income was partly offset by lower interest expense, notably on customer accounts. This was driven by a reduction in the cost of funds on customer accounts in Latin America, notably in Brazil, and in Europe due to the downward movement in interest rates during the year, together with deposit repricing initiatives in the US and Europe. The reduction in average customer account balances due to the disposal of non-strategic branches in the US was largely offset by significant volume growth in other parts of the business, notably in Hong Kong, reflecting more conservative customer behaviour during the year in RBWM, and in Rest of Asia-Pacific, as a result of new mandates and deposit acquisition in Payments and Cash Management in CMB and GB&M.

Interest expense on deposits by banks decreased, mainly in Europe. This was due to lower placements by other financial institutions with HSBC, in part due to lower interest rates offered, together with a reduction in the cost of sale and repurchase ('repo') funding as market rates fell. Lower average balances and interest rates in Brazil also contributed to the decline.

There was also a decrease in interest expense on debt securities issued by the Group, driven by a net reduction in average balances outstanding, mainly in North America and, to a lesser extent, in Europe. Funding requirements in the US fell as a result of the business disposals and continued reduction of the CML portfolio in run-off and, as a consequence, maturing debt was not replaced and some of the outstanding debt was repaid with the proceeds from the sales. In addition, maturing debt was not replaced in Europe. These decreases were partly offset by higher interest expense in Latin America, as a result of new debt issued, principally in 2011. The Group's cost of funds on debt securities rose as the new issuances in Latin America were at a higher effective interest rate than that paid in other parts of the Group. The replacement of short-term debt by the issuance of medium-term notes in Europe also contributed to the rise in the cost of funds of debt securities in issue.

'Net interest income' includes the expense of internally funding trading assets, while related revenue is reported in 'Net trading income'. The internal cost of funding of these assets declined, reflecting the reduction in average trading assets during the year. In reporting our global business results, this cost is included within 'Net trading income'.

Net fee income

	2012 US$m	2011 US$m	2010 US$m
Account services	**3,563**	3,670	3,632
Cards	**3,030**	3,955	3,801
Funds under management	**2,561**	2,753	2,511
Credit facilities	**1,761**	1,749	1,635
Broking income	**1,350**	1,711	1,789
Imports/exports	**1,196**	1,103	991
Remittances	**819**	770	680
Unit trusts	**739**	657	560
Underwriting	**739**	578	623
Global custody	**737**	751	700
Insurance	**696**	1,052	1,147
Corporate finance	**370**	441	440
Trust income	**283**	294	291
Investment contracts	**141**	136	109
Mortgage servicing	**86**	109	118
Taxpayer financial services	**–**	2	73
Maintenance income on operating leases	**–**	–	99
Other	**2,078**	1,766	1,918
Fee income	**20,149**	21,497	21,117
Less: fee expense	**(3,719)**	(4,337)	(3,762)
Net fee income	**16,430**	17,160	17,355

Net fee income decreased by US$730m on a reported basis, and by US$294m on a constant currency basis.

On an underlying basis, which excludes the net fee income relating to the business disposals listed on page 29 (2012: US$401m and 2011:US$1.41bn) and currency translation movements of US$436m, net fee income rose by US$726m, or 5%.

The reduction on a constant currency basis was primarily due to the sale of the Card and Retail Services business, which led to a reduction in cards and insurance fee income and fee expenses. As part of that transaction, we entered into a transition service agreement with the purchaser to support certain account servicing operations until they are integrated into the purchaser's infrastructure. We receive fees for providing these services, which are reported in 'Other fee income'. The associated costs are reported in 'Operating expenses'.

Broking income fell, most notably in Hong Kong and Europe, due to reduced transaction volumes reflecting investor sentiment. Income from funds under management ('FuM') fell, mainly in Rest of Asia-Pacific, as customers invested in lower yielding products reflecting their lower risk appetite. Income from FuM was also lower in North America, due to the sale of the full service retail brokerage business in Canada. In Europe, the decline was mainly due to challenging market conditions in the latter half of 2011 which led to a fall in average client assets in 2012 as well as net new money outflows and a fall in client numbers within GPB.

Partly offsetting these reductions was growth in underwriting fees as we actively captured increased client demand for debt capital financing in North America, Hong Kong and Europe in 2012, in part, reflecting the enhanced collaboration between CMB and GB&M. Trade-related income also increased, most notably in Europe and Hong Kong, reflecting increased transaction volumes as we capitalised on our global network to capture cross-border trade flows.

Fees from unit trusts also rose in Hong Kong, reflecting higher sales volumes.

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Net trading income

	2012 US$m	2011 US$m	2010 US$m
Trading activities	**5,249**	4,873	5,708
Ping An contingent forward sale contract[37]	**(553)**	–	–
Net interest income on trading activities	**2,683**	3,223	2,530
Other trading income – hedge ineffectiveness:			
– on cash flow hedges	**35**	26	(9)
– on fair value hedges	**(27)**	(224)	38
Non-qualifying hedges	**(296)**	(1,392)	(1,057)
Net trading income[49,50]	**7,091**	6,506	7,210

For footnotes, see page 120.

Reported net trading income of US$7.1bn was US$585m higher than in 2011. On a constant currency basis, net trading income rose by US$849m, driven by lower adverse fair value movements on non-qualifying hedges. Net income from trading activities rose in GB&M, but this was more than offset by lower net interest income on trading activities and adverse fair value movements on the contingent forward sale contract relating to Ping An.

There were lower adverse fair value movements on non-qualifying hedges. These hedges are derivatives entered into as part of a documented interest rate management strategy for which hedge accounting was not, nor could be, applied. They are principally cross-currency and interest rate swaps used to economically hedge fixed rate debt issued by HSBC Holdings and floating rate debt issued by HSBC Finance Corporation ('HSBC Finance'). The size and direction of the changes in the fair value of non-qualifying hedges that are recognised in the income statement can be volatile from year-to-year, but do not alter the cash flows expected as part of the documented interest rate management strategy for both the instruments and the underlying economically hedged assets and liabilities if the derivative is held to maturity. In North America, there were lower adverse fair value movements on non-qualifying hedges as US long-term interest rates declined to a lesser extent than in 2011. There were also lower adverse fair value movements on non-qualifying hedges in Europe. This was driven by favourable fair value movements in HSBC Holdings, compared with adverse fair value movements in 2011, reflecting the less pronounced decline in long-term US interest rates relative to sterling and euro interest rates compared with 2011. This was partly offset by adverse movements in European operating entities as interest rates fell.

During 2012, HSBC Finance terminated approximately US$3.0bn of non-qualifying hedges. A further US$2.4bn of non-qualifying hedges were terminated in January 2013 to better align our hedges with the overall interest rate position in HSBC Finance. The losses on these economic hedges reported in previous years were therefore crystallised.

Net income from trading activities increased compared with 2011, driven by a strong performance in GB&M. This was after taking into account a net charge of US$385m in the fourth quarter of 2012 as a result of a change in estimation methodology in respect of credit valuation adjustments on derivative assets and debit valuation adjustments on derivative liabilities to reflect evolving market practices (see page 441).

Rates revenue was significantly higher, notably in Europe, as spreads on government debt securities tightened and investor sentiment improved following stimuli by central banks. This was despite significant adverse fair value movements due to own credit spreads on structured liabilities as spreads tightened, compared with a gain reported in 2011, together with a credit valuation adjustment charge of US$837m. The improvement in market sentiment also led to tighter spreads on corporate debt securities, resulting in strong growth in Credit revenue. Foreign Exchange revenue was broadly in line with 2011, as higher income resulting from enhanced collaboration between GB&M and CMB, and increased volumes from improvements in our electronic pricing and distribution capabilities, offset the effect of less volatile markets in 2012. These favourable movements were partly offset by a reduction in Equities trading revenue, reflecting a decline in market volumes together with adverse fair value movements on structured liabilities as own credit spreads tightened in 2012, compared with favourable movements in 2011.

These factors were partly offset by unfavourable fair value movements on assets held as economic hedges of foreign currency debt at fair value compared with favourable movements in 2011, due to movements in the underlying currencies. These offset favourable foreign exchange movements on foreign currency debt which are reported in 'Net expense from financial instruments designated at fair value'.

Net interest income on trading activities also declined. This was driven by a significant reduction in average trading assets, notably holdings of debt securities in Europe, in the latter part of 2011 and the first quarter of 2012 as eurozone sovereign debt concerns dominated the market. In addition, yields fell as a result of both price appreciation in a low interest rate environment and an increase in the proportion of the portfolio invested in relatively lower-yielding treasury bills and government debt securities. This was partly offset by a reduction in funding costs, reflecting both the decline in the size of the portfolio and the low rate environment.

There were also adverse fair value movements of US$553m on the contingent forward sale contract relating to Ping An (see page 472).

Net income/(expense) from financial instruments designated at fair value

	2012 US$m	2011 US$m	2010 US$m
Net income/(expense) arising from:			
– financial assets held to meet liabilities under insurance and investment contracts	**2,980**	(933)	2,349
– liabilities to customers under investment contracts	**(996)**	231	(946)
– HSBC's long-term debt issued and related derivatives	**(4,327)**	4,161	(258)
Change in own credit spread on long-term debt	**(5,215)**	3,933	(63)
Other changes in fair value[51]	**888**	228	(195)
– other instruments designated at fair value and related derivatives	**117**	(20)	75
Net income/(expense) from financial instruments designated at fair value	**(2,226)**	3,439	1,220

Assets and liabilities from which net income/(expense) from financial instruments designated at fair value arose

	2012 US$m	2011 US$m	2010 US$m
Financial assets designated at fair value at 31 December	**33,582**	30,856	37,011
Financial liabilities designated at fair value at 31 December	**87,720**	85,724	88,133
Including:			
Financial assets held to meet liabilities under:			
– insurance contracts and investment contracts with DPF[52]	**8,376**	7,221	7,167
– unit-linked insurance and other insurance and investment contracts	**23,655**	20,033	19,725
Long-term debt issues designated at fair value	**74,768**	73,808	69,906

For footnotes, see page 120.

The accounting policies for the designation of financial instruments at fair value and the treatment of the associated income and expenses are described in Notes 2i and 2b on the Financial Statements, respectively.

The majority of the financial liabilities designated at fair value are fixed-rate long-term debt issues, the rate profile of which has been changed to floating through interest rate swaps as part of a documented interest rate management strategy. The movement in fair value of these long-term debt issues and the related hedges includes the effect of our credit spread changes and any ineffectiveness in the economic relationship between the related swaps and own debt. As credit spreads widen or narrow, accounting profits or losses, respectively, are booked. The size and direction of the changes in the credit spread on our debt and ineffectiveness, which are recognised in the income statement, can be volatile from year to year, but do not alter the cash flows expected as part of the documented interest rate management strategy. As a consequence, fair value movements arising from changes in our own credit spread on long-term debt and other fair value movements on the debt and related derivatives are not regarded internally as part of managed performance and are therefore not allocated to global businesses, but are reported in 'Other'. Credit spread movements on own debt designated at fair value are excluded from underlying results, and related fair value movements are not included in the calculation of regulatory capital.

We reported net expense from financial instruments designated at fair value of US$2.2bn in 2012 compared with net income of US$3.4bn in 2011. This included the credit spread-related movements in the fair value of our own long-term debt, on which we reported adverse fair value movements of US$5.2bn in 2012 and favourable movements of US$3.9bn in 2011. The adverse fair value movements arose in 2012 as credit spreads tightened in Europe and North America, having widened during 2011.

Net income arising from financial assets held to meet liabilities under insurance and investment contracts reflected net investment gains in 2012 as global equity market conditions improved, compared with net investment losses in 2011. This predominantly affected the value of assets held to support unit-linked contracts in the UK and Hong Kong, insurance contracts with discretionary participation features ('DPF') in Hong Kong, and investment contracts with DPF in France.

The investment gains or losses arising from equity markets result in a corresponding movement in liabilities to customers, reflecting the extent to which unit-linked policyholders, in particular, participate in the investment performance of the associated asset portfolio. Where these relate to assets held to back investment contracts, the corresponding movement in liabilities to customers is also recorded under 'Net income/(expense) from financial instruments designated at fair value'. This is in contrast to gains or losses related to assets held to back insurance contracts or investment contracts with DPF, where the corresponding movement in liabilities to customers is recorded under 'Net insurance claims incurred and movement in liabilities to policyholders'.

Within net income from financial instruments designated at fair value were favourable foreign exchange movements in 2012, compared with adverse movements in 2011, on foreign currency debt designated at fair value issued as part of our overall funding strategy. An offset from assets held as economic hedges was reported in 'Net trading income'.

Gains less losses from financial investments

	2012 US$m	2011 US$m	2010 US$m
Net gains/(losses) from disposal of:			
– debt securities	**781**	712	564
– equity securities	**823**	360	516
– other financial investments	**5**	12	(7)
	1,609	1,084	1,073
Impairment of available-for-sale equity securities	**(420)**	(177)	(105)
Gains less losses from financial investments	**1,189**	907	968

Gains less losses from financial investments increased by US$282m on a reported basis and US$310m on a constant currency basis.

The increase was driven by higher net gains from the disposal of available-for-sale equity securities, notably in Hong Kong as a result of the sale of our shares in four Indian banks. In addition, we reported a rise in disposal gains in Principal Investments in GB&M.

Higher gains were also reported on the disposal of available-for-sale government debt securities, principally in the UK as part of Balance Sheet Management's structural interest rate risk management activities. This was partly offset by losses on the disposal of legacy assets in GB&M in the UK (see page 18), together with the non-recurrence of gains in 2011 on the disposal of available-for-sale debt securities in our Insurance business in RBWM, also in Europe.

There were higher impairments of available-for-sale equity securities due to significant write-downs in 2012 on three holdings, two of which were in our direct investment business, which is in run-off.

Net earned insurance premiums

	2012 US$m	2011 US$m	2010 US$m
Gross insurance premium income	**13,602**	13,338	11,609
Reinsurance premiums	**(558)**	(466)	(463)
Net earned insurance premiums	**13,044**	12,872	11,146

Net earned insurance premiums were broadly in line with 2011 on a reported basis. On a constant currency basis net earned premiums increased by 6%.

The rise in net earned premium income was driven by Hong Kong and Latin America. In Hong Kong, sales of insurance contracts increased, in particular deferred annuity products, as we widened our product offerings to fulfil customers' long-term savings and retirement needs, supported by successful marketing campaigns. Renewal premiums from both unit-linked and insurance contracts with DPF also increased reflecting strong sales in previous years. The increase in net earned premiums in Latin America was due to higher sales of unit-linked and term life products in Brazil, reflecting customer appetite for life insurance products. It was partly offset by a decrease in net earned premiums following the sale of the general insurance business in Argentina in May 2012. In Europe, net earned premiums decreased, mainly on investment contracts with DPF in France, as a result of the uncertain economic and political environment in the election year and increased product competition. The non-renewal and transfer to third parties of certain contracts in our Irish business during 2011 also contributed to the decline. This was partly offset by a rise in net earned premiums in the UK due, in part, to the sale of a unit-linked insurance product through two new third party platforms.

Gains on disposal of US branch network, US cards business and Ping An

	2012 US$m	2011 US$m	2010 US$m
Gains on disposal of US branch network	**864**	–	–
Gains on disposal of US cards business	**3,148**	–	–
Gains on disposal of Ping An	**3,012**	–	–
Total	**7,024**	–	–

Significant progress was made in 2012 in exiting non-strategic markets and disposing of businesses and investments not aligned with the Group's long-term strategy. These included three major disposals:

- In May 2012, HSBC USA Inc., HSBC Finance and HSBC Technology and Services (USA) Inc. sold their US Card and Retail Services business to Capital One Financial Corporation, realising a gain on sale of US$3.1bn.
- In May 2012, HSBC Bank USA, N.A. ('HSBC Bank USA') sold 138 out of 195 branches primarily in upstate New York to First Niagara Bank, realising a gain of US$661m. In August 2012, it sold the remaining 57 branches to the same purchaser, realising a gain of US$203m.
- In December 2012, HSBC Insurance Holdings Limited and The Hongkong and Shanghai Banking Corporation agreed to sell to indirect wholly-owned subsidiaries of Charoen Pokphand Group Company Limited their entire shareholdings in Ping An, representing 15.57% of the issued share capital of Ping An, in two tranches. The first tranche was completed on 7 December 2012. The completion of the second tranche took place on 6 February 2013. The disposal of this associate resulted in a gain of US$3.0bn in 2012 (see page 472). Our remaining shareholding has been classified as a financial investment.

Other operating income

	2012 US$m	2011 US$m	2010 US$m
Rent received	**210**	217	535
Gains/(losses) recognised on assets held for sale	**485**	55	(263)
Valuation gains on investment properties	**72**	118	93
Gain on disposal of property, plant and equipment, intangible assets and non-financial investments	**187**	57	701
Gains arising from dilution of interests in associates and joint ventures	**–**	208	188
Change in present value of in-force long-term insurance business	**737**	726	705
Other	**409**	385	603
Other operating income	**2,100**	1,766	2,562

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Change in present value of in-force long-term insurance business

	2012 US$m	2011 US$m	2010 US$m
Value of new business	**1,027**	943	737
Expected return	**(420)**	(428)	(85)
Assumption changes and experience variances	**69**	(30)	59
Other adjustments	**61**	241	(6)
Change in present value of in-force long-term insurance business	**737**	726	705

Reported other operating income of US$2.1bn increased by 19% in 2012. On a constant currency basis, it rose by 25% as a result of business disposals during the year.

We continued to rationalise our portfolio in non-strategic markets, resulting in a number of gains and losses on disposal which are excluded from our underlying results (see page 28). These included gains of US$108m on the sale of our RBWM operations in Thailand, US$130m on the sale of our shareholding in a property company in the Philippines, US$163m on the sales of the HSBC and Hang Seng general insurance businesses in Hong Kong, US$102m following the completion of the sale of our general insurance manufacturing business in Argentina, and US$212m following the sale of our shares in Global Payments Asia-Pacific Ltd. The gains on disposal were partly offset by an investment loss on a subsidiary of US$85m in the Middle East and North Africa and a loss of US$62m on the sale of our operations in Costa Rica, Honduras and El Salvador.

Reported other operating income in 2011 included a gain of US$181m arising from a dilution of our holding in Ping An following its issue of share capital to a third party and a gain of US$83m from the sale of HSBC Afore S.A. de C.V. ('HSBC Afore'), our Mexican pension business.

On an underlying basis, excluding the gains and losses on disposal totalling US$747m in 2012 and US$354m in 2011, other operating income rose. This was due to lower losses on foreclosed properties due to the reduction in foreclosure activity in the US, less deterioration in housing prices during 2012 and, in some markets, improvements in pricing compared with 2011 in the US.

The present value of in-force ('PVIF') long-term insurance business asset was broadly in line with 2011. The value of new business from the sale of life insurance products, favourable investment returns, together with the recognition of a PVIF asset relating to the unit-linked pension products in Brazil contributed to a rise. In addition, there were lower adverse changes to non-economic assumptions, including mortality and lapse rates in Hong Kong and North America in 2012. These factors were substantially offset by adverse assumption changes in 2012, principally relating to the valuation of policyholder options and guarantees in Hong Kong, along with the non-recurrence of a gain of US$237m (US$243m as reported) recognised upon refinement of the PVIF asset in 2011.

The increase in other operating income was partly offset by losses recognised on the sale of syndicated loans in Europe and on the reclassification of certain businesses to held for sale in South America. In addition, a gain on sale and leaseback of branches in Mexico recognised in 2011 did not recur.

Net insurance claims incurred and movement in liabilities to policyholders

	2012 US$m	2011 US$m	2010 US$m
Insurance claims incurred and movement in liabilities to policyholders:			
– gross	**14,529**	11,631	11,969
– reinsurers' share	**(314)**	(450)	(202)
– net[53]	**14,215**	11,181	11,767

For footnote, see page 120.

Net insurance claims incurred and movement in liabilities to policyholders increased by 27% on a reported basis, and by 33% on a constant currency basis.

The increase in liabilities to policyholders largely resulted from gains in the fair value of the assets where the policyholders bear the investment risk, particularly in relation to unit-linked insurance contracts and investment and insurance contracts with DPF.

The higher investment returns were largely the result of positive equity market movements in 2012 compared with losses experienced during 2011 notably in Hong Kong, France and the UK. The gains or losses on the financial assets designated at fair value held to support these insurance and investment contract liabilities are reported in 'Net income from financial instruments designated at fair value'.

The increase in liabilities to policyholders also reflected the increase in new business written, notably in Hong Kong and Brazil as explained under 'Net earned insurance premiums'. This was partly offset by a lower increase in reserves in France attributable to the decline in net earned premiums, and a decrease in Argentina due to the sale of the general insurance business in May 2012.

Loan impairment charges and other credit risk provisions

	2012 US$m	2011 US$m	2010 US$m
Loan impairment charges			
New allowances net of allowance releases	**9,306**	12,931	14,568
Recoveries of amounts previously written off	**(1,146)**	(1,426)	(1,020)
	8,160	11,505	13,548
Individually assessed allowances	**2,139**	1,915	2,625
Collectively assessed allowances	**6,021**	9,590	10,923
Impairment of available-for-sale debt securities	**99**	631	472
Other credit risk provisions/(recoveries)	**52**	(9)	19
Loan impairment charges and other credit risk provisions	**8,311**	12,127	14,039

Reported loan impairment charges and other credit risk provisions ('LIC's) fell from US$12bn to US$8.3bn, a decrease of 31% compared with 2011. On an underlying basis they reduced from US$10bn to US$8.0bn.

On a constant currency basis, they declined by US$3.5bn or 30% compared with 2011. Collectively assessed allowances were down by US$3.3bn and credit risk provisions fell by US$456m, partly offset by higher individually assessed impairment charges of US$258m.

At 31 December 2012, the aggregate balance of customer loan impairment allowances was US$16bn. This represented 2% of gross loans and advances to customers (net of reverse repos and settlement accounts) in line with 31 December 2011.

The fall in collectively assessed impairment allowances was most significant in RBWM in North America due to the continued reduction in the CML portfolios in run-off, and the sale of the Card and Retail Services business. In addition, lower loan impairment charges in Europe in RBWM were due to improved credit quality as we continued to pro-actively identify and monitor customers facing financial hardship and focused our lending growth on higher quality assets, notably in the UK. These factors were partly offset by higher loan impairment charges and other credit risk provisions in Latin America which were driven by increased delinquency rates in RBWM and CMB, mainly in Brazil.

Impairment of available-for-sale debt securities reduced, mainly in Europe, due to lower charges on available-for-sale ABSs and on Greek sovereign debt, partly offset by an increase in Rest of Asia-Pacific due to a charge on an available-for-sale debt security in GB&M.

Individually assessed impairment allowances increased by 14%, primarily in Europe in CMB, reflecting challenging economic conditions in the UK, Greece, Spain and Turkey. In addition, higher individually assessed impairments in Latin America mainly related to a single exposure in Brazil.

LICs declined in North America, primarily in the CML portfolio, as well as in Europe, Hong Kong and the Middle East and North Africa. The decrease was partly offset by an increase in Latin America and Rest of Asia-Pacific.

In North America, LICs fell by 51% to US$3.5bn. Within this, loan impairment charges fell by US$1.3bn following the sale of the Card and Retail Services business. Loan impairment charges in our CML business in the US fell by 48% to US$2.6bn, driven by lower lending balances, as we continued to run off the portfolio, and lower delinquency levels. Loan impairment charges continued to be adversely affected by delays in expected cash flows from mortgage loans due, in part, to delays in foreclosure processing, although the effects were less pronounced than in 2011. These decreases were partly offset by an adjustment made

Report of the Directors: Operating and Financial Review (continued)

Financial summary > Group performance by income and expense item

following a review completed in the fourth quarter of 2012 which concluded that the estimated average period of time from current status to write-off was ten months for real estate loans. In CMB and GB&M, loan impairment charges increased, mainly in Bermuda, due to individually assessed impairments on a small number of exposures.

In Europe, LICs decreased by 22% to US$1.9bn. This was mainly in GB&M due to lower credit risk provisions on available-for-sale ABSs as a result of an improvement in underlying asset prices, as well as lower charges on Greek sovereign debt. Further information on our exposures to countries in the eurozone is provided on page 192. This was partly offset by increased impairment charges on the legacy credit loans and receivables portfolio. In RBWM, loan impairment charges continued to decline, primarily in the UK, as we focused our lending growth on higher quality assets and continued to pro-actively identify and monitor customers facing financial hardship. As a result, delinquency rates improved across both the secured and unsecured lending portfolios. This was partly offset by an increase in impairments in Turkey due to strong growth in previous years in our RBWM customer loans and advances. In addition, there were higher individually assessed provisions in CMB across a range of sectors, reflecting increased stress on the financial status of certain customers in the challenging economic conditions in certain eurozone countries.

In Hong Kong, LICs fell by 53% to US$74m, largely due to lower specific impairment charges in CMB and the non-recurrence of charges relating to available-for-sale Greek sovereign debt securities.

In the Middle East and North Africa, LICs decreased by US$6m to US$286m. Lower loan impairment charges in RBWM reflected repositioning of the book towards higher quality secured lending in previous years. This was largely offset by higher LICs recorded for a small number of large exposures in GB&M.

LICs in Latin America and Rest of Asia-Pacific increased compared with 2011. In Latin America, they increased by 29% to US$2.1bn. This was mainly in Brazil, driven by increased delinquency rates in RBWM and CMB, particularly in the Business Banking portfolio reflecting lower economic growth in 2012. We took a number of steps to reposition the portfolios in RBWM and CMB including improving our collections capabilities, reducing third-party originations and lowering credit limits where appropriate. Loan impairment charges fell in Brazil during the second half of 2012, mainly due to lower collective portfolio provisions.

In Rest of Asia-Pacific, LICs increased by 64% to US$436m, notably in CMB as a result of the impairment of a corporate exposure in Australia and a small number of corporate exposures in India, as well as a credit risk provision on an available-for-sale debt security in GB&M.

Operating expenses

	2012 US$m	2011 US$m	2010 US$m
By expense category			
Employee compensation and benefits	**20,491**	21,166	19,836
Premises and equipment (excluding depreciation and impairment)	**4,326**	4,503	4,348
General and administrative expenses	**15,657**	12,956	10,808
Administrative expenses	**40,474**	38,625	34,992
Depreciation and impairment of property, plant and equipment	**1,484**	1,570	1,713
Amortisation and impairment of intangible assets	**969**	1,350	983
Operating expenses	**42,927**	41,545	37,688

Staff numbers (full-time equivalents)

	At 31 December 2012	2011	2010
Europe	**70,061**	74,892	75,698
Hong Kong	**27,742**	28,984	29,171
Rest of Asia-Pacific	**85,024**	91,051	91,607
Middle East and North Africa	**8,765**	8,373	8,676
North America	**22,443**	30,981	33,865
Latin America	**46,556**	54,035	56,044
Staff numbers	**260,591**	288,316	295,061

Reported operating expenses of US$42.9bn were US$1.4bn or 3% higher than in 2011. On an underlying basis, costs increased by 11%.

On a constant currency basis, operating expenses in 2012 were US$2.7bn or 7% higher than in 2011, primarily driven by fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanction laws of US$1.9bn, of which US$1.5bn was attributed to, and paid by, HSBC North America Holdings Inc. ('HNAH') and its subsidiaries and US$375m was paid by HSBC Holdings. Further provisions for the UK customer redress programmes of US$2.3bn were raised during 2012 compared with a charge of US$890m in 2011 (US$898m as reported). This included a charge for additional estimated redress for possible mis-selling in previous years of PPI policies US$1.7bn (2011: US$713m) and interest rate protection products (US$598m), which took the balance sheet provision for the UK customer redress programmes at 31 December 2012 to US$2.2bn.

In 2011 we recorded a credit of US$570m (US$587m as reported) following a change in the inflation measure used to calculate the defined benefit obligation in the UK for deferred pensions which did not recur in 2012.

Costs also rose due to inflationary pressures in certain of our Latin American and Asian markets and increased investment costs in strategic initiatives, including certain business expansion projects, and in enhanced processes and technology capabilities. We also increased investment in our regulatory and compliance infrastructure primarily in the US.

The above increases in costs were mitigated by strict cost control and the continued delivery of our organisational effectiveness programmes, which resulted in sustainable cost savings of US$2.0bn. The number of employees (expressed in FTEs) at the end of the 2012 was 10% lower than at the end of 2011. This reflected the planned net reduction of staff numbers across the Group from organisational effectiveness initiatives and business disposals. In 2012, average FTEs fell by 7%.

Business disposals in 2011 and 2012 resulted in a lower cost base, most significantly from the sale of the Card and Retail Services business and the 195 branches in the US.

Restructuring and other related costs were US$876m in 2012 compared with US$1.1bn in 2011 (US$1.1bn as reported).

Cost efficiency ratios[4]

	2012 %	2011 %	2010 %
HSBC	**62.8**	57.5	55.2
Geographical regions			
Europe	**108.4**	70.4	67.9
Hong Kong	**39.0**	44.5	43.4
Rest of Asia-Pacific	**42.7**	54.2	55.7
Middle East and North Africa	**48.0**	44.5	44.7
North America	**60.8**	55.7	48.8
Latin America	**58.7**	63.3	65.7
Global businesses			
Retail Banking and Wealth Management	**58.4**	63.2	58.1
Commercial Banking	**45.9**	46.3	49.4
Global Banking and Markets	**54.2**	57.0	48.8
Global Private Banking	**67.6**	68.8	65.8

For footnote, see page 120.

Share of profit in associates and joint ventures

	2012 US$m	2011 US$m	2010 US$m
Associates			
Bank of Communications Co., Limited	**1,670**	1,370	987
Ping An Insurance (Group) Company of China, Ltd	**763**	946	848
Industrial Bank Co., Limited	**670**	471	327
The Saudi British Bank	**346**	308	161
Other	**72**	126	156
Share of profit in associates	**3,521**	3,221	2,479
Share of profit in joint ventures	**36**	43	38
Share of profit in associates and joint ventures	**3,557**	3,264	2,517

The reported share of profit in associates and joint ventures was US$3.6bn, an increase of 9% compared with 2011. On a constant currency basis, it increased by 7%, driven by higher contributions from our associates in mainland China.

Our share of profits from BoCom rose, as a result of loan growth and higher fee income from cards, management service and guarantees and commitments. This was partly offset by increased operating expenses reflecting investment in staff and technology, and higher loan impairment charges. Profits from Industrial Bank also increased, reflecting continued growth in lending balances and a rise in associated fee income, partly offset by higher operating expenses in line with business expansion, as well as increased loan impairment charges. On 7 January 2013, our holding in Industrial Bank was diluted following its issue of additional share capital to third parties. Our shareholding has now been classified as a financial investment.

Profits from The Saudi British Bank rose, driven by higher revenues reflecting strong balance sheet growth and lower costs resulting from effective control and monitoring.

Profits from Ping An were lower due to market valuation losses on equity securities held by their insurance business, reflecting volatile domestic equity markets, partly offset by increased income from the banking business reflecting the contribution of Ping An Bank (formerly Shenzhen Development Bank). On 5 December 2012, we agreed to sell our entire shareholding in Ping An and recognised a gain on the disposal of the associate. Our remaining shareholding has been classified as a financial investment (see page 39 for details of this transaction).

Tax expense

	2012 US$m	2011 US$m	2010 US$m
Profit before tax	**20,649**	21,872	19,037
Tax expense	**(5,315)**	(3,928)	(4,846)
Profit after tax	**15,334**	17,944	14,191
Effective tax rate	**25.7%**	18.0%	25.5%

The tax charge in 2012 was US$1.4bn or 35% higher than in 2011 on a reported basis.

The higher tax charge in 2012 reflected the non-tax deductible effect of fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws, together with the non-recognition of the tax benefit in respect of the accounting charge associated with negative fair value movements on own debt. The lower tax charge in 2011 included the benefit of US deferred tax recognised in 2011 in respect of foreign tax credits.

As a result of these factors, the reported effective tax rate for 2012 was 25.7 % compared with 18.0% for 2011.

In 2012, the tax paid by the Group was US$9.3bn (2011: US$8.0bn). The amount differs from the tax charge reported in the income statement due to indirect taxes such as VAT and the bank levy included in the pre-tax profit and the timing of payments.

The Group also plays a major role as tax collector for governments in the jurisdictions in which we operate. In 2012, the Group collected US$8.5bn (2011: US$8.7bn).

Consolidated balance sheet

Five-year summary consolidated balance sheet and selected financial information

	At 31 December				
	2012	2011	2010	2009	2008
	US$m	US$m	US$m	US$m	US$m
ASSETS					
Cash and balances at central banks	**141,532**	129,902	57,383	60,655	52,396
Trading assets	**408,811**	330,451	385,052	421,381	427,329
Financial assets designated at fair value	**33,582**	30,856	37,011	37,181	28,533
Derivatives	**357,450**	346,379	260,757	250,886	494,876
Loans and advances to banks	**152,546**	180,987	208,271	179,781	153,766
Loans and advances to customers[54]	**997,623**	940,429	958,366	896,231	932,868
Financial investments	**421,101**	400,044	400,755	369,158	300,235
Assets held for sale	**19,269**	39,558	1,991	3,118	2,075
Other assets	**160,624**	156,973	145,103	146,061	135,387
Total assets	**2,692,538**	2,555,579	2,454,689	2,364,452	2,527,465
LIABILITIES AND EQUITY					
Liabilities					
Deposits by banks	**107,429**	112,822	110,584	124,872	130,084
Customer accounts	**1,340,014**	1,253,925	1,227,725	1,159,034	1,115,327
Trading liabilities	**304,563**	265,192	300,703	268,130	247,652
Financial liabilities designated at fair value	**87,720**	85,724	88,133	80,092	74,587
Derivatives	**358,886**	345,380	258,665	247,646	487,060
Debt securities in issue	**119,461**	131,013	145,401	146,896	179,693
Liabilities under insurance contracts	**68,195**	61,259	58,609	53,707	43,683
Liabilities of disposal groups held for sale	**5,018**	22,200	86	3	–
Other liabilities	**118,123**	111,971	109,868	148,411	149,150
Total liabilities	**2,509,409**	2,389,486	2,299,774	2,228,791	2,427,236
Equity					
Total shareholders' equity	**175,242**	158,725	147,667	128,299	93,591
Non-controlling interests	**7,887**	7,368	7,248	7,362	6,638
Total equity	**183,129**	166,093	154,915	135,661	100,229
Total equity and liabilities	**2,692,538**	2,555,579	2,454,689	2,364,452	2,527,465

Five-year selected financial information

	2012	2011	2010	2009	2008
Called up share capital	**9,238**	8,934	8,843	8,705	6,053
Capital resources[55,56]	**180,806**	170,334	167,555	155,729	131,460
Undated subordinated loan capital	**2,778**	2,779	2,781	2,785	2,843
Preferred securities and dated subordinated loan capital[57]	**48,260**	49,438	54,421	52,126	50,307
Risk-weighted assets and capital ratios[55]					
Risk-weighted assets	**1,123,943**	1,209,514	1,103,113	1,133,168	1,147,974
	%	%	%	%	%
Core tier 1 ratio	**12.3**	10.1	10.5	9.4	7.0
Total capital ratio	**16.1**	14.1	15.2	13.7	11.4
Financial statistics					
Loans and advances to customers as a percentage of customer accounts	**74.4**	75.0	78.1	77.3	83.6
Average total shareholders' equity to average total assets	**6.16**	5.64	5.53	4.72	4.87
Net asset value per ordinary share at year-end[58] (US$)	**9.09**	8.48	7.94	7.17	7.44
Number of US$0.50 ordinary shares in issue (millions)	**18,476**	17,868	17,686	17,408	12,105
Closing foreign exchange translation rates to US$:					
US$1: £	**0.619**	0.646	0.644	0.616	0.686
US$1: €	**0.758**	0.773	0.748	0.694	0.717

For footnotes, see page 120.
A more detailed consolidated balance sheet is contained in the Financial Statements on page 374.

Movement in 2012

Total reported assets were US$2.7 trillion, 5% higher than at 31 December 2011. Excluding the effect of currency movements, total assets increased by 4%, as shown on page 48.

Our business model (see page 14) and our approach to managing the Group balance sheet contributed to our strong liquidity position. Customer deposits increased by over US$65bn in 2012, which enabled us to continue to support our customers' borrowing requirements. Loans and advances to customers grew by more than US$39bn during the year, notably in residential mortgages and term and trade-related lending to corporate and commercial customers. Higher customer activity also led to a rise in trading assets.

We have made significant progress in simplifying and re-shaping our balance sheet to improve our capital deployment. We completed a significant number of business disposals during the year, most notably the Card and Retail Services business and non-strategic branches in the US. This led to a significant reduction in 'Assets held for sale' with further transactions due to complete in 2013.

Assets

Cash and balances at central banks rose by 7% as we placed a greater portion of our surplus liquidity in Hong Kong, Europe and Rest of Asia-Pacific with central banks, reflecting both our risk profile and growth in customer deposits. This was partly offset by a reduction in North America as liquidity was redeployed into highly-rated financial investments.

Trading assets increased by 21%. At the end of 2011, client activity fell as eurozone debt concerns dominated the global economy and, as a result, we reduced our holdings of debt and equity securities and did not replace maturities in our reverse repo book. In 2012, client activity increased from these subdued levels which resulted in a rise in reverse repo and securities borrowing balances, together with higher holdings of equity securities. Notwithstanding the rise in year-end balances, we actively managed the trading inventory in GB&M and the average balance for the year declined by 9%.

Financial assets designated at fair value rose by 8%. Holdings of equity securities in our insurance businesses in Hong Kong and Europe increased, reflecting favourable market movements. Portfolio growth was also partly attributable to net premiums received in the year.

Derivative assets remained broadly in line with December 2011 levels. Downward movements in yield curves in major currencies led to a rise in the fair value of interest rate contracts, largely in Europe and, to a lesser extent, the US. This was partly offset by a decline in the fair value of credit derivative contracts in Europe and the US, as spreads tightened, and foreign exchange contracts in Europe reflecting lower volumes of open trades. In addition, netting increased from an increase in trading through clearing houses and a rise in the fair value of interest rate contracts.

Loans and advances to banks declined by 16%, driven by a reduction in reverse repo balances in Europe, in part reflecting the redeployment of liquidity to central banks, together with maturities and repayments in Hong Kong and Rest of Asia-Pacific.

Loans and advances to customers increased by 4%. Residential mortgage balances continued to grow strongly, following the success of marketing campaigns and competitive pricing in the UK, the continued strength in the property market in Hong Kong and expansion of the distribution network in Rest of Asia-Pacific. Our focus on corporate and commercial customers that trade internationally led to a rise in term and trade-related lending in Hong Kong and Rest of Asia-Pacific. Lending to CMB customers also increased in Europe, notably in the UK despite muted demand for credit, and in North America, reflecting our focus on target segments in the US. In the Middle East and North Africa, the rise in term lending balances followed the completion of the merger of our operations in Oman with OIB and the acquisition of the onshore retail and commercial banking business of Lloyds Banking Group in the UAE. Corporate overdraft balances which did not meet netting criteria also increased in the UK, with a corresponding rise in related customer accounts. The above movements were partly offset by a reduction in residential mortgage balances in North America as a result of repayments and write-offs on the run-off portfolio. Lending to GB&M customers in Europe also declined as we reduced our exposure to certain sectors and disposed of selected positions, and clients chose to re-finance through the capital markets. Reverse repo balances also declined, mainly in Europe.

During 2012 we reclassified to 'Assets held for sale' loans and advances to customers relating to the planned disposals of non-strategic RBWM banking operations in Rest of Asia-Pacific and businesses in Latin America and Middle East and North Africa. In addition, loans and advances to customers, net of customer allowances, relating to the planned disposal of non-real estate personal loan balances in the CML run-off portfolio in North America were reclassified as 'Assets held for sale'.

Financial investments rose by 4% as excess liquidity was deployed into available-for-sale investments, notably treasury bills in Hong Kong and highly-rated debt securities in North America.

Assets held for sale declined by 51% following the completion of the US disposals. This was partly offset by the reclassification to 'Assets held for sale' during the year of the non-real estate personal loan balances in North America, our shareholdings in Ping An and Bao Viet Holdings and other non-strategic businesses.

Liabilities

Deposits by banks declined by 6% due to lower placements by, and repo activity with, other financial institutions in Europe. This was partly offset by higher short-term placements in North America and Hong Kong.

Customer accounts rose by 5%. This was driven in part by a significant rise in Hong Kong, where RBWM customers adopted a more conservative approach to managing their assets. CMB benefited from increased liquidity in the market, higher Payments and Cash Management balances and a rise in deposits from Business Banking customers. There was also strong deposit growth in CMB and GB&M in Europe, which benefited from higher balances in Payments and Cash Management, while growth in RBWM in Europe reflected the success of deposit gathering campaigns. The increase in current accounts in GB&M in the UK was also related to the rise in overdrafts which did not meet netting criteria. These movements were partly offset by a decrease in Brazil due to both a managed reduction in term deposits and the continued transformation of our funding base, substituting wholesale customer deposits for medium-term notes. Customer account balances in North America also fell as short-term deposits in the US placed at the end of 2011 were withdrawn. In addition, we reduced rates offered to customers as our funding requirements diminished following the business disposals and the continued decline of the consumer finance portfolios in run-off.

Trading liabilities increased by 12%, due to higher repo activity, notably in the US and in Europe, which we used to fund the rise in trading assets resulting from higher client activity.

Financial liabilities designated at fair value remained broadly in line with December 2011 levels. A net increase in Europe due to new issuances was largely offset by a net reduction in North America as maturities were not replaced, reflecting the decrease in funding requirements in the US.

The increase in the value of *derivative liabilities* was in line with that of 'Derivative assets' as the underlying risk is broadly matched.

Debt securities in issue declined by 10% as maturing debt was not replaced in North America due to the decline in funding requirements there.

Liabilities under insurance contracts rose by 11%, largely due to higher investment returns which resulted in a rise in the fair value of assets held to support unit-linked insurance contracts and investment and insurance contracts with DPF, together with the related liabilities to policyholders. In addition, liabilities to policyholders were established for new business written in Hong Kong, Europe and Latin America. This was offset in part by a reduction in liabilities under insurance contracts reflecting disposals of general insurance businesses in Hong Kong, Rest of Asia-Pacific, Latin America and Europe, together with the reclassification to 'Liabilities of disposal groups held for sale' of general insurance liabilities in North America and life insurance liabilities in Rest of Asia-Pacific.

Liabilities of disposal groups held for sale declined by 77% following the completion of the US disposals. This was partly offset by the transfer to this classification of other non-strategic businesses.

Other liabilities rose by 5%, reflecting higher provisions for customer redress programmes in the UK together with a rise in amounts owed to clearing houses as trading activity conducted through them increased.

Equity

Total shareholders' equity rose by 9%, driven in part by profits generated in the year. In addition, there was a favourable movement on the available-for-sale reserve from a negative balance of US$3.3bn at 31 December 2011 to a positive balance of US$1.6bn at 31 December 2012, reflecting an improvement in the fair value of these assets.

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Reconciliation of reported and constant currency assets and liabilities

	31 December 2012 compared with 31 December 2011					
HSBC	31 Dec 11 as reported US$m	Currency translation adjustment[59] US$m	31 Dec 11 at 31 Dec 12 exchange rates US$m	31 Dec 12 as reported US$m	Reported change %	Constant currency change %
Cash and balances at central banks	129,902	2,011	131,913	141,532	9	7
Trading assets	330,451	7,317	337,768	408,811	24	21
Financial assets designated at fair value	30,856	147	31,003	33,582	9	8
Derivative assets	346,379	9,519	355,898	357,450	3	–
Loans and advances to banks	180,987	1,436	182,423	152,546	(16)	(16)
Loans and advances to customers	940,429	18,175	958,604	997,623	6	4
Financial investments	400,044	4,772	404,816	421,101	5	4
Assets held for sale	39,558	(175)	39,383	19,269	(51)	(51)
Other assets	156,973	719	157,692	160,624	2	2
Total assets	2,555,579	43,921	2,599,500	2,692,538	5	4
Deposits by banks	112,822	1,809	114,631	107,429	(5)	(6)
Customer accounts	1,253,925	20,233	1,274,158	1,340,014	7	5
Trading liabilities	265,192	6,262	271,454	304,563	15	12
Financial liabilities designated at fair value	85,724	1,782	87,506	87,720	2	–
Derivative liabilities	345,380	9,566	354,946	358,886	4	1
Debt securities in issue	131,013	2,053	133,066	119,461	(9)	(10)
Liabilities under insurance contracts	61,259	145	61,404	68,195	11	11
Liabilities of disposal groups held for sale	22,200	(486)	21,714	5,018	(77)	(77)
Other liabilities	111,971	693	112,664	118,123	5	5
Total liabilities	2,389,486	42,057	2,431,543	2,509,409	5	3
Total shareholders' equity	158,725	1,821	160,546	175,242	10	9
Non-controlling interests	7,368	43	7,411	7,887	7	6
Total equity	166,093	1,864	167,957	183,129	10	9
Total equity and liabilities	2,555,579	43,921	2,599,500	2,692,538	5	4

For footnote, see page 120.

In implementing our strategy, we have agreed to sell a number of businesses across the Group. Assets and liabilities of businesses which, it is highly probable, will be sold are reported as held for sale on the balance sheet until the sale is closed. We include loans and advances to customers and customer account balances reported as held for sale in our combined view of customer lending and customer accounts. We consider the combined view more accurately reflects the size of our lending and deposit books and growth thereof.

Combined view of customer lending and customer deposits

	2012 US$m	2011 US$m	Change %
Loans and advances to customers	**997,623**	940,429	6
Loans and advances to customers reported in assets held for sale[60]	**6,124**	35,105	(83)
Card and Retail Services	**–**	29,137	(100)
US branches	**–**	2,441	(100)
Other	**6,124**	3,527	74
Combined customer lending	**1,003,747**	975,534	3
Customer accounts	**1,340,014**	1,253,925	7
Customer accounts reported in assets held for sale[62]	**2,990**	20,138	(85)
US branches	**–**	15,144	(100)
Other	**2,990**	4,994	(40)
Combined customer deposits	**1,343,004**	1,274,063	5

For footnote, see page 120.

Financial investments

	At 31 December 2012		
	Equity securities US$bn	**Debt securities US$bn**	**Total US$bn**
Balance Sheet Management	**–**	**293.4**	**293.4**
Insurance entities	**–**	**43.4**	**43.4**
Special purpose entities	**–**	**24.7**	**24.7**
Principal investments	**2.9**	**–**	**2.9**
Other	**2.9**	**53.8**	**56.7**
	5.8	**415.3**	**421.1**

The table above analyses the Group's holdings of financial investments by business activity. Further information can be found in the following sections:

- 'Balance Sheet Management' (page 223) for a description of the activities and an analysis of third party assets in balance sheet management.
- 'Risk management of insurance operations' (page 232) includes a discussion and further analysis of the use of financial investments within our insurance operations.
- 'Special purpose entities' (page 502) for further information about the nature of securities investment conduits in which the above financial investments are held.
- 'Equity securities classified as available for sale' (page 222) includes private equity holdings and other strategic investments.
- 'Other' represents financial investments held in certain locally managed treasury portfolios and other GB&M portfolios held for specific business activities.

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Customer accounts by country

	At 31 December 2012 US$m	2011 US$m
Europe	**555,009**	493,404
UK	**426,144**	373,737
France[61]	**55,578**	55,278
Germany	**15,611**	8,738
Malta	**5,957**	5,695
Switzerland[62]	**20,211**	19,888
Turkey	**7,629**	6,809
Other	**23,879**	23,259
Hong Kong	**346,208**	315,345
Rest of Asia-Pacific	**183,621**	174,012
Australia	**20,430**	18,802
India	**10,415**	10,227
Indonesia	**6,512**	6,490
Mainland China	**35,572**	31,570
Malaysia	**17,641**	16,970
Singapore	**47,862**	44,447
Taiwan	**12,497**	11,659
Vietnam	**2,147**	1,834
Other	**30,545**	32,013
Middle East and North Africa (excluding Saudi Arabia)	**39,583**	36,422
Egypt	**7,548**	7,047
Qatar	**2,704**	2,796
UAE	**18,448**	18,172
Other	**10,883**	8,407
North America	**149,037**	155,982
US	**90,627**	97,542
Canada	**47,049**	45,510
Bermuda	**11,361**	12,930
Latin America	**66,556**	78,760
Argentina	**5,351**	4,878
Brazil	**30,144**	42,410
Mexico	**22,724**	21,772
Panama	**5,940**	5,463
Other	**2,397**	4,237
Total	**1,340,014**	1,253,925

For footnotes, see page 120.

Economic loss

Our internal performance measures include economic profit/(loss), a calculation which compares the return on financial capital invested in HSBC by our shareholders with the cost of that capital. We price our cost of capital internally and the difference between that cost and the post-tax profit attributable to ordinary shareholders represents the amount of economic profit/(loss) generated.

Our long-term cost of capital is reviewed annually and is 11% for 2012; this remains unchanged from 2011. However, it has been revised to 10% for 2013, primarily due to a reduction in the risk-free rate, reflecting the continued intervention of central banks, quantitative easing and the flight to quality, and greater banking sector stability through higher levels of capital and liquidity.

The following commentary is on a reported basis.

The return on invested capital fell by 2.2 percentage points to 8.0%, which was 3.0 percentage points lower than our benchmark cost of capital. Our economic loss was US$5.1bn, a deterioration of US$3.7bn compared with the loss in 2011. This reflected higher average invested capital and a decrease in profits attributable to ordinary shareholders, primarily due to adverse fair value movements on own debt attributable to credit spreads of US$5.2bn, compared with favourable movements of US$3.9bn in 2011, an increase in notable cost items and a higher tax charge in 2012.

	2012		2011	
	US$m	%[63]	US$m	%[63]
Average total shareholders' equity	**166,820**		156,129	
Adjusted by:				
Goodwill previously amortised or written off	**8,399**		8,123	
Property revaluation reserves	**(896)**		(914)	
Reserves representing unrealised losses on effective cash flow hedges	**55**		287	
Reserves representing unrealised losses on available-for-sale securities	**1,185**		3,379	
Preference shares and other equity instruments	**(7,256)**		(7,256)	
Average invested capital[64]	**168,307**		159,748	
Return on invested capital[65]	**13,454**	**8.0**	16,224	10.2
Benchmark cost of capital	**(18,514)**	**(11.0)**	(17,572)	(11.0)
Economic loss and spread	**(5,060)**	**(3.0)**	(1,348)	(0.8)

For footnotes, see page 120.

Reconciliation of RoRWA measures

Performance Management

We target a return on average ordinary shareholders' equity of 12%–15%. For internal management purposes we monitor global businesses and geographical regions by pre-tax return on RWAs, a metric which combines return on equity and regulatory capital efficiency objectives.

In addition to measuring return on average risk-weighted assets ('RoRWA') we measure our performance internally using the non-GAAP measure of underlying RoRWA, which is underlying profit before tax as a percentage of average risk-weighted assets adjusted for the effects of foreign currency translation differences and business disposals. Underlying RoRWA adjusts performance for certain items which distort year-on-year performance as explained on page 26.

We also present the non-GAAP measure of underlying RoRWA adjusted for the effect of operations which are not regarded as contributing to the longer-term performance of the Group. These include the run-off portfolios and the Card and Retail Services business which was sold in 2012.

The Card and Retail Services average RWAs in the table below represent the average of the associated operational risk RWAs that were not immediately released on disposal and have not already been adjusted as part of the underlying RoRWA calculation. The pre-tax loss for Card and Retail Services in the table below primarily relates to litigation expenses incurred after the sale of the business that have not been adjusted as part of the underlying RoRWA calculation.

Reconciliation of underlying RoRWA (excluding run-off portfolios and Card and Retail Services)

	2012			2011		
	Pre-tax return US\$m	**Average RWAs[66] US\$bn**	**RoRWA[66,67] %**	Pre-tax return US\$m	Average RWAs[66] US\$bn	RoRWA[66,67] %
Reported	**20,649**	**1,172**	**1.8**	21,872	1,154	1.9
Underlying[67]	**16,385**	**1,129**	**1.5**	13,861	1,077	1.3
Run-off portfolios	**(1,630)**	**167**	**(1.0)**	(4,901)	169	(2.9)
Legacy credit in GB&M	**(280)**	**45**	**(0.6)**	(429)	33	(1.3)
US CML and other[68]	**(1,350)**	**122**	**(1.1)**	(4,472)	136	(3.3)
Card and Retail Services	**(150)**	**5**	**(3.0)**	–	–	–
Underlying (excluding run-off portfolios and Card and Retail Services)	**18,165**	**957**	**1.9**	18,762	908	2.1

For footnotes, see page 120.

Reconciliation of reported and underlying average risk-weighted assets

	Year ended 31 December		
	2012 US\$bn	2011 US\$bn	Change %
Average reported RWAs[66]	**1,172**	1,154	2
Currency translation adjustment[24]	**–**	(7)	
Acquisitions, disposals and dilutions	**(43)**	(70)	
Average underlying RWAs[66]	**1,129**	1,077	5

Disposals, held for sale and run-off portfolios

In implementing our strategy, we have sold or agreed to sell a number of businesses and investments across the Group. The sale of these businesses and investments will have a significant effect on both our revenue and profitability in the future. In addition, we have substantial portfolios which are being run down. We expect the losses on these portfolios to continue to affect the Group in the future.

The table below presents the contribution of these businesses and investments to the historical results of the Group. We do not expect the historical results to be indicative of future results because of disposals or run-offs. Fixed allocated costs, included in total operating costs, will not necessarily be removed upon disposal and have been separately identified.

Summary income statements for disposals, held for sale and run-off portfolios[69,70]

	2012					
				Held for sale	Run-off portfolios	
	Card and Retail Services US$m	Ping An US$m	Other disposals US$m	excluding US CML US$m	US CML and other[71] US$m	Legacy credit in GB&M US$m
Net interest income/(expense)	1,267	–	352	303	2,561	(28)
Net fee income/(expense)	395	–	13	(35)	33	(17)
Net trading income/(expense)	–	–	67	22	(226)	99
Net income/(expense) from financial instruments designated at fair value	–	–	3	5	(785)	10
Gains less losses from financial investments	–	–	8	27	–	(72)
Dividend income	–	–	–	–	3	–
Net earned insurance premiums	–	–	430	315	–	–
Other operating income/(expense)	7	–	10	5	37	(3)
Total operating income/(expense)	1,669	–	883	642	1,623	(11)
Net insurance claims incurred and movement in liabilities to policyholders	–	–	(218)	(225)	–	–
Net operating income/(expense)[21]	1,669	–	665	417	1,623	(11)
Loan impairment charges and other credit risk provisions	(322)	–	(16)	(77)	(2,569)	(168)
Net operating income/(expense)	1,347	–	649	340	(946)	(179)
Total operating expenses	(729)	–	(467)	(344)	(1,106)	(101)
Operating profit/(loss)	618	–	182	(4)	(2,052)	(280)
Share of profit in associates and joint ventures	–	763	12	9	2	–
Profit/(loss) before tax	618	763	194	5	(2,050)	(280)
By global business						
Retail Banking and Wealth Management	618	622	99	(29)	(1,274)	–
Commercial Banking	–	82	40	24	9	–
Global Banking and Markets	–	59	65	28	–	(280)
Global Private Banking	–	–	(9)	–	–	–
Other	–	–	(1)	(18)	(785)	–
Profit/(loss) before tax	618	763	194	5	(2,050)	(280)
By geographical region						
Europe	–	–	(1)	–	–	(281)
Hong Kong	–	–	45	–	–	1
Rest of Asia-Pacific	–	763	(31)	22	–	(2)
Middle East and North Africa	–	–	46	–	–	–
North America	618	–	25	(25)	(2,050)	2
Latin America	–	–	110	8	–	–
Profit/(loss) before tax	618	763	194	5	(2,050)	(280)
Other information						
Gain on sale	3,148	3,012	1,579			
Fixed allocated costs included in total operating expenses	188	–	77	52	230	–
	US$bn	US$bn	US$bn	US$bn	US$bn	US$bn
Reduction in RWAs on disposal[72]	39.3	24.9	7.5	8.8		
RWAs[72]				9.3	107.1	38.6
	%	%	%	%	%	%
Share of HSBC's profit before tax	3.0	3.7	0.9	–	(10.0)	(1.4)
Cost efficiency ratio	43.7	–	70.2	82.5	68.1	–

For footnotes, see page 120.

Critical accounting policies

(Audited)

Introduction

The results of HSBC are sensitive to the accounting policies, assumptions and estimates that underlie the preparation of our consolidated financial statements. The significant accounting policies are described in Note 2 on the Financial Statements.

The accounting policies that are deemed critical to our results and financial position, in terms of the materiality of the items to which the policies are applied and the high degree of judgement involved, including the use of assumptions and estimation, are discussed below.

Impairment of loans and advances

Our accounting policy for losses arising from the impairment of customer loans and advances is described in Note 2g on the Financial Statements. Loan impairment allowances represent management's best estimate of losses incurred in the loan portfolios at the balance sheet date.

Management is required to exercise judgement in making assumptions and estimates when calculating loan impairment allowances on both individually and collectively assessed loans and advances.

The majority of the collectively assessed loan impairment allowances are in North America, where they were US$5.2bn, representing 54% (2011: US$6.8bn; 62%) of the Group's total collectively assessed loan impairment allowances and 32% of the Group's total impairment allowances. Of the North American collective impairment allowances approximately 86% (2011: 75%) related to the US CML portfolio.

The methods used to calculate collective impairment allowances on homogeneous groups of loans and advances that are not considered individually significant are disclosed in Note 2g on the Financial Statements. They are subject to estimation uncertainty, in part because it is not practicable to identify losses on an individual loan basis because of the large number of individually insignificant loans in the portfolio.

The estimation methods include the use of statistical analyses of historical information, supplemented with significant management judgement, to assess whether current economic and credit conditions are such that the actual level of inherent losses is likely to be greater or less than that suggested by historical experience. Where changes in economic, regulatory or behavioural conditions result in the most recent trends in portfolio risk factors being not fully reflected in the statistical models, risk factors are taken into account by adjusting the impairment allowances derived solely from historical loss experience.

Risk factors include loan portfolio growth, product mix, unemployment rates, bankruptcy trends, geographical concentrations, loan product features, economic conditions such as national and local trends in housing markets, the level of interest rates, portfolio seasoning, account management policies and practices, changes in laws and regulations, and other influences on customer payment patterns. Different factors are applied in different regions and countries to reflect local economic conditions, laws and regulations. The methodology and the assumptions used in calculating impairment losses are reviewed regularly in the light of differences between loss estimates and actual loss experience. For example, roll rates, loss rates and the expected timing of future recoveries are regularly benchmarked against actual outcomes to ensure they remain appropriate.

In 2012, a portfolio risk factor adjustment of US$225m was made to increase the collective loan impairment allowances for our US mortgage lending portfolios. The adjustment was made following a review completed in the fourth quarter of 2012 which concluded that the estimated average period of time from current status to write-off was ten months for real estate loans (previously a period of seven months was used). During 2013, this revised estimate will be incorporated into the statistical impairment allowance models.

Where loans are individually assessed for impairment, management judgement is required in determining whether there is objective evidence that a loss event has occurred, and if so, the measurement of the impairment allowance. In determining whether there is objective evidence that a loss event has occurred, judgement is exercised in evaluating all relevant information on indicators of impairment, which is not restricted to the consideration of whether payments are contractually past-due but includes broader consideration of factors indicating deterioration in the financial condition and outlook of borrowers affecting their ability to pay. A higher level of judgement is required for loans to borrowers showing signs of financial difficulty in market sectors experiencing economic stress, particularly where the likelihood of repayment is affected by the prospects for refinancing or the sale of a specified asset. For those loans where objective evidence of impairment exists, management determine the size of the allowance required based on a range of factors such as the realisable value of security, the likely dividend available on liquidation or bankruptcy, the viability of the customer's business model and the capacity to trade successfully out of financial difficulties and generate sufficient cash flow to service debt obligations.

Under certain specified conditions, we provide loan forbearance to borrowers experiencing financial difficulties by agreeing to modify the contractual payment terms of loans in order to improve the management of customer relationships, maximise collection opportunities and, if possible, avoid default or repossession. Where forbearance activities are significant, higher levels of judgement and estimation uncertainty are involved in determining their effects on loan impairment allowances. Forbearance activities take place in both retail and wholesale loan portfolios, but our largest concentration is in the US, in HSBC Finance's CML portfolio.

The exercise of judgement requires the use of assumptions which are highly subjective and very sensitive to the risk factors, in particular to changes in economic and credit conditions across a large number of geographical areas. Many of the factors have a high degree of interdependency and there is no single factor to which our loan impairment allowances as a whole are sensitive, though they are particularly sensitive to general economic and credit conditions in North America. For example, a 10% increase in impairment allowances on collectively assessed loans and advances in North America would have increased loan impairment allowances by US$0.5bn at 31 December 2012 (2011: US$0.7bn).

It is possible that the outcomes within the next financial year could differ from the assumptions used, and this could result in a material adjustment to the carrying amount of loans and advances.

Goodwill impairment

Our accounting policy for goodwill is described in Note 2p on the Financial Statements. Note 23 on the Financial Statements lists our cash generating units ('CGU's) by geographical region and global business. HSBC's total goodwill amounted to US$21bn at 31 December 2012 (2011: US$21bn).

The review of goodwill for impairment reflects management's best estimate of the future cash flows of the CGUs and the rates used to discount these cash flows, both of which are subject to uncertain factors as follows:

- the future cash flows of the CGUs are sensitive to the cash flows projected for the periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of sustainable cash flows thereafter. Forecasts are compared with actual performance and verifiable economic data, but they necessarily reflect management's view of future business prospects at the time of the assessment; and
- the rates used to discount future expected cash flows are based on the costs of capital assigned to individual CGUs and the rates can have a significant effect on their valuation. The cost of capital percentage is generally derived from a Capital Asset Pricing Model, which incorporates inputs reflecting a number of financial and economic variables, including the risk-free interest rate in the country concerned and a premium for the risk of the business being evaluated. These variables are subject to fluctuations in external market rates and economic conditions beyond our control and are consequently subject to uncertainty and require the exercise of significant judgement.

A decline in a CGU's expected cash flows and/or an increase in its cost of capital reduces the CGU's estimated recoverable amount. If this is lower than the carrying value of the CGU, a charge for impairment of goodwill is recognised in our income statement for the year.

The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. In such market conditions, management retests goodwill for impairment more frequently than annually to ensure that the assumptions on which the cash flow forecasts are based continue to reflect current market conditions and management's best estimate of future business prospects.

During 2012, no impairment of goodwill was identified (2011: nil). In addition to the annual impairment test which was performed as at 1 July 2012, management reviewed the current and expected performance of the CGUs as at 31 December 2012 and determined that there was no indication of potential impairment of the goodwill allocated to them, except for the GB&M – Europe CGU, which experienced significantly reduced profitability in the second half of 2012 compared with the first half of 2012. The reduced forecast profitability resulted in a reduction in the recoverable amount of the CGU over its carrying amount ('headroom'). Consequently, the results of the goodwill impairment testing for this CGU are more sensitive to key assumptions used. Management retested the goodwill for this CGU and concluded that there was no impairment.

Note 23 on the Financial Statements includes details of the CGUs with significant balances of goodwill, states the key assumptions used to assess the goodwill in each of those CGUs for impairment and provides a discussion of the sensitivity of the carrying value of goodwill to changes in key assumptions.

Valuation of financial instruments

Our accounting policy for determining the fair value of financial instruments is described in Note 2d on the Financial Statements. The best evidence of fair value is a quoted price for the instrument being measured in an actively traded market. In the event that the market for a financial instrument is not active, a valuation technique is used. The majority of valuation techniques employ only observable market data and so the reliability of the fair value measurement is high. However, certain financial instruments are valued on the basis of valuation techniques that include one or more significant market inputs that are unobservable. Valuation techniques that rely to a greater extent on unobservable inputs require a higher level of management judgement to calculate a fair value than those based wholly on observable inputs.

Valuation techniques used to calculate fair values are discussed in Note 15 on the Financial Statements. The main assumptions and estimates which management consider when applying a model with valuation techniques are:

- the likelihood and expected timing of future cash flows on the instrument. These cash flows are estimated based on the terms of the instrument, and judgement may be required when the ability of the counterparty to service the instrument in accordance with the contractual terms is in doubt. Future cash flows may be sensitive to changes in market rates;
- selecting an appropriate discount rate for the instrument. The determination of this rate is based on an assessment of what a market participant would regard as the appropriate spread of the rate for the instrument over the appropriate risk-free rate; and
- judgement to determine what model to use to calculate fair value in areas where the choice of valuation model is particularly subjective, for example, when valuing complex derivative products.

When applying a model with unobservable inputs, estimates are made to reflect uncertainties in fair values resulting from a lack of market data inputs, for example, as a result of illiquidity in the market. For these instruments, the fair value measurement is less reliable. Inputs into valuations based on unobservable data are inherently uncertain because there is little or no current market data available from which to determine the level at which an arm's length transaction would occur under normal business conditions. However, in most cases there is some market data available on which to base a determination of fair value, for example historical data, and the fair values of most financial instruments are based on some market observable inputs even when unobservable inputs are significant.

The fair values of financial assets and liabilities of US$718bn (2011: US$665bn) and US$622bn (2011: US$569bn), respectively, were determined using valuation techniques which represented 60% (2011: 61%) and 83% (2011: 82%), respectively, of financial assets and liabilities measured at fair value.

The methodology for estimating credit valuation adjustments ('CVA') and debit valuation adjustments ('DVA') has been revised as at 31 December 2012 as a result of changing market practices in response to regulatory and accounting changes, as well as general market developments.

A key input into the calculation of CVA is the probability of default ('PD'). Prior to the revision of the methodology, the PD was based on HSBC's internal credit rating for the counterparty. The revised methodology maximises the use of PD based on market-observable data, such as credit default swap ('CDS') spreads. Where CDS spreads are not available, PDs are estimated having regard to market practice, considering relevant data including CDS indices and historical rating transition matrices. In addition, HSBC aligned its methodology for determining DVA to be consistent with that applied for CVA as at 31 December 2012. Historically, HSBC considered that a zero spread was appropriate in respect of own credit risk and consequently did not adjust derivative liabilities for its own credit risk.

The types and amounts of adjustments made in determining the fair value of financial instruments measured at fair value using valuation techniques, and a sensitivity analysis of fair values for financial instruments with significant unobservable inputs to reasonably possible alternative assumptions, are described in Note 15 on the Financial Statements.

Given the uncertainty and subjective nature of valuing financial instruments at fair value, it is possible that the outcomes in the next financial year could differ from the assumptions used, and this could result in a material adjustment to the carrying amount of financial instruments measured at fair value.

Deferred tax assets

Our accounting policy for the recognition of deferred tax assets is described in Note 2s on the Financial Statements. The recognition of a deferred tax asset relies on an assessment of the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and ongoing tax planning strategies.

The most significant judgements concern the US deferred tax asset, given the recent history of losses in our US operations. The net US deferred tax asset amounted to US$4.6bn or 61% (2011: US$5.2bn; 68%) of deferred tax assets recognised on the Group's balance sheet. These judgements take into consideration the reliance placed on the use of tax planning strategies.

The most significant tax planning strategy is the retention of capital in our US operations to ensure the realisation of the deferred tax assets. The principal strategy involves generating future taxable profits through the retention of capital in the US in excess of normal regulatory requirements in order to reduce deductible funding expenses or otherwise deploy such capital or increase levels of taxable income. Management expects that, with this strategy, the US operations will generate sufficient future profits to support the recognition of the deferred tax assets. If HSBC Holdings were to decide not to provide this ongoing support, the full recovery of the deferred tax asset may no longer be probable and could result in a significant reduction of the deferred tax asset which would be recognised as a charge in the income statement.

Provisions

The accounting policy for provisions is described in Note 2w on the Financial Statements. Note 32 on the Financial Statements discloses the major categories of provisions recognised. The closing balance of provisions amounted to US$5.3bn (2011: US$3.3bn), of which US$1.7bn (2011: US$1.5bn) relates to legal proceedings and regulatory matters and US$2.4bn (2011: US$1.1bn) relates to customer remediation.

Judgement is involved in determining whether a present obligation exists, and in estimating the probability, timing and amount of any outflows. Professional expert advice is taken on litigation provisions, property provisions (including onerous contracts) and similar liabilities.

Provisions for legal proceedings and regulatory matters typically require a higher degree of judgement than other types of provisions. When cases are at an early stage, accounting judgements can be difficult because of the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. As matters progress through various stages of development, management and legal advisers evaluate on an ongoing basis whether provisions should be recognised and their estimated amounts, revising previous judgements and estimates as appropriate. At more advanced stages, it is typically possible to make judgements and estimates around a better defined set of possible outcomes. However, such judgements can be very difficult and the amount of any provision can be very sensitive to the assumptions used. There could be a wide range of possible outcomes for any pending legal proceedings, investigations or inquiries. As a result, it is often not practicable to quantify a range of possible outcomes for individual matters. It is also not practicable to meaningfully quantify ranges of potential outcomes in aggregate for these types of provisions because of the diverse nature and circumstances of such matters and the wide range of uncertainties involved. For a detailed description of the nature of uncertainties and assumptions and the effect on the amount and timing of possible cash outflows on material matters, see Note 43 on the Financial Statements.

Provisions for customer remediation also require significant levels of estimation and judgement. The amounts of provisions recognised depend on a number of different assumptions, for example, the volume of inbound complaints, the projected period of inbound complaint volumes, the decay rate of complaint volumes, the population identified as systemically mis-sold and the number of policies per customer complaint.

In view of the inherent uncertainties and the high level of subjectivity involved in the recognition and measurement of provisions, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based, resulting in materially different amounts of provisions recognised and outflows of economic benefits from those estimated by management for the purposes of the 2012 Financial Statements.

Global businesses

Summary

HSBC reviews operating activity on a number of bases, including by geographical region and by global business.

The commentaries below present global businesses followed by geographical regions (page 79). Performance is discussed in this order because certain strategic themes, business initiatives and trends affect more than one geographical region. All commentaries are on a constant currency basis (page 25) unless stated otherwise.

Basis of preparation

The results of global businesses are presented in accordance with the accounting policies used in the preparation of HSBC's consolidated financial statements. Our operations are closely integrated and, accordingly, the presentation of global business data includes internal allocations of certain items of income and expense. These allocations include the costs of certain support services and global functions, to the extent that these can be meaningfully attributed to operational business lines. While such allocations have been made on a systematic and consistent basis, they necessarily involve some subjectivity.

Where relevant, income and expense amounts presented include the results of inter-segment funding as well as inter-company and inter-business line transactions. All such transactions are undertaken on arm's length terms.

The expense of the UK bank levy is included in the Europe geographical region as HSBC regards the levy as a cost of being headquartered in the UK. For the purposes of the segmentation by global business, the cost of the levy is included in 'Other'.

The fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws of US$1.9bn are included in the North America (US$1.5bn) and Europe (US$0.4bn) geographical regions, and in 'Other' for the purposes of the segmentation by global business.

Profit/(loss) before tax

	2012		2011		2010	
	US$m	**%**	US$m	%	US$m	%
Retail Banking and Wealth Management	**9,575**	**46.4**	4,270	19.6	3,839	20.2
Commercial Banking	**8,535**	**41.3**	7,947	36.3	6,090	32.0
Global Banking and Markets	**8,520**	**41.3**	7,049	32.2	9,215	48.4
Global Private Banking	**1,009**	**4.9**	944	4.3	1,054	5.5
Other[73]	**(6,990)**	**(33.9)**	1,662	7.6	(1,161)	(6.1)
	20,649	**100.0**	21,872	100.0	19,037	100.0

Total assets[74]

	At 31 December			
	2012		2011	
	US$m	**%**	US$m	%
Retail Banking and Wealth Management	**536,244**	**19.9**	540,548	21.2
Commercial Banking	**363,659**	**13.5**	334,966	13.1
Global Banking and Markets	**1,942,470**	**72.1**	1,877,627	73.5
Global Private Banking	**118,440**	**4.4**	119,839	4.7
Other	**201,741**	**7.5**	180,126	7.0
Intra-HSBC items	**(470,016)**	**(17.4)**	(497,527)	(19.5)
	2,692,538	**100.0**	2,555,579	100.0

For footnotes, see page 120.

Risk-weighted assets

	At 31 December			
	2012		2011	
	US$bn	**%**	US$bn	%
Retail Banking and Wealth Management	**276.6**	**24.6**	351.2	29.0
Commercial Banking	**397.0**	**35.3**	382.9	31.7
Global Banking and Markets	**403.1**	**35.9**	423.0	35.0
Global Private Banking	**21.7**	**1.9**	22.5	1.9
Other	**25.5**	**2.3**	29.9	2.4
	1,123.9	**100.0**	1,209.5	100.0

Selected items included in profit before tax by global business

Acquisitions, disposals and dilutions[75]

	2012	2011	2010
	US$m	US$m	US$m
Retail Banking and Wealth Management	**5,574**	3,328	3
Commercial Banking	**594**	76	119
Global Banking and Markets	**149**	114	262
Global Private Banking	**55**	(9)	–
Other[73]	**3,107**	141	250
	9,479	3,650	634

For footnotes, see page 120.

Products and services

Retail Banking and Wealth Management

RBWM serves over 54 million personal customers. We take deposits and provide transactional banking services to enable customers to manage their day-to-day finances and save for the future. We selectively offer credit facilities to assist customers in their short or longer-term borrowing requirements; and we provide financial advisory, broking, insurance and investment services to help them to manage and protect their financial futures.

We develop products designed to meet the needs of specific customer segments, which may include a range of different services and delivery channels.

Typically, customer offerings include:

- *liability-driven services*: deposits and account services;
- *asset-driven services*: credit and lending, both secured and unsecured; and
- *fee-driven and other services*: financial advisory, broking, life insurance manufacturing and asset management.

We deliver services through four principal channels: branches, self-service terminals, telephone service centres and digital (internet and mobile). Customers can transact with the bank via a combination of these channels, through the following offerings:

- HSBC Premier: we provide preferential banking services and global recognition to our mass affluent customers and their immediate families with a dedicated relationship manager, specialist wealth advice and tailored solutions. Customers can access emergency travel assistance, priority telephone banking and an online 'global view' of their Premier accounts around the world.
- HSBC Advance: we provide a range of preferential products and services to simplify the banking needs of customers and to help them manage and plan their money to achieve their financial goals and ambitions.
- Wealth Solutions & Financial Planning: a financial planning process designed around individual customer needs to help our clients to protect, grow and manage their wealth through investment and wealth insurance products manufactured by Global Asset Management, Global Markets and HSBC Insurance and by selected third-party providers.
- Basic Banking: we increasingly provide globally standardised but locally delivered, reliable, easy to understand, good-value banking products and services using global product platforms and globally set service standards.

Commercial Banking

We segment our CMB business into Corporate, to serve both corporate and mid-market companies with more sophisticated financial needs, and Business Banking, to serve SMEs, enabling differentiated coverage of our target customers. This allows us to provide continuous support to companies as they grow both domestically and internationally, and ensures a clear focus on internationally aspirant customers.

We place particular emphasis on international connectivity to meet the needs of our business customers. We aim to be recognised as the leading international trade and business bank by focusing on faster-growing markets, repositioning towards international business and enhancing collaboration across the Group. This will be underpinned by reducing complexity and operational risk and driving efficiency gains through adopting a global operating model.

- Credit and Lending: we offer a broad range of domestic and cross-border financing, including overdrafts, corporate cards, term loans and syndicated, leveraged, acquisition and project finance. Asset finance is also offered in selected countries.
- International trade and receivables finance: we provide the services and finance our clients need throughout the trade cycle including; letters of credit, collections, guarantees; receivables finance; supply chain solutions; commodity and structured finance; and risk distribution. HSBC is supporting the development of renminbi as a trade currency, with renminbi capabilities in more than 50 markets.
- Payments and Cash Management: we are a leading provider of domestic and cross-border payments, collections, liquidity management and account services offering local, regional and global solutions delivered via e-enabled platforms designed to address the current and future needs of our clients.
- Insurance and Investments: we offer business and financial protection, trade insurance, employee benefits, corporate wealth management and a variety of other commercial risk insurance products in selected countries.
- GB&M: our CMB franchise represents a key client base for GB&M products and services, including foreign exchange and interest rate products, together with capital raising on debt and equity markets and advisory services.

Global Banking and Markets

GB&M provides tailored financial solutions to major government, corporate and institutional clients and private investors worldwide. Managed as a global business, GB&M operates a long-term relationship management approach to build a full understanding of clients' financial requirements. Sector-focused client service teams comprising relationship managers and product specialists develop financial solutions to meet individual client needs. With a presence in over 60 countries/territories and access to HSBC's worldwide presence and capabilities, this business serves subsidiaries and offices of our clients on a global basis.

GB&M is managed as two principal business lines: Global Markets and Global Banking. This structure allows us to focus on relationships and sectors that best fit the Group's geographic reach and facilitate seamless delivery of our products and services to clients.

In addition, Balance Sheet Management is responsible for the management of liquidity and funding. It also manages structural interest rate positions within the Global Markets limit structure.

- Global Markets operations consist of treasury and capital markets services. Products include foreign exchange; currency, interest rate, bond, credit, equity and other derivatives; government and non-government fixed income and money market instruments; precious metals and exchange-traded futures; equity services; distribution of capital markets instruments; and securities services, including custody and clearing services and funds administration to both domestic and cross-border investors.
- Global Banking offers financing, advisory and transaction services. Products include:
  - capital raising, advisory services, bilateral and syndicated lending, leveraged and acquisition finance, structured and project finance, lease finance and non-retail deposit taking;
  - international, regional and domestic payments and cash management services; and trade services for large corporate clients.

Global Private Banking

GPB provides investment management and trustee solutions to high net worth individuals and their families globally. We aim to meet the needs of our clients by providing excellent customer service, utilising our global reach and offering a comprehensive suite of solutions.

Drawing on the strength of the HSBC Group and the most suitable products from the marketplace, we work with our clients to provide solutions to grow, manage, and preserve wealth for today and for the future.

- Private Banking services comprise multicurrency and fiduciary deposits, account services, and credit and specialist lending. GPB also accesses HSBC's universal banking capabilities to offer products and services such as credit cards, internet banking, and corporate and investment banking solutions.
- Investment Management comprises advisory and discretionary investment services, as well as brokerage across asset classes. This includes a complete range of investment vehicles, portfolio management, security services and alternatives.
- Private Trust Solutions comprise trusts and estate planning, designed to protect wealth and preserve it for future generations through structures tailored to meet the individual needs of each client.

Retail Banking and Wealth Management

RBWM provides banking and wealth management services for our personal customers to help them to manage their finances and protect and build their financial futures.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	20,298	24,101	24,166
Net fee income	7,205	8,226	8,397
Other income	6,358	1,206	1,048
Net operating income[21]	**33,861**	33,533	33,611
LICs[76]	(5,515)	(9,319)	(11,259)
Net operating income	**28,346**	24,214	22,352
Total operating expenses	(19,769)	(21,202)	(19,539)
Operating profit	**8,577**	3,012	2,813
Income from associates[77]	998	1,258	1,026
Profit before tax	**9,575**	4,270	3,839
RoRWA[66]	3.1%	1.2%	1.1%

Underlying revenue growth in all faster-growing regions

Announced 34 disposals or closures since the start of 2011 and completed 12 in 2012

Best in Wealth Management in Hong Kong

(The Asian Banker, March 2012)

Strategic direction

RBWM provides retail banking and wealth management services for personal customers in markets where we have, or can build, the scale to do so cost effectively.

We focus on three strategic imperatives:

- building a consistent, high standard, customer needs-driven wealth management service for retail customers drawing on our Insurance and Asset Management businesses;
- leveraging global expertise to improve customer service and productivity, to provide a high standard of banking solutions and service to our customers efficiently; and
- simplifying and re-shaping the RBWM portfolio of businesses globally, to focus our capital and resources on key markets.

For footnotes, see page 120.

The commentary is on a constant currency basis unless stated otherwise.

Review of performance

- RBWM reported profit before tax of US$9.6bn compared with US$4.3bn in 2011 (US$4.2bn on a constant currency basis). This included net gains resulting from a number of strategic transactions, including US$3.7bn from the disposals of the Card and Retail Services ('CRS') business and non-strategic branches in the US.
- On an underlying basis, profit before tax increased by US$3.1bn, largely driven by lower loan impairment charges in the US run-off portfolio and higher insurance profits in Hong Kong and Brazil. These were partly offset by charges relating to the customer redress programmes in the UK of US$1.8bn, compared with US$868m in 2011 (US$875m as reported).

RBWM – profit/(loss) before tax

	2012 US$m	2011 US$m	2010 US$m
RBWM excluding US CRS and US run-off portfolio	7,083	6,681	5,936
US CRS	3,766	2,061	1,979
US run-off portfolio	(1,274)	(4,472)	(4,076)
	9,575	4,270	3,839

- Loss before tax in the US run-off portfolio declined significantly, mainly due to lower loan impairment charges reflecting the decline in average lending balances. In addition, revenue benefited from lower adverse movements on the fair value of non-qualifying hedges in HSBC Finance of US$227m, compared with US$1.2bn in 2011. This was partly offset by a fall in net interest income largely driven by the continued reduction in lending balances.
- Profit before tax for RBWM excluding US CRS and the US run-off portfolio increased by US$472m, with revenue growth in Hong Kong, Latin America and Rest of Asia-Pacific partly offset by a fall in profit in the UK due to a US$883m increase in customer redress provisions and the non-recurrence of a credit of US$256m (US$264m as reported) relating to defined benefit pension obligations.
- *Revenue* grew by 13% in Hong Kong reflecting wider deposit spreads, higher lending and deposit balances and the gains on sale of the general insurance businesses and our shares in Global Payments Asia-Pacific Ltd. Insurance income also increased due to higher investment returns and strong sales and renewals of life insurance products. This was partly offset by the

non-recurrence of the implementation benefit from refining the PVIF asset calculation in 2011.

- Revenue in Rest of Asia-Pacific increased by 3% due to the gain on sale of our operations in Thailand, partly offset by the loss of operating revenues associated with this disposal and the discontinuation of our HSBC Premier ('Premier') service in Japan. Net interest income remained broadly in line with 2011. Mortgage and deposit balances grew, primarily in Singapore, mainland China, Australia and Malaysia, although the effect was offset by narrower asset and deposit spreads.

- In Latin America, revenue grew by 6%, driven by higher insurance revenues from strong sales of unit-linked pension and term life products and the favourable effect of the recognition of a PVIF asset (US$144m) in Brazil. In addition, we reported a gain on sale of the general insurance business in Argentina. Net interest income increased due to growth in personal loans and deposit balances. Growth was partly offset by the loss on sale of certain businesses as well as the non-recurrence of gains on the sale and leaseback of branches and the sale of HSBC Afore, both in Mexico during 2011.

- In Europe, revenue remained broadly in line with 2011. Revenue decreased in the UK, largely driven by deposit spread compression. This was partly offset by higher mortgage spreads and average balances in the UK and business expansion in Turkey, which led to higher net interest income following growth in personal lending and mortgage balances.

- *Loan impairment charges* in RBWM excluding US CRS and the US run-off portfolio were broadly in line with 2011. Reductions in Europe, driven by lower delinquencies across both the secured and unsecured lending portfolios, particularly in the UK, were offset by higher impairments in Brazil, where delinquency rates increased as economic growth slowed in 2012.

- *Operating expenses* in RBWM excluding US CRS and the US run-off portfolio increased only modestly, despite significantly higher customer redress provisions and the non-recurrence of a pension credit in the UK. Excluding these items, expenses decreased through both our organisational effectiveness programmes and the transactions undertaken as part of our portfolio management activities, detailed below. These led to a reduction of more than 13,500 FTEs, with all regions contributing to sustainable cost savings of more than US$350m.

- *Share of profit from associates and joint ventures* decreased by 22%, mainly from Ping An due to market valuation losses on equity securities held by their insurance business, reflecting volatile domestic equity markets. Following the disposal of our associate, Ping An, our remaining shareholding has been classified as a financial investment.

Strategic imperatives

Developing a high standard of wealth management for retail customers

- In 2012, we accelerated the transformation of the Wealth Management business in HSBC, investing significantly in infrastructure to improve customer experience and revenue generation, although further progress is required to achieve our strategic goals.

- Wealth Management revenues increased by over US$550m in 2012 to US$6.4bn, primarily due to growth from insurance, mutual funds and foreign exchange. Wealth insurance revenues improved, driven by higher investment returns, notably in Hong Kong and France and strong sales of life insurance products in Hong Kong and Brazil. Mutual funds sales grew, with revenues increasing by 17% to US$935m. Revenues from foreign exchange transactions benefited from infrastructure investments, including the successful deployment of our web-enabled foreign currency 'Get Rate' system across key markets in Europe and Asia towards the end of 2011.

- Foreign exchange services are a core component of our wealth strategy, and we continue to invest in order to further enhance our customer offering. By 31 December 2012, over 220,000 of our customers were using our Global View and Global Transfer products, making cross-border transfers amounting to more than US$13bn in the year. We enhanced our international wire services by improving limits and pricing. We also completed the online launch of dual-currency deposits in Asian markets, and improved market access for foreign exchange trading.

- Sales of our long-term fund products, including our managed solutions, continued to grow. We launched the HSBC Asia Focused Income Fund in May which grew to US$1bn by the end of 2012. World Selection and Premier Investment Management Services for retail customers continued to grow, with total net sales amounting to US$2bn during the year, resulting in a 20% increase to US$19bn in FuM related to these portfolios.
- HSBC Global Asset Management's investment performance was strong in 2012, with over 70% of its Equity, Multi-Asset and Fixed Income funds by value ranking above median. As a result, 71% of eligible funds were in the top two quartiles over the three-year period to 31 December 2012.
- We made significant investments to reinforce the wealth risk management framework, introducing enhanced risk profiling and strategic financial planning tools to enable more effective control of compliance and regulatory risks.
- As part of the drive to enhance customer experience, we started the global roll-out of a new Wealth Dashboard, which allows customers easy access and analysis of personal holdings and enables ongoing comparison with reference portfolios. Additionally, in a number of markets we introduced a global insurance point-of-sale system which offers customers a faster, more integrated service.

Leveraging global expertise in retail banking

- We continued to enhance our digital banking capabilities with the launch of the first mobile payment solution in Hong Kong enabling contactless credit card transactions through Visa payWave terminals, the first deployment of a global application platform in the US, and the roll-out of mortgage digital sales tools in the UK, India, UAE and Malaysia.
- Our business re-engineering programme is driving cost reduction and efficiency improvements through standardisation. We used our global scale to improve cost controls and progressively standardised the design of our Contact Centres. In addition, we are successfully deploying enhanced analytical capabilities to improve customer experience.

Portfolio management to drive superior returns

- Good progress was made in portfolio management activities with 17 disposals or closures announced in 2012 and a further four in 2013, following the 13 announced in 2011, and 12 transactions completed in 2012. During 2012, we completed the sale or closure of our retail businesses in Thailand, Honduras, El Salvador and Costa Rica, disposed of the Card and Retail Services business and upstate New York branches in the US and the full service retail brokerage business in Canada and recorded an investment loss on a subsidiary. Additionally, we announced the sale of our retail banking operations in Colombia, Peru, Uruguay, Paraguay and Pakistan and the closure of the consumer finance business in Canada. In December 2012 we disposed of our associate, Ping An, with our remaining shareholding classified as a financial investment, and also completed the sale of our shares in Global Payments Asia-Pacific Ltd. Following completion of all the announced transactions we will have refocused our business to 20 home and priority markets (representing 98% of 2012 profit before tax) and a limited number of network and small markets.
- We are exiting the general insurance manufacturing business and focusing on life insurance manufacturing where we have scale. In 2012, we completed the sale of our general insurance businesses in Hong Kong, Singapore, Argentina and Ireland, announced the sale of our insurance manufacturing businesses in the US and Taiwan and reached an agreement to sell a portfolio of general insurance assets and liabilities in Mexico.
- In October 2012, we completed the acquisition of the onshore retail banking business of Lloyds Banking Group in the UAE, following the merger in the second quarter of our Omani operations with OIB.
- We remained focused on managing the run-off of balances in our CML portfolio, with year-end lending balances, including loans held for sale, declining by 14% from December 2011 to US$43bn. In the third quarter of 2012, we reclassified US$3.7bn of non-real estate personal loan balances, net of impairment allowances, from our consumer finance portfolio to 'Assets held for sale' as we actively marketed the portfolio. We also identified real estate secured loan balances which we plan to actively market in multiple transactions over the next two years.

Commercial Banking

CMB offers a full range of commercial financial services and tailored solutions to more than three million customers ranging from small and medium-sized enterprises to publicly quoted companies in more than 60 countries.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**10,361**	9,931	8,487
Net fee income	**4,470**	4,291	3,964
Other income	**1,720**	1,389	1,383
Net operating income[21]	**16,551**	15,611	13,834
LICs[76]	**(2,099)**	(1,738)	(1,805)
Net operating income	**14,452**	13,873	12,029
Total operating expenses	**(7,598)**	(7,221)	(6,831)
Operating profit/(loss)	**6,854**	6,652	5,198
Income from associates[77]	**1,681**	1,295	892
Profit/(loss) before tax	**8,535**	7,947	6,090
RoRWA[66]	**2.2%**	2.2%	2.0%

Record reported profit before tax
US$8.5bn

9%
increase in customer deposits, driven by Payments and Cash Management

Number one global trade finance bank in the world
(Oliver Wyman Global Transaction Banking Survey 2012)

Strategic direction

CMB aims to be the banking partner of choice for international businesses by building on our rich heritage, international capabilities and relationships to enable connectivity and support trade and capital flows around the world, thereby strengthening our leading position in international business and trade.

We have four strategic imperatives:

- focus on faster-growing markets while connecting revenue and investment flows with developed markets;
- capture growth in international SMEs and corporate businesses;
- enhance collaboration across all global businesses to provide our customers with access to the full range of the Group's services; and
- simplify processes and enhance risk management controls by adopting a global operating model.

For footnotes, see page 120.

The commentary is on a constant currency basis unless stated otherwise.

Review of performance

- CMB reported a record profit before tax of US$8.5bn in 2012, 7% higher than in 2011. On a constant currency basis, profit before tax increased by 10%. This included gains totalling US$468m mainly from the sale of branches in the US, the disposal of general insurance businesses in Argentina and Hong Kong and the sale of our shares in Global Payments Asia-Pacific Ltd in Hong Kong.
- On an underlying basis, profit before tax increased by 3%. This was driven by strong revenue growth and higher income from our associates, substantially offset by a rise in operating expenses which reflected the effect of notable cost items that included a customer redress provision of US$268m relating to interest rate protection products in the UK. Loan impairment charges also rose, driven by higher individually assessed provisions in Europe and Rest of Asia-Pacific, and a rise in collective charges in Latin America.
- *Revenue* grew by 10% in the year, with increases in all regions. This reflected strong net interest income growth, higher net fee income and a rise in other income driven by the gains on disposals.
- *Net interest income* increased by 8% as a result of average balance sheet growth. Customer loans and advances rose in all regions, with over half this growth coming from our faster growing regions of Hong Kong, Rest of Asia-Pacific and Latin America, driven by higher trade-related lending as demand for export finance increased. In Europe, despite muted demand for credit, net interest income from lending activities also rose as a result of growth in average lending balances, notably in the UK. Net interest income from customer accounts rose as we continued to attract deposits through our Payments and Cash Management products. Net interest income from deposits also benefited from higher liability spreads in Hong Kong, reflecting an increase in short-term interest rates.
- *Net fee income* benefited from higher transaction volumes of Payments and Cash Management products, mainly in Europe, Latin America and Hong Kong. Net fee income from Global Trade and Receivables Finance products also rose in Hong Kong, due to continued demand for export finance as we captured international trade and capital flows, and in Europe as we continued to expand our Trade and Commodity and Structured Trade Finance offerings. In addition,

our collaboration with GB&M led to higher revenues generated primarily from sales of foreign exchange products.

- *Loan impairment charges and other credit risk provisions* increased by US$442m, driven by higher individually assessed loan impairments in Europe, reflecting the challenging economic conditions in the UK, Greece, Spain and Turkey, and in Rest of Asia-Pacific in respect of a small number of customers in our Corporate segment. Collective impairment provisions also rose in Latin America, mainly in Brazil from increased delinquency in the Business Banking portfolio.

- *Operating expenses* increased by 10%, primarily due to a US$268m customer redress provision relating to interest rate protection products in the UK (see page 32). The rise in costs also reflected the non-recurrence of a credit in 2011 of US$206m (US$212m as reported), arising from a change in the measurement of defined benefit pension obligations in the UK. In addition, we continued to invest in and strengthen our Risk and Compliance function as part of our global operating model. Operating expenses also increased in our faster-growing regions of Latin America and Rest of Asia-Pacific due to inflationary pressures and continued investment in front line and support staff.

- *Income from associates* grew by 28% as our associates in mainland China benefited from a rise in lending and associated fee income, reflecting continued economic growth.

Strategic imperatives

Focus on faster-growing markets while connecting with developed markets

- We continued to position the business for growth, maintaining our investment in our faster-growing regions, where revenues rose by 12 percentage points from 2011 and represented over 54% of our revenues. Our top 20 markets contributed over 90% of our profit before tax in 2012, with 14 of these countries located in the faster-growing regions.

- Our strong network helps connect customers with both developed and developing markets as they expand internationally. During 2012, we were the first bank to settle cross-border renminbi trade across six continents with our ability to provide related services in over 50 countries offering a competitive advantage to our customers as the renminbi is positioned as a major global trade and investment currency. We have expanded our global network of dedicated China desks to cover our top markets, representing about half of the world's GDP. These are staffed by Mandarin-speaking experts who support mainland Chinese businesses to identify new opportunities to expand overseas.

- As reported in the *Oliver Wyman Global Transaction Banking Survey 2012*, we maintained our position as the world's largest global trade finance bank with a market share of global trade finance revenue that increased from 9% in 2011 to 10% in the first half of 2012, in spite of a slowdown in world trade growth. Our Global Trade and Receivables Finance revenues increased by 11% as our network provided customers with access to over 75% of world trade flows. In addition, we continued to expand our Commodity and Structured Trade Finance offering across CMB and GB&M, establishing new teams in four countries, which brought the total to seven by the end of 2012. Our team of product specialists more than doubled from 31 at the end of 2011 to 78 across Europe, Hong Kong and Rest of Asia-Pacific, with plans for further expansion in Latin America, Middle East and North Africa, North America and additional countries in Rest of Asia-Pacific by the end of 2013.

- International payments volumes in Payments and Cash Management have grown at twice the rate of the market globally since 2010 with year-on-year revenue increasing by 15% in 2012. This growth reflected new mandates and investments in new products such as HSBCnet mobile to improve our customers' experience. Double digit revenue growth was reported in the UK, Brazil and Hong Kong, all of which are top markets for CMB, reflecting the strength of the franchise in both developed and developing markets. In 2012, HSBC was the first bank to be named 'Best Cash Management Bank' globally for both 'Financial Institutions' and 'Non-Financial Institutions' in the same year by *Euromoney's* customer survey. Also in this poll, we were named 'Best Domestic Cash Management Provider' in over 20 countries.

Capture growth in international businesses

- Our strong international network offers a distinctive presence in key markets with major trade flows, facilitating growth for international businesses. Our international customer base generated around 40% of our revenues.

- In Business Banking, we continued to attract and serve an increasing number of international SMEs and further differentiated our service offering to them by extending our global network of specialist International Relationship Managers ('IRM's) who focus on high value international clients. During 2012, we added over 165 IRMs in France, Brazil and the UK and plan to expand the model into other key Business Banking markets in 2013.
- We continued to support SMEs through the economic recovery, with a particular focus on those with international aspirations. In the first half of 2012, we launched an international SME fund in the UK to support UK businesses that trade, or aspire to trade, internationally. By the end of 2012, we had approved lending through the fund of £5.1bn (US$8.2bn), exceeding our original target of £4.0bn (US$6.5bn), and provided £12bn (US$20bn) of gross new lending to UK SMEs, including the renewal of overdraft and other lending facilities. Over 80% of small business lending applications received during the year were approved. Similarly, in the UAE, we launched our third SME fund of AED1bn (US$272m) targeted at international trade customers.
- Our global expertise helped connect our customers with new market opportunities. We held three 'Global Connections International Exchanges' in Brazil, mainland China and Dubai in 2012, where we were joined by clients from all of our top 20 markets who were able to make contacts, share their specialist market knowledge and identify new business opportunities.

Strong partnership with global businesses

- Our collaboration with GB&M has delivered nearly US$0.7bn in incremental gross revenue since 2010. Gross revenues from sales of GB&M products to CMB customers which are shared across the two global businesses grew by over US$0.1bn in 2012 or by 5%, mainly driven by sales of foreign exchange products.
- We continued to benefit from GB&M's e-FX platform to deliver our standard foreign exchange products to customers more efficiently. We also addressed demand for alternative sources of finance, providing our customers with access to debt and equity capital markets and offering specialised financing, such as Project and Export Finance, via GB&M.
- Dedicated executives are now in place in both CMB and GPB to promote cross-business referral activities and support the collaboration between the businesses. For example, the Global Priority Clients initiative was launched in 2012 to service the Group's largest ultra-high net worth clients' corporate and personal needs jointly.
- In 2012, we launched our trade credit insurance offering in Hong Kong, Brazil and the UK. It will be rolled out to further markets in the first half of 2013, including Turkey, France, Singapore and Malaysia.

Simplify processes and enhance risk management controls by adopting a global operating model

- The successful adoption of a global model has enabled us to deliver a number of benefits, notably simplified processes for our customers, enhanced governance and compliance oversight, and sustainable cost savings across the business.
- We have made significant progress in simplifying and reducing the time to complete our credit renewal process, implementing improvements in 17 key markets with further countries in scope for the first quarter of 2013. In addition, we have deployed a consistent model for cross-border account opening to facilitate the on-boarding of new international customers.
- The sustainable cost savings of over US$100m achieved through process re-engineering and organisational effectiveness have been reinvested in both front line staff and our Risk and Compliance function. We introduced enhanced consistent Know Your Customer procedures, a global product governance board and dedicated resources to improve governance oversight. This investment, combined with our values-based approach to relationship management, is helping to foster a disciplined and constructive culture of risk management in CMB while encouraging balanced and sustainable growth.

Global Banking and Markets

GB&M provides tailored financial solutions to major government, corporate and institutional clients worldwide.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**6,960**	7,263	7,343
Net fee income	**3,329**	3,227	3,664
Net trading income[78]	**5,690**	5,204	5,830
Other income	**2,294**	1,363	2,075
Net operating income[21]	**18,273**	17,057	18,912
LICs[76]	**(670)**	(984)	(990)
Net operating income	**17,603**	16,073	17,922
Total operating expenses	**(9,907)**	(9,722)	(9,228)
Operating profit	**7,696**	6,351	8,694
Income from associates[77]	**824**	698	521
Profit before tax	**8,520**	7,049	9,215
RoRWA[66]	**2.1%**	1.8%	2.5%

Record reported revenues from corporate and institutional debt issuance

77%
of profit before tax from faster-growing regions

Most Innovative Investment Bank of the Year
(The Banker Investment Banking Awards 2012)

Strategic direction

GB&M continues to pursue its well-established 'emerging markets-led and financing-focused' strategy, with the objective of being a leading international wholesale bank. This strategy has evolved to include a greater emphasis on connectivity between the global businesses, across the regions and within GB&M, leveraging the Group's extensive distribution network.

We focus on four strategic imperatives:

- reinforce client coverage and client-led solutions for major government, corporate and institutional clients;
- continue to selectively invest in the business to support the delivery of an integrated suite of products and services;
- enhance collaboration with other global businesses, particularly CMB, to appropriately service the needs of our international client base; and
- focus on business re-engineering to optimise operational efficiency and reduce costs.

For footnotes, see page 120.

The commentary is on a constant currency basis unless stated otherwise.

Review of performance

- GB&M reported profit before tax of US$8.5bn, 21% higher than in 2011. On a constant currency basis, profit before tax increased by 24% despite a significant net charge relating to credit and debit derivative valuation adjustments. The rise in profit before tax was driven by strong revenue growth, notably in Rates and Credit, together with significantly lower credit risk provisions than in 2011, partly offset by higher operating expenses. GB&M is well positioned for growth in faster-growing regions with record reported revenues in Hong Kong (US$2.8bn), Rest of Asia-Pacific (US$4.0bn) and Latin America (US$1.8bn).
- In the fourth quarter a net charge of US$385m was reported in net trading income as a result of a change in estimation methodology in respect of credit valuation adjustments on derivative assets of US$903m and debit valuation adjustments on derivative liabilities of US$518m to reflect evolving market practices (see Note 15 on the Financial Statements).
- Notwithstanding the charge noted above, *revenues* rose by 10%, primarily due to significantly higher trading revenues in Rates and Credit, notably in Europe, as spreads tightened and investor sentiment improved following stimuli by central banks globally. Balance Sheet Management reported higher gains on the disposal of available-for-sale debt securities, largely in the UK, while Payments and Cash Management benefited from growth in average liability balances, increased transaction volumes and new mandates. These increases were partly offset by a fall in revenues from our Equities business due to lower client activity as market volumes declined. Revenues in 2012 also included adverse fair value movements from own credit spreads on structured liabilities of US$629m compared with a favourable fair value movement of US$458m reported in 2011.
- *Loan impairment charges and other credit risk provisions* decreased by US$300m compared with 2011. Credit risk provisions declined significantly, from US$515m in 2011 to US$117m in 2012, driven by lower impairment charges on Greek sovereign debt, and on available-for-sale ABSs in our legacy portfolio reflecting an improvement in underlying asset prices. This was partly offset by a US$97m increase in loan impairment charges as a result of a small number of specific impairments in

Global Banking and on the legacy credit loans and receivables portfolio.

- *Operating expenses* increased by US$393m to US$9.9bn, predominantly due to a customer redress provision of US$330m relating to interest rate protection products in the UK (see page 32). Performance costs rose, albeit at a lower rate of growth than net operating income, which resulted in a lower total compensation ratio than in 2011. 2011 also included a credit of US$108m (US$111m as reported) relating to defined benefit pension obligations in the UK, which did not recur.

Management view of total operating income

	2012 US$m	2011 US$m	2010 US$m
Global Markets[79]	**8,733**	8,098	9,173
Credit	**779**	335	1,649
Rates	**1,771**	1,341	2,052
Foreign Exchange	**3,215**	3,272	2,752
Equities	**679**	961	755
Securities Services	**1,663**	1,673	1,511
Asset and Structured Finance	**626**	516	454
Global Banking	**5,568**	5,401	4,621
Financing and Equity Capital Markets	**3,071**	3,233	2,852
Payments and Cash Management[80]	**1,744**	1,534	1,133
Other transaction services[81]	**753**	634	636
Balance Sheet Management[82]	**3,738**	3,488	4,102
Principal Investments	**125**	209	319
Debit valuation adjustment	**518**	–	–
Other[83]	**(409)**	(139)	697
Total operating income	**18,273**	17,057	18,912

Balance Sheet Management revenues included a notional tax credit on income earned from tax-exempt investments of US$116m in 2012 (2011: US$85m; 2010: US$50m), which is offset above within 'Other.'

For footnotes, see page 120.

- Included in the table above are the following amounts in relation to the change in credit valuation adjustment estimation methodology:

	2012 US$m
Credit	**(52)**
Rates	**(837)**
Foreign Exchange	**(7)**
Equities	**(7)**
Total	**(903)**

- Global Markets delivered a strong performance in an uncertain financial and economic environment, in part due to a US$444m increase in Rates revenues. This was despite significant adverse fair value movements from own credit spreads on structured liabilities as spreads tightened, compared with favourable movements reported in 2011, together with a credit valuation adjustment of US$837m in 2012. Revenues in Credit increased by US$453m due to strong trading income, mainly in Europe, as spreads tightened on corporate debt securities. Additionally, we achieved record reported revenues from primary market issuance, mainly within Credit, with revenues in Europe, Hong Kong and North America increasing as we enhanced regional coverage and actively captured growth in client demand for debt capital financing.

- Foreign Exchange income was broadly in line with 2011, as higher revenues from enhanced collaboration between GB&M and CMB, and increased volumes from the improvement in our electronic pricing and distribution capabilities, offset the effect of less volatile markets in 2012. Notwithstanding the capture of higher market share within a number of our target emerging markets, Equities revenues decreased by 27%, driven by lower client activity as market volumes declined against the backdrop of economic and fiscal uncertainty in Europe and North America. This was coupled with adverse fair value movements on structured liabilities compared with favourable movements in 2011.

- In Global Banking, Financing and Equity Capital Markets revenues were broadly unchanged compared with 2011 as lower advisory and underwriting fees, mainly in Europe, reflecting the challenging market environment, were partly offset by higher Project and Export Finance revenues, as deal volumes increased, and as we captured a higher market share of public and private sector investment in infrastructure development in emerging markets. Payments and Cash Management revenues increased by 15% due to higher average liability balances and an increase in transaction volumes. We increased our focus on cross-selling Payments and Cash Management products to selected international customers and saw a rise in new mandates.

- In 'Other transaction services', revenues increased by 24% as the Global Trade and Receivables Finance business benefited from enhanced collaboration between Global Banking relationship managers and specialist sales teams and the expansion of the Commodity and Structured Trade Finance offering leading to higher revenues in Europe and Rest of Asia-Pacific. Revenues in Rest of Asia-Pacific also increased as a result of growth in export lending and improved spreads.

- Balance Sheet Management revenues rose by US$324m due to higher gains on the disposal of available-for-sale debt securities as part of structural interest rate risk management of the balance sheet, notably in Europe. Net interest income declined in Europe, however, as yield curves continued to flatten and liquidity from maturities and sales of available-for-sale debt securities was re-invested at lower prevailing rates. In addition, we placed a greater portion of our liquidity with central banks. Higher net interest income was reported in Rest of Asia-Pacific due to higher yields and portfolio growth in mainland China, and in Latin America due to lower funding costs in Brazil as interest rates declined.
- Principal Investments revenue declined by US$76m compared with 2011 owing to higher impairments, mainly on three available-for-sale equity securities, two of which were in our direct investment business in run-off. This was offset in part by higher realised gains on disposals.

Strategic imperatives

Reinforce client coverage and client-led solutions

- Our multinational coverage teams continued to expand our offerings of cross-product solutions for our clients and delivered revenue growth, particularly in faster-growing regions as we successfully executed a number of notable cross-border transactions. This included providing financing and advisory services to clients through our Project and Export Financing business, which resulted in HSBC being awarded ‘Best Project Finance House’ in Asia, the Middle East and Latin America in the *Euromoney Awards for Excellence 2012*.
- To further strengthen client coverage and product expertise, we invested in selective recruitment in key strategic markets. In Rest of Asia-Pacific, we enhanced our advisory, debt capital markets and credit and lending businesses through a number of senior appointments in the Resources and Energy and the Financial Institutions groups. We also appointed a Co-Head of Global Banking in Brazil to drive strategic dialogue with key clients and develop our advisory business in Latin America.
- We continued to develop our distinctive geographical franchise to enhance client coverage, particularly within debt capital markets. A number of successfully executed transactions, notably in emerging markets, demonstrated the benefit of partnering between regional and global product teams. These partnerships facilitated the delivery of innovative solutions and alternative funding opportunities for our clients. As a result, HSBC was awarded ‘Best Global Emerging Market Debt House’ in the *Euromoney Awards for Excellence 2012*. Additionally, we increased our market share of, and maintained our leading position in, emerging markets debt issuance.

Enhance core product strengths and selectively develop new capabilities

- We continued to develop cross-product capabilities in the growing renminbi market. Earlier in the year, we issued the first international renminbi bond outside Chinese sovereign territory. Since then, a number of significant transactions were supported by in-depth collaboration between regional teams, reinforcing HSBC’s position as the leading house for international renminbi issuance. In recognition of these achievements, HSBC was awarded ‘RMB House of the Year’ in the *2012 Asia Risk Awards*, along with ‘Best for overall products/services’ and ‘Most likely RMB products/services provider’ in the *2012 Asiamoney Offshore RMB Services* survey.
- In Foreign Exchange, we remained focused on enhancing product offerings in our e-FX platforms for a broader client base, particularly for CMB and RBWM customers. This included the launch of our ‘Dynamic Currency Conversion’ product within our transactional Foreign Exchange business in the UK in time for the Olympics, along with a real-time online foreign currency margin trading product in Hong Kong. Our strength in foreign exchange capabilities, particularly in emerging markets, was recognised by several awards during the year including ‘Best Bank for Foreign Exchange’ in Asia-Pacific and ‘Best Bank for Emerging Asian currencies’ in the *2012 FX Week Best Banks Awards*. Our innovation and achievements in the renminbi market contributed to HSBC also being awarded ‘Foreign Exchange House of the Year’ in the *2012 Structured Products Asia Awards*.

- As a result of recent investment in our equity execution platform and research capabilities in emerging markets, we progressed in repositioning the business for future growth and enhanced our ability to respond to client needs. We are now ranked in the top five of equities brokers in Hong Kong, while our ranking in the *Asiamoney 2012 Brokers Poll* for Asian Equity Research and Sales rose from fifth in 2011 to second in 2012.

- In a challenging economic environment, our clients demand visibility and control of their intra-day cash positions. To facilitate this, we expanded the Global Liquidity Solutions platform within Payments and Cash Management, and it is now live in 27 countries. We were also the first foreign bank to gain approval to establish an automated, cross-border pooling structure in mainland China. The pilot scheme, which aims to centralise foreign currency management for multinational companies by connecting their onshore and offshore cash management structures, will enable our clients to manage their cash positions more efficiently.

- We are actively managing our legacy credit exposures and exited from certain positions, including ABSs in the UK and certain structured credit positions and related hedges in the US during 2012. We will look to reduce the size of this portfolio further as opportunities arise, using the economic framework put in place in 2011 (see page 18).

Collaborate with other global businesses to deliver incremental revenues

- We have worked closely with CMB to provide their clients with appropriate GB&M products and this has delivered nearly US$0.7bn in incremental gross revenue since 2010. Gross revenues, which are shared across the two global businesses, grew by over US$0.1bn in 2012, or by 5%, mainly driven by sales of foreign exchange products. A number of appointments during the year, including a new Head of Commercial Banking Coverage for Asia-Pacific in Global Banking, further strengthened collaboration efforts and enhanced our ability to meet the financing needs of our clients.

- We continued to enhance collaboration across the Group through the Institutional Private Clients ('IPC') initiative with GPB and the Premier referrals initiative with RBWM, leading to higher revenues and increased Premier account openings respectively, compared with 2011. We also appointed a Head of Coverage in Hong Kong to strengthen our Global Banking franchise and deliver on IPC initiatives in the region.

Strategic re-engineering to deliver sustainable cost savings

- The successful implementation of the organisational design we announced in 2011, and our continued resource optimisation through re-engineering, delivered over US$200m of sustainable savings in 2012.

Global Private Banking

GPB serves high net worth individuals and families with complex and international needs.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**1,294**	1,439	1,345
Net fee income	**1,232**	1,382	1,299
Other income	**646**	471	449
Net operating income[21]	**3,172**	3,292	3,093
LIC (charges)/ recoveries[76]	**(27)**	(86)	12
Net operating income	**3,145**	3,206	3,105
Total operating expenses	**(2,143)**	(2,266)	(2,035)
Operating profit	**1,002**	940	1,070
Income/(expense) from associates[77]	**7**	4	(16)
Profit before tax	**1,009**	944	1,054
RoRWA[66]	**4.6%**	3.9%	4.1%

Significant progress towards rationalising and repositioning our business

Over US$70m of sustainable cost savings

Outstanding Private Bank in Asia-Pacific and in the Middle East
(Private Banker International Awards, 2012)

Strategic direction

GPB works with high net worth clients to manage and preserve their wealth while connecting them to global opportunities. We focus on three strategic imperatives:

- implementing a new operating model to manage the business globally and better service client needs, with an enhanced systems platform and adherence to the highest risk and compliance standards in the industry;
- intensifying collaboration within the Group, particularly with CMB, to access entrepreneur wealth creation; and
- capturing growth by focusing investment on the most attractive developed and faster-growing wealth markets, where GPB can access the Group's client franchise and its strong local and international product capabilities.

For footnotes, see page 120.

The commentary is on a constant currency basis unless stated otherwise.

Review of performance

- Reported profit before tax of US$1.0bn was 7% higher than in 2011 on a reported basis and 8% higher on a constant currency basis.
- On an underlying basis, which excludes the gain on the sale of our operations in Japan (US$67m) and associated operating results, profit before tax was broadly unchanged as lower operating expenses and decreased loan impairment charges and other credit risk provisions were largely offset by reduced revenues.
- *Revenue* declined by 3%, primarily due to lower fee income. Brokerage fees fell, reflecting a reduction in client transaction volumes due, in part, to lower volatility. Fees from assets under management and account service fees also declined as challenging market conditions in the latter half of 2011 led to a fall in average client assets in 2012, coupled with a reduction in client numbers as we repositioned our target client base. Net interest income was lower as higher yielding positions matured, opportunities for reinvestment were limited by lower prevailing yields and we selectively managed our exposures to eurozone sovereign debt. Narrower liability spreads and lower deposit balances in Switzerland and the sale of our operations in Japan also contributed to the fall in net interest income. These factors were partly offset by gains on the sale of our operations in Japan and our headquarters building in Switzerland of US$67m and US$53m, respectively.
- *Loan impairment charges and other credit risk provisions* reduced by 68% as a result of the non-recurrence of charges relating to available-for-sale Greek sovereign debt securities and lower individually assessed and collective impairments in the UK. These factors were partly offset by lower recoveries in the US.
- *Operating expenses* decreased by 4%, primarily due to a managed reduction in average staff numbers and lower performance costs. The decrease in staff costs was partly offset by higher customer redress provisions, costs relating to the merger of pension funds in Switzerland, and increased restructuring and other related costs.

Client assets[84]

	2012 US$bn	2011 US$bn
At 1 January	**377**	390
Net new money	**(7)**	13
Value change	**17**	(20)
Exchange and other	**11**	(6)
At 31 December	**398**	377

- Client assets, which include FuM and cash deposits, increased by US$21bn, driven by the inclusion of custody assets in client assets and favourable market and foreign exchange movements, partly offset by negative net new money and the disposal of our operations in Japan. Negative net new money included a small number of large client withdrawals and reflected lower inflows as we became more selective in establishing new client relationships, as well as the adoption of more stringent compliance and tax transparency standards. We also stopped marketing in certain non-strategic countries. In addition, we implemented a redefined segmentation model to reposition our client base towards higher net worth international and domestic relationships. This programme, along with a review of certain client relationships with a view to reducing control risk, resulted in a reduction of around US$4.5bn of client assets in 2012.
- 'Total client assets', which also include some non-financial assets held in client trusts, increased from US$496bn at 31 December 2011 to US$517bn at 31 December 2012 largely due to market movements partly offset by negative net new money as noted above.
- Our return on assets, defined as the percentage of our revenues to our average client assets, was unchanged as the reduction in revenues corresponded with the fall in average client assets.

Strategic imperatives

- 2012 was a year of transition for GPB as we repositioned our business model and target client base to focus investment in selected priority markets, enhance our compliance and risk frameworks and encourage better alignment with the other global businesses. We are targeting higher net worth international and domestic customers and have built on existing product strengths and leveraged Group capabilities to meet their needs. We expect this period of transition and implementation to continue throughout 2013.

Implementing a more focused business model that better services client needs

- We implemented a new target operating model based on six 'global markets' (North Asia; South East Asia; North America; Latin America; Europe; and Middle East, North Africa and Turkey). This enables us to operate as an integrated global business rather than a federation of private banks and to provide our clients with globally consistent products and services and improved co-ordination of marketing and servicing activity.
- We sold or closed a number of non-strategic, underperforming businesses in order to rationalise our business and focus on priority markets. Disposals included our operations in Japan, our UK property advisory business, a portfolio of non-strategic clients in Monaco, our domestic trust business in Malaysia and a branch of our UK business in Ireland.
- Our compliance and risk framework was strengthened by the establishment of a GPB Global Standards Committee and a revised risk appetite framework. The implementation of ongoing workstreams including tax transparency and cross-border marketing will be accelerated in 2013.
- We enhanced our global front office systems with the roll out of Global Vision in Switzerland, Global Client Relationship Management in the US and Global Private Wealth Solutions in the Channel Islands, which provide integrated databases to support effective client management. We will continue to roll these systems out to other locations during 2013.

Developing closer collaboration across the Group

- We leveraged existing relationships across the Group in order to access wealth created by entrepreneurs who already bank with HSBC on the business side. Referral flows from other global businesses generated net new money of US$5.4bn. To further support referrals with CMB, a collaboration framework was put in place, dedicated executives appointed and referral targets agreed.
- We worked with RBWM to define and promote a Group-wide wealth offering. GPB and RBWM now operate a systematic process for the review and referral of clients to ensure they receive the service most appropriate to their needs.

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- The Global Priority Clients initiative was launched with GB&M and CMB to service jointly the Group's largest ultra-high net worth clients with corporate and personal needs through a dedicated single point of contact. The framework has been defined, clients identified for joint coverage and investment specialists assigned, and we have begun to roll out a new credit advisory model to fund credit transactions.

Capturing growth in faster-growing and domestic markets

- We continued to focus on faster-growing markets, and attracted positive net new money of US$1.9bn and US$0.5bn from clients in Asia and the Middle East, respectively.
- Our product range was further developed during 2012; in particular, we made progress in strengthening our Alternatives platform, with four new real estate 'club deals' and two private equity launches in the year raising more than US$1.3bn. Further launches are expected in 2013.

Other[73]

'Other' contains the results of certain property transactions, unallocated investment activities, centrally held investment companies, movements in fair value of own debt, central support and functional costs with associated recoveries, HSBC's holding company and financing operations.

	2012 US$m	2011 US$m	2010 US$m
Net interest expense	**(730)**	(911)	(998)
Net fee income	**194**	34	32
Net trading expense	**(537)**	(355)	(311)
Change in credit spread on long-term debt	**(4,327)**	4,161	(258)
Other changes in fair value	**(1,136)**	78	42
Net income/(expense) from financial instruments designated at fair value	**(5,463)**	4,239	(216)
Other income	**8,868**	6,138	6,153
Net operating income[21]	**2,332**	9,145	4,660
LIC recoveries[76]	**–**	–	3
Net operating income	**2,332**	9,145	4,663
Total operating expenses	**(9,369)**	(7,492)	(5,918)
Operating profit/(loss)	**(7,037)**	1,653	(1,255)
Income from associates[77]	**47**	9	94
Profit/(loss) before tax	**(6,990)**	1,662	(1,161)

For footnotes, see page 120.

The commentary is on a constant currency basis unless stated otherwise.

Notes

- The reported loss before tax of US$7.0bn in 2012 compared with reported profit before tax of US$1.7bn in 2011. On a constant currency basis, pre-tax loss increased by US$8.7bn.
- These results included adverse movements of US$5.2bn on the fair value of our own debt attributable to a tightening of our own credit spreads in 2012, notably in Europe and North America, compared with favourable movements of US$3.9bn in 2011. Reported results also included a number of gains and losses on disposal (see page 27). These included a gain of US$3.0bn on the disposal of our associate, Ping An. Our remaining shareholding has been classified as a financial investment (see Note 26 on the Financial Statements). In addition, we reported a gain on disposal of US$130m from the sale of our shareholding in a property company in the Philippines. Reported profits in 2011 included accounting gains of US$181m relating to the dilution of our shareholding in Ping An, partly offset by a remeasurement loss of US$48m relating to Ping An's consolidation of Ping An Bank (formerly known as Shenzhen Development Bank).
- On an underlying basis, excluding the items noted above, the pre-tax loss increased by US$2.5bn, driven by higher operating expenses, notably the charge of US$1.9bn relating to US fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws. In addition, revenues declined due to adverse fair value movements of US$553m on the contingent forward sale contract relating to Ping An.
- *Net fee income* increased by US$166m, due in part to fees received under the transition services agreement entered into following the sale of the Card and Retail Services business in North America.
- *Net trading expense* increased from US$353m to US$537m, driven by adverse fair value movements on the contingent forward sale contract relating to Ping An. This was partly offset by lower adverse fair value movements on non-qualifying hedges in 2012. This was driven by non-qualifying hedges in HSBC Holdings, mainly related to cross-currency swaps used to economically hedge fixed rate long-term debt, on which there were favourable movements of US$122m in 2012 compared with adverse fair value movements of US$276m in 2011.
- *Gains less losses from financial investments* included gains of US$314m on the sale of our non-strategic investments in four Indian banks.
- Excluding the movements in the fair value of our own debt, *Net expense from financial instruments designated at fair value* of US$248m compared with net income of US$293m in 2011. This was due to adverse fair value movements in 2012 from interest and exchange rate ineffectiveness in the hedging of long-term debt designated at fair value, issued principally by HSBC Holdings and its European and North American subsidiaries, compared with favourable fair value movements in 2011.
- We reported a gain of US$3.0bn on the disposal of our associate, Ping An. Our remaining shareholding has been classified as a financial investment.
- *Other operating income* decreased by 9%, due to lower intra-group recharges from centralised operational activities due to divestments and on-going cost savings, notably in North America. This was partly offset by a gain of US$130m from the sale of our shareholding in a property company in the Philippines.
- *Operating expenses* increased by 27% to US$9.4bn, primarily due to fines and penalties paid as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws of US$1.9bn, of which US$1.5bn was attributed to and paid by HNAH and its subsidiaries and US$375m was paid by HSBC Holdings. In addition, there were inflationary pressures in certain of our Latin American and Asian markets. However, the charge relating to the UK bank levy declined as the current year charge of US$571m was partly offset by an adjustment of US$99m in the 2011 bank levy charge of US$570m as the basis of calculation was clarified. Costs related to operational activities also fell due to divestments and on-going cost savings, notably in North America. These costs are recorded in 'Other' and charged to global businesses through a recharge mechanism, with income reported in 'Other operating income'.

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Analysis by global business

HSBC profit/(loss) before tax and balance sheet data

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other[73] US$m	Inter–segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income/(expense)	20,298	10,361	6,960	1,294	(730)	(511)	37,672
Net fee income	7,205	4,470	3,329	1,232	194	–	16,430
Trading income/(expense) excluding net interest income	276	617	3,588	476	(549)	–	4,408
Net interest income on trading activities	28	16	2,102	14	12	511	2,683
Net trading income/(expense)[78]	304	633	5,690	490	(537)	511	7,091
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	(4,327)	–	(4,327)
Net income/(expense) from other financial instruments designated at fair value	1,893	250	1,094	–	(1,136)	–	2,101
Net income/(expense) from financial instruments designated at fair value	1,893	250	1,094	–	(5,463)	–	(2,226)
Gains less losses from financial investments	96	22	730	(3)	344	–	1,189
Dividend income	24	18	148	6	25	–	221
Net earned insurance premiums	11,191	1,786	25	42	–	–	13,044
Gains on disposal of US branch network, US cards business and Ping An	3,735	277	–	–	3,012	–	7,024
Other operating income	1,472	536	313	151	5,487	(5,859)	2,100
Total operating income	46,218	18,353	18,289	3,212	2,332	(5,859)	82,545
Net insurance claims[86]	(12,357)	(1,802)	(16)	(40)	–	–	(14,215)
Net operating income[21]	33,861	16,551	18,273	3,172	2,332	(5,859)	68,330
Loan impairment charges and other credit risk provisions	(5,515)	(2,099)	(670)	(27)	–	–	(8,311)
Net operating income	28,346	14,452	17,603	3,145	2,332	(5,859)	60,019
Employee expenses[87]	(5,532)	(2,247)	(3,764)	(915)	(8,033)	–	(20,491)
Other operating expenses	(14,237)	(5,351)	(6,143)	(1,228)	(1,336)	5,859	(22,436)
Total operating expenses	(19,769)	(7,598)	(9,907)	(2,143)	(9,369)	5,859	(42,927)
Operating profit/(loss)	8,577	6,854	7,696	1,002	(7,037)	–	17,092
Share of profit in associates and joint ventures	998	1,681	824	7	47	–	3,557
Profit/(loss) before tax	9,575	8,535	8,520	1,009	(6,990)	–	20,649
	%	%	%	%	%		%
Share of HSBC's profit before tax	46.4	41.3	41.3	4.9	(33.9)		100.0
Cost efficiency ratio	58.4	45.9	54.2	67.6	–		62.8
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	378,040	288,033	283,842	45,213	2,495		997,623
Total assets	536,244	363,659	1,942,470	118,440	201,741	(470,016)	2,692,538
Customer accounts	562,151	338,405	332,115	105,772	1,571		1,340,014

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other[73] US$m	Inter–segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income/(expense)	24,101	9,931	7,263	1,439	(911)	(1,161)	40,662
Net fee income	8,226	4,291	3,227	1,382	34	–	17,160
Trading income/(expense) excluding net interest income	(562)	565	3,306	415	(441)	–	3,283
Net interest income on trading activities	43	19	1,898	16	86	1,161	3,223
Net trading income/(expense)[78]	(519)	584	5,204	431	(355)	1,161	6,506
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	4,161	–	4,161
Net income/(expense) from other financial instruments designated at fair value	(761)	33	(72)	–	78	–	(722)
Net income/(expense) from financial instruments designated at fair value	(761)	33	(72)	–	4,239	–	3,439
Gains less losses from financial investments	124	20	761	3	(1)	–	907
Dividend income	27	15	75	7	25	–	149
Net earned insurance premiums	10,882	1,956	47	–	(13)	–	12,872
Other operating income	907	483	577	30	6,127	(6,358)	1,766
Total operating income	42,987	17,313	17,082	3,292	9,145	(6,358)	83,461
Net insurance claims[86]	(9,454)	(1,702)	(25)	–	–	–	(11,181)
Net operating income[21]	33,533	15,611	17,057	3,292	9,145	(6,358)	72,280
Loan impairment charges and other credit risk provisions	(9,319)	(1,738)	(984)	(86)	–	–	(12,127)
Net operating income	24,214	13,873	16,073	3,206	9,145	(6,358)	60,153
Employee expenses[87]	(6,538)	(2,184)	(4,196)	(1,351)	(6,897)	–	(21,166)
Other operating expenses	(14,664)	(5,037)	(5,526)	(915)	(595)	6,358	(20,379)
Total operating expenses	(21,202)	(7,221)	(9,722)	(2,266)	(7,492)	6,358	(41,545)
Operating profit	3,012	6,652	6,351	940	1,653	–	18,608
Share of profit in associates and joint ventures	1,258	1,295	698	4	9	–	3,264
Profit before tax	4,270	7,947	7,049	944	1,662	–	21,872
	%	%	%	%	%		%
Share of HSBC's profit before tax	19.6	36.3	32.2	4.3	7.6		100.0
Cost efficiency ratio	63.2	46.3	57.0	68.8	81.9		57.5
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	357,907	262,039	276,463	41,856	2,164		940,429
Total assets	540,548	334,966	1,877,627	119,839	180,126	(497,527)	2,555,579
Customer accounts	529,017	306,174	306,454	111,814	466		1,253,925

For footnotes, see page 120.

Disposals, held for sale and run-off portfolios

In implementing our strategy, we have sold or agreed to sell a number of businesses and investments across the Group. We expect these disposals to have a significant effect on both the revenue and the profitability of the global businesses in the future. In addition, significant portfolios are being run down. We expect the losses on these portfolios to continue to affect the global businesses in the future.

The table below presents the contribution of these businesses and investments to the historical results of global businesses. We do not expect the historical results to be indicative of future results because of disposal or run-off. Fixed allocated costs, included in total operating costs, will not necessarily be removed upon disposal and have been separately identified on page 53.

Summary income statements for disposals, held for sale and run-off portfolios[69,70]

	2012				
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m
Net interest income/(expense)	4,281	133	35	8	(2)
Net fee income	380	–	1	8	–
Net trading income/(expense)[78]	(204)	4	160	–	2
Net income/(expense) from financial instruments designated at fair value	6	2	10	–	(785)
Gains less losses from financial investments	32	1	(70)	–	–
Dividend income	3	–	–	–	–
Net earned insurance premiums	518	203	25	–	(1)
Other operating income/(expense)	40	20	(3)	(1)	–
Total operating income/(expense)	5,056	363	158	15	(786)
Net insurance claims incurred and movement in liabilities to policyholders	(297)	(129)	(17)	–	–
Net operating income/(expense)[21]	4,759	234	141	15	(786)
Loan impairment charges and other credit risk provisions	(2,980)	(4)	(168)	–	–
Net operating income/(expense)	1,779	230	(27)	15	(786)
Total operating expenses	(2,376)	(164)	(165)	(24)	(18)
Operating profit/(loss)	(597)	66	(192)	(9)	(804)
Share of profit in associates and joint ventures	633	89	64	–	–
Profit/(loss) before tax	36	155	(128)	(9)	(804)
By geographical region					
Europe	2	–	(283)	(1)	–
Hong Kong	27	13	6	–	–
Rest of Asia-Pacific	612	91	57	(8)	–
Middle East and North Africa	10	–	36	–	–
North America	(656)	9	2	–	(785)
Latin America	41	42	54	–	(19)
Profit/(loss) before tax	36	155	(128)	(9)	(804)
Gain on sale	4,074	476	22	64	3,103

For footnotes, see page 120.

Geographical regions

Summary

Additional information on results in 2012 may be found in the 'Financial Summary' on pages 25 to 54.

In the analysis of profit by geographical regions that follows, operating income and operating expenses include intra-HSBC items of US$3,358m (2011: US$3,421m; 2010: US$3,125m).

Profit/(loss) before tax

	2012		2011		2010	
	US$m	**%**	US$m	%	US$m	%
Europe	**(3,414)**	**(16.5)**	4,671	21.3	4,302	22.6
Hong Kong	**7,582**	**36.7**	5,823	26.6	5,692	29.9
Rest of Asia-Pacific	**10,448**	**50.6**	7,471	34.2	5,902	31.0
Middle East and North Africa	**1,350**	**6.5**	1,492	6.8	892	4.7
North America	**2,299**	**11.1**	100	0.5	454	2.4
Latin America	**2,384**	**11.6**	2,315	10.6	1,795	9.4
	20,649	**100.0**	21,872	100.0	19,037	100.0

Total assets[74]

	At 31 December			
	2012		2011	
	US$m	**%**	US$m	%
Europe	**1,389,240**	**51.6**	1,281,945	50.3
Hong Kong	**518,334**	**19.3**	473,024	18.5
Rest of Asia-Pacific	**342,269**	**12.7**	317,816	12.4
Middle East and North Africa	**62,605**	**2.3**	57,464	2.2
North America	**490,247**	**18.2**	504,302	19.7
Latin America	**131,277**	**4.9**	144,889	5.7
Intra-HSBC items	**(241,434)**	**(9.0)**	(223,861)	(8.8)
	2,692,538	**100.0**	2,555,579	100.0

Risk-weighted assets[88]

	At 31 December			
	2012		2011	
	US$bn	**%**	US$bn	%
Total	**1,123.9**		1,209.5	
Europe	**314.7**	**27.6**	340.2	27.8
Hong Kong	**111.9**	**9.8**	105.7	8.6
Rest of Asia-Pacific	**302.2**	**26.4**	279.3	22.8
Middle East and North Africa	**62.2**	**5.4**	58.9	4.8
North America	**253.0**	**22.2**	337.3	27.6
Latin America	**97.9**	**8.6**	102.3	8.4

For footnotes, see page 120.

Report of the Directors: Operating and Financial Review (continued)

Selected items included in profit before tax by geographical region

Fair value movements arising from changes in own credit spreads[26]

	2012 US$m	2011 US$m	2010 US$m
Europe	**(4,110)**	2,947	(198)
Hong Kong	**–**	–	(6)
Rest of Asia-Pacific	**(3)**	2	(1)
Middle East and North Africa	**(12)**	14	–
North America	**(1,090)**	970	142
	(5,215)	3,933	(63)

Acquisitions, disposals and dilutions[75]

	2012 US$m	2011 US$m	2010 US$m
Europe	**(3)**	–	286
Hong Kong	**420**	82	136
Rest of Asia-Pacific	**4,048**	1,141	188
Middle East and North Africa	**(18)**	54	(42)
North America	**4,888**	2,192	66
Latin America	**144**	181	–
	9,479	3,650	634

For footnotes, see page 120.

Europe

Our principal banking operations in Europe are HSBC Bank plc in the UK, HSBC France, HSBC Bank A.S. in Turkey, HSBC Bank Malta p.l.c., HSBC Private Bank (Suisse) SA and HSBC Trinkaus & Burkhardt AG. Through these subsidiaries we provide a wide range of banking, treasury and financial services to personal, commercial and corporate customers across Europe.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**10,394**	11,001	11,250
Net fee income	**6,169**	6,236	6,371
Net trading income	**2,707**	2,161	2,863
Other income/(expense)	**(1,662)**	4,848	2,266
Net operating income[21]	**17,608**	24,246	22,750
LICs[76]	**(1,921)**	(2,512)	(3,020)
Net operating income	**15,687**	21,734	19,730
Total operating expenses	**(19,095)**	(17,069)	(15,445)
Operating profit/(loss)	**(3,408)**	4,665	4,285
Income/(expense) from associates[77]	**(6)**	6	17
Profit/(loss) before tax	**(3,414)**	4,671	4,302
Cost efficiency ratio	**108.4%**	70.4%	67.9%
RoRWA[66]	**(1.0%)**	1.5%	1.3%
Year-end staff numbers	**70,061**	74,892	75,698

Strong Rates and Credit performance as investor sentiment improved

40%

reduction in RBWM loan impairment charges

US$2.3bn

of customer redress provisions in the UK

For footnotes, see page 120.

Economic background

The **UK** economy remained weak in 2012, with little growth in underlying activity. Preliminary data showed that the level of real Gross Domestic Product ('GDP') contracted by 0.3% in the fourth quarter, as economic activity fell back after a boost related to the Olympic Games. Despite the lacklustre economy, the labour market remained fairly resilient, with the unemployment rate in the three months to December down to 7.8% from 8.4% in the same period in 2011. In response to the stagnating economy, the Bank of England ('BoE') increased the size of its Asset Purchase Facility to £375bn (US$606bn) and launched a new scheme, Funding for Lending, aimed at increasing the supply of credit. Consumer Prices Index ('CPI') inflation fell during the first half of the year but remained above the BoE's 2% target. In the fourth quarter, it rose back to 2.7%, partly due to increases in tuition fees and energy prices.

The **eurozone** returned to recession in 2012 as the initial resilience in France and Germany was more than offset by deepening contractions in the periphery, where domestic demand was dragged down by austerity and private sector deleveraging. Inflation slowed from 2.7% at the end of 2011 to 2.2% in 2012 and the European Central Bank ('ECB') cut the refinance ('refi') rate by 0.25% to 0.75% in July. The sovereign crisis worsened again in the first half of 2012 but early signs of a roadmap for future integration of the economic and monetary union, additional support for Greece and, most importantly, the ECB's commitment to supporting the euro through its Outright Monetary Transactions bond-buying programme succeeded in lowering peripheral government bond spreads to their lowest level since March 2012.

Review of performance

Our operations in Europe reported a pre-tax loss of US$3.4bn, compared with a profit of US$4.7bn in 2011. On a constant currency basis, pre-tax profits declined by US$8.0bn.

In 2012, there were adverse movements of US$4.1bn on our own debt designated at fair value, resulting from changes in credit spreads, compared with favourable movements of US$2.9bn in 2011. On an underlying basis, pre-tax profits decreased by US$930m due to higher operating expenses reflecting a US$1.4bn increase in the provision for customer redress programmes in the UK, in particular relating to the possible mis-selling of PPI and interest rate protection products. This was partly offset by higher GB&M revenues, notably in the Rates and Credit businesses as spreads on eurozone

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Profit/(loss) before tax by country within global businesses

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
UK	**343**	**832**	**(111)**	**235**	**(6,355)**	**(5,056)**
France[60]	**135**	**203**	**514**	**(11)**	**(263)**	**578**
Germany	**29**	**64**	**283**	**40**	**(72)**	**344**
Malta	**39**	**52**	**31**	**–**	**–**	**122**
Switzerland	**–**	**2**	**1**	**133**	**–**	**136**
Turkey	**(32)**	**71**	**104**	**–**	**1**	**144**
Other	**(5)**	**(16)**	**164**	**102**	**73**	**318**
	509	**1,208**	**986**	**499**	**(6,616)**	**(3,414)**
2011						
UK	1,330	1,227	(265)	192	1,037	3,521
France[60]	69	192	(194)	16	18	101
Germany	36	69	203	28	16	352
Malta	31	72	21	–	–	124
Switzerland	–	(8)	–	225	–	217
Turkey	7	62	87	2	–	158
Other	(151)	73	225	94	(43)	198
	1,322	1,687	77	557	1,028	4,671
2010						
UK	1,181	827	1,772	223	(1,605)	2,398
France[60]	138	135	376	18	26	693
Germany	36	32	231	30	4	333
Malta	37	56	17	–	–	110
Switzerland	–	(5)	–	265	–	260
Turkey	64	80	105	1	–	250
Other	(144)	80	202	103	17	258
	1,312	1,205	2,703	640	(1,558)	4,302

For footnote, see page 120.

bonds tightened and investor sentiment improved. In addition, impairment charges fell due to lower credit risk provisions in GB&M, notably in the legacy credit portfolio, and improved delinquency rates in RBWM in the UK as we continued to improve the quality of these portfolios with a higher proportion of secured lending.

We made significant progress in reshaping our business in Europe. The disposal of non-core businesses simplified our European portfolio, allowing us to concentrate resources on businesses where we can deliver sustainable profits and growth while managing risks effectively. We exited from Hungary, Georgia, Slovakia, and RBWM in Russia and Poland, and sold Property Vision in the UK, our insurance and reinsurance businesses in Ireland and the retail equities brokerage in Greece.

During 2012, we made progress with our restructuring programme to align our businesses in each country to their respective global business operating models in order to reduce complexity and lower our costs in a sustainable way. Total restructuring costs (including impairment of assets) of US$299m were incurred across Europe as a result of organisational effectiveness and other initiatives, which delivered sustainable cost savings of approximately US$770m.

In RBWM, we continued to drive strong growth in mortgage lending in the UK through the success of our competitive offerings and marketing campaigns. Our share of new UK mortgage lending in 2012 was 12%, up from the 10% share of new lending in 2011, while maintaining a loan-to-value ratio of 58%. We have approved new mortgage lending of £19bn (US$32bn) during 2012, compared with our original lending commitment of £15bn (US$24bn), with £5bn (US$8bn) approved for first time buyers. Wealth Management revenue was marginally lower during the year reflecting the challenging economic environment. Our Wealth Management products and services were redesigned in accordance with the FSA's Retail Distribution Review, which was introduced on 1 January 2013, and we continue to offer a competitive fee-based financial advice service to Premier customers. The expansion of the RBWM business continued in

Turkey, where we are targeting mass affluent customers.

In CMB, we continued to invest in the UK, and have increased the number of International Relationship Managers to over 200 during the year. In the first half of 2012, we launched an International SME fund in the UK to support UK businesses that trade, or aspire to trade, internationally. By the end of 2012, we had approved lending through the fund of £5.1bn (US$8.2bn), exceeding the original target of £4.0bn (US$6.5bn), and provided £12bn (US$20bn) of gross new lending to UK SMEs, including the renewal of overdraft and other lending facilities. Over 80% of small business lending applications received during the year were approved. Revenue from international customers increased and our focus on this client base, together with targeted growth initiatives such as deposit acquisition and regional pricing strategies, led to a rise in Payments and Cash Management and Global Trade and Receivable Finance income.

Revenues from CMB's collaboration with GB&M increased primarily from sales of foreign exchange products. During the year, we made a provision for the possible mis-selling of interest rate protection products and the sale of these products to customers in our Business Banking segment, which serves SMEs, was withdrawn.

GB&M continued to develop cross-product capabilities in the growing renminbi market. Early in the year, we issued the first international renminbi bond outside sovereign Chinese territory. Since then, a number of significant transactions were supported by in-depth collaboration between European and other regional teams which reinforced our position as the leading house for international renminbi issuance. In Foreign Exchange, the focus remained on enhancing product offerings in our e-FX platforms for a broader client base, particularly to RBWM and CMB customers. This included the launch of a 'Dynamic Currency Conversion' product within the transactional Foreign Exchange business. To enhance coverage efforts in Global Banking, the Corporate Finance Group was established to strengthen the financial advisory and event financing business. Payments and Cash Management won a number of mandates and implemented the Global Liquidity Solutions platform to provide advanced liquidity management functionality for its clients. In addition, our legacy credit exposure was reduced in Europe by exiting from certain positions and the business will reduce the size of this portfolio further as opportunities arise.

In GPB, we revised our medium-term strategic plan to focus the business on investing in priority markets with a redefined client offering that builds on product strengths and leverages Group capabilities. We concentrated on higher net worth international and domestic customers, enhancing our compliance and risk framework and improving alignment with the other global businesses.

Our activities are likely to be affected by proposed legislation in the UK arising from the recommendations of the UK Independent Commission on Banking ('ICB') to ring-fence the retail bank from wholesale operations and to require the retail bank to have a greater primary loss absorbing capacity. Proposed changes in regulations are likely to affect how we conduct activities, with the potential to curtail the types of business we carry out and increase the costs of doing business. The implementation of any proposed changes will take a considerable amount of time and involve significant cost (see page 132).

The following commentary is on a constant currency basis.

Net interest income decreased by 3%. Balance Sheet Management revenues declined, principally in the UK, as yield curves continued to flatten and liquidity arising from maturities and sales of available-for-sale debt securities was re-invested at lower prevailing rates. In addition we placed a greater portion of our liquidity with central banks. GPB was similarly affected as higher yielding positions matured and as we managed selectively our exposures to eurozone sovereign debt. Legacy credit revenues in the UK also fell as a result of higher interest expense on structured debt issued at the end of 2011, coupled with lower effective yields on assets. RBWM net interest income declined mainly in the UK due to lower deposit spreads reflecting strong competition in the low interest rate environment. This was partly offset by strong growth in average residential mortgage balances and improved lending spreads in the UK, along with higher personal lending and cards balances in Turkey as the business expanded. In addition, net interest income in CMB benefited from higher average customer account balances as we continued to attract deposits through our Payments and Cash Management products as a result of competitive pricing, while average lending balances also rose, mainly in the UK, despite muted demand for credit.

Net fee income increased by 2%. CMB fee income rose due to higher transaction volumes reflecting new mandates in Payments and Cash Management. RBWM fee income also increased due to lower commissions paid as a result of the run-off and subsequent disposal of the insurance businesses in Ireland. These increases were partly offset by a fall in brokerage fees in GPB, reflecting a reduction in client transaction volumes, due in part to lower market volatility. Fees from assets under management and account services also declined, as challenging market conditions in the latter half of 2011 led to a fall in average client assets in 2012, coupled with a reduction in client numbers as we repositioned our target client base.

Net trading income increased by 27%, primarily due to significantly higher Rates trading revenues in the UK and France, and higher Credit trading revenues, mainly in the UK, as spreads tightened and investor sentiment improved following stimuli by central banks. This was despite significant adverse fair value movements in Rates, including a charge from own credit spreads on structured liabilities as spreads tightened which compared with a gain reported in 2011, together with a charge as a result of a change in estimation methodology in respect of credit valuation adjustments on derivative assets (see Note 15 on the Financial Statements). Revenues in our legacy credit portfolio increased due to price appreciation and redemption at par of certain assets. Foreign Exchange income was also stronger due to higher income from GB&M's ongoing collaboration with CMB, and increased volumes from improvements in our electronic pricing and distribution capabilities, although this was partly offset by the effect of less volatile markets in 2012. In addition, trading income benefited from the change in estimation methodology for debit valuation adjustments on derivative liabilities (see Note 15 on the Financial Statements).

There were lower adverse fair value movements on non-qualifying hedges, driven by favourable fair value movements on non-qualifying hedges in HSBC Holdings, compared with adverse fair value movements in 2011, reflecting the less pronounced decline in long-term US interest rates relative to sterling and euro interest rates than in 2011. This was partly offset by higher adverse movements on non-qualifying hedges in European operating entities as interest rates fell.

Adverse foreign exchange movements were reported on assets held as economic hedges of foreign currency debt designated at fair value compared with favourable movements in 2011. These offset favourable foreign exchange movements on the foreign currency debt which are reported in 'Net expense from financial instruments designated at fair value'.

Net expense from financial instruments designated at fair value increased by US$4.8bn. Excluding adverse fair value movements due to the change in credit spreads on our own debt held at fair value, net income from financial instruments designated at fair value of US$1.9bn in 2012 compared with a net expense of US$374m in 2011. This reflected favourable foreign exchange movements on foreign currency debt designated at fair value issued as part of our overall funding strategy compared with adverse movements in 2011, with an offset reported in 'Net trading income'. In addition, net investment gains were recognised on the fair value of assets held to meet liabilities under insurance and investment contracts as market conditions improved, compared with net investment losses in 2011. The corresponding movement in liabilities to customers is recorded under 'Net insurance claims incurred and movement in liabilities to policyholders' to the extent that these investment gains or losses are attributable to policyholders holding unit-linked insurance policies and insurance or investment contracts with DPF.

Gains less losses from financial investments decreased by US$133m. This was driven by higher impairments in GB&M in the UK of available-for-sale equity securities due to significant write-downs in 2012 on three holdings, two of which were in our direct investment business in run-off. The decline was also driven by losses on the disposal of legacy assets, also in GB&M in the UK (see page 27), together with the non-recurrence of gains in 2011 on the disposal of available-for-sale debt securities in our Insurance business in RBWM. These factors were partly offset by higher gains on the disposal of available-for-sale debt securities in Balance Sheet Management, mainly in the UK, as part of structural interest rate risk management activities, coupled with a rise in disposal gains in Principal Investments in GB&M.

Net earned insurance premiums decreased by 6%. This mainly reflected lower life insurance sales in RBWM in France as a result of the adverse economic environment and increased competition from other banking products. The run-off and subsequent disposal of the insurance businesses in Ireland in 2012 also contributed to the decline. This was partly offset by a rise in net earned premiums in the UK due, in part, to the sale of a unit-linked insurance product through two new third party platforms.

Other operating income decreased by US$95m. GB&M incurred losses on the sale of certain syndicated loans in the UK. In addition, gains in

2011 on the disposal of a property fund did not recur.

Net insurance claims incurred and movement in liabilities to policyholders increased by 40%, driven by net investment gains on the fair value of the assets held to support policyholder contracts, compared with net losses in 2011. This was partly offset by lower reserves established for new business, reflecting the decline in premiums in France.

Loan impairment charges and other credit risk provisions decreased by 22% to US$1.9bn. GB&M reported lower credit risk provisions, mainly in the UK, on available-for-sale ABSs, driven by an improvement in underlying asset prices, as well as lower charges on Greek sovereign debt. These were coupled with a reduction in loan impairment charges in RBWM, notably in the UK, as we continued to pro-actively identify and monitor customers facing financial hardship and focused on growing higher quality lending. As a result, delinquency rates improved across both the secured and unsecured lending portfolios. This was partly offset by an increase in loan impairment charges in RBWM in Turkey, reflecting business expansion. In addition, there were higher individually assessed provisions in CMB reflecting, mainly, the challenging economic conditions in the UK, Greece, Spain and Turkey.

Operating expenses increased by 15%, driven by higher charges relating to UK customer redress programmes with US$2.3bn reported in 2012, compared with a charge of US$890m (US$898m as reported) in 2011. In 2012 we included an additional charge of US$1.7bn for estimated redress for the possible mis-selling of PPI policies and US$598m in relation to the possible mis-selling of interest rate protection products in previous years, of which US$268m related to the estimated redress to be paid to customers and the remainder to costs of closing out these positions and related administration costs. A charge relating to the US Office of Foreign Asset Control ('OFAC') investigation of US$375m was also incurred in HSBC Holdings, along with the UK bank levy of US$571m. This was partly offset by an adjustment of US$99m in the 2011 bank levy charge of US$570m as the basis of calculation was clarified. In addition, 2011 included a credit of US$570m (US$587m as reported) arising from the defined benefit pension obligations in the UK which did not recur. Restructuring costs of US$299m were US$92m lower than in 2011, as the review initiated in 2011 to improve cost efficiency continued to be implemented and we completed disposals and exits in Europe.

Excluding these items, operating expenses marginally increased compared with 2011. Our organisational effectiveness initiatives progressed, delivering sustainable cost savings of approximately US$770m in 2012. This enabled us to reinvest in, and reallocate capital, to our designated growth businesses such as our mortgage offering, our international CMB business and our home and priority growth markets (UK, France, Germany and Turkey), as well as launching the M&S Bank in the UK.

Operating expenses in Europe

	2012 US$m	2011 US$m
HSBC Holdings	**2,063**	1,664
UK	**11,993**	9,989
Continental Europe	**5,237**	5,563
Intra-region eliminations	**(198)**	(147)
Total operating expenses	**19,095**	17,069

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Profit/(loss) before tax and balance sheet data – Europe

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income/(expense)	5,437	3,228	1,409	820	(543)	43	10,394
Net fee income	2,622	1,658	1,032	848	9	–	6,169
Trading income excluding net interest income	67	26	848	216	25	–	1,182
Net interest income on trading activities	7	14	1,500	14	33	(43)	1,525
Net trading income[78]	74	40	2,348	230	58	(43)	2,707
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	(3,091)	–	(3,091)
Net income/(expense) from other financial instruments designated at fair value	770	139	1,073	–	(1,106)	–	876
Net income/(expense) from financial instruments designated at fair value	770	139	1,073	–	(4,197)	–	(2,215)
Gains less losses from financial investments	(5)	(1)	375	(3)	(2)	–	364
Dividend income	–	1	104	3	3	–	111
Net earned insurance premiums	3,150	438	–	42	–	–	3,630
Other operating income	84	58	88	61	796	(9)	1,078
Total operating income/(expense)	12,132	5,561	6,429	2,001	(3,876)	(9)	22,238
Net insurance claims[86]	(4,054)	(536)	–	(40)	–	–	(4,630)
Net operating income/(expense)[21]	8,078	5,025	6,429	1,961	(3,876)	(9)	17,608
Loan impairment charges and other credit risk provisions	(347)	(1,109)	(436)	(29)	–	–	(1,921)
Net operating income/(expense)	7,731	3,916	5,993	1,932	(3,876)	(9)	15,687
Total operating expenses	(7,225)	(2,708)	(4,999)	(1,431)	(2,741)	9	(19,095)
Operating profit/(loss)	506	1,208	994	501	(6,617)	–	(3,408)
Share of profit/(loss) in associates and joint ventures	3	–	(8)	(2)	1	–	(6)
Profit/(loss) before tax	509	1,208	986	499	(6,616)	–	(3,414)
	%	%	%	%	%		%
Share of HSBC's profit before tax	2.5	5.9	4.8	2.4	(32.0)		(16.5)
Cost efficiency ratio	89.4	53.9	77.8	73.0	(70.7)		108.4
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	170,002	105,796	156,798	29,963	881		463,440
Total assets	240,744	132,718	1,044,507	76,145	75,513	(180,387)	1,389,240
Customer accounts	191,024	121,648	184,473	57,125	739		555,009

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income/(expense)	5,653	3,107	2,102	936	(574)	(223)	11,001
Net fee income	2,633	1,640	989	942	32	–	6,236
Trading income/(expense) excluding net interest income	40	5	602	191	(201)	–	637
Net interest income on trading activities	11	16	1,205	16	53	223	1,524
Net trading income/(expense)[78]	51	21	1,807	207	(148)	223	2,161
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	3,180	–	3,180
Net income/(expense) from other financial instruments designated at fair value	(672)	(21)	(65)	–	46	–	(712)
Net income/(expense) from financial instruments designated at fair value	(672)	(21)	(65)	–	3,226	–	2,468
Gains less losses from financial investments	51	(1)	453	1	11	–	515
Dividend income	1	1	42	4	1	–	49
Net earned insurance premiums	3,768	381	–	–	(13)	–	4,136
Other operating income	95	58	187	5	760	74	1,179
Total operating income	11,580	5,186	5,515	2,095	3,295	74	27,745
Net insurance claims[86]	(3,212)	(287)	–	–	–	–	(3,499)
Net operating income[21]	8,368	4,899	5,515	2,095	3,295	74	24,246
Loan impairment (charges)/ recoveries and other credit risk provisions	(596)	(960)	(876)	(82)	2	–	(2,512)
Net operating income	7,772	3,939	4,639	2,013	3,297	74	21,734
Total operating expenses	(6,450)	(2,252)	(4,569)	(1,456)	(2,268)	(74)	(17,069)
Operating profit	1,322	1,687	70	557	1,029	–	4,665
Share of profit/(loss) in associates and joint ventures	–	–	7	–	(1)	–	6
Profit before tax	1,322	1,687	77	557	1,028	–	4,671
	%	%	%	%	%		%
Share of HSBC's profit before tax	6.0	7.7	0.4	2.5	4.7		21.3
Cost efficiency ratio	77.1	46.0	82.8	69.5	68.8		70.4
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	150,205	98,154	156,903	28,378	696		434,336
Total assets	210,140	124,049	1,021,486	77,410	63,141	(214,281)	1,281,945
Customer accounts	176,134	104,530	154,208	58,265	267		493,404

For footnotes, see page 120.

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Geographical regions > Hong Kong

Hong Kong

HSBC's principal banking subsidiaries in Hong Kong are The Hongkong and Shanghai Banking Corporation Limited and Hang Seng Bank Limited. The former is the largest bank incorporated in Hong Kong and is our flagship bank in the Asia-Pacific region. It is one of Hong Kong's three note-issuing banks, accounting for more than 60% by value of banknotes in circulation in 2012.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**5,316**	4,691	4,246
Net fee income	**3,335**	3,097	2,962
Net trading income	**1,463**	1,189	1,312
Other income	**2,308**	1,705	1,682
Net operating income[21]	**12,422**	10,682	10,202
LICs[76]	**(74)**	(156)	(114)
Net operating income	**12,348**	10,526	10,088
Total operating expenses	**(4,848)**	(4,758)	(4,431)
Operating profit	**7,500**	5,768	5,657
Income from associates[77]	**82**	55	35
Profit before tax	**7,582**	5,823	5,692
Cost efficiency ratio	**39.0%**	44.5%	43.4%
RoRWA[66]	**7.0%**	5.3%	5.0%
Year-end staff numbers	**27,742**	28,984	29,171

24%
growth in underlying profit before tax

Market leader in offshore renminbi bond issuance

Best Commercial Bank 2012
(FinanceAsia)

For footnotes, see page 120.

Economic background

The **Hong Kong** economy started 2012 on a strong footing, but lost momentum in the second quarter as global trade flows slowed and the mainland Chinese economy cooled, causing GDP to contract slightly. Domestic demand stayed resilient, however, supported by continued wage growth, and firm job market conditions and asset prices. This underpinned investment and private consumption growth, leading the economy back into expansion in the third quarter (0.6%, quarter-on-quarter, seasonally adjusted). Slower economic momentum and deflationary pressures in mainland China allowed the pressure on Hong Kong's asset prices to ease through most of 2012, resulting in reduced CPI inflation of 4.1%, compared with 5.3% in 2011.

Review of performance

Reported pre-tax profits from our operations in Hong Kong were US$7.6bn compared with US$5.8bn in 2011, an increase of 30% on both a reported and a constant currency basis.

Reported profits included gains on the sale of our shares in Global Payments Asia-Pacific Ltd of US$212m and the HSBC and Hang Seng Bank general insurance businesses of US$117m and US$46m, respectively. Excluding these gains and associated operating results, underlying profit of US$7.2bn increased by 24%, driven by higher net interest income in CMB and RBWM, the gain of US$314m on the sale of non-strategic investments in India, higher trading revenues in GB&M, increased fee income in both CMB and GB&M, and a reduction in loan impairment charges. These favourable movements were partly offset by higher operating expenses.

In RBWM, we continue to develop our Wealth Management services for our retail customers and launched new investment funds, including the Global High Yield Bond Fund which attracted over US$1bn of subscriptions by the end of the year. The sale of the general insurance businesses enabled us to focus on life insurance manufacturing, where we maintained our market leadership position. We also led the market in deposits, mortgages, mandatory provident funds and credit cards. We maintained our prudent lending approach with average loan-to-value ratios of 48% on new mortgage drawdowns and an estimated 32% on the portfolio as a whole. We now offer renminbi current accounts for non-residents and launched the first mobile payment solution in the region, enabling contactless credit card transactions through Visa payWave terminals.

Profit/(loss) before tax by global business

	2012 US$m	2011 US$m	2010 US$m
Retail Banking and Wealth Management	**3,694**	3,022	3,001
Commercial Banking	**2,188**	1,608	1,352
Global Banking and Markets	**1,518**	1,316	1,347
Global Private Banking	**249**	188	227
Other	**(67)**	(311)	(235)
	7,582	5,823	5,692

In CMB, we capitalised on our international connectivity and our standing as a leading trade finance bank to grow trade-related revenues by 10%, particularly with mainland China. The collaboration between CMB and GB&M continued to strengthen, with revenue growth of 13%, most notably from the provision of foreign exchange products to our corporate customers. We won the *FinanceAsia* award for 'Best Commercial Bank 2012' and ten *Asiamoney* awards for Payments and Cash Management, including the 'Best Local Cash Management Bank' for small, medium and large corporates.

In GB&M, we led the market in Hong Kong dollar bond issuance and were the leading bookrunner for corporate high yield bonds in Asia excluding Japan. We continued to lead the market in offshore renminbi bond issuance with several high-profile deals completed in 2012 for multinationals accessing the market.

We also reinforced our position as a leading international bank for offshore renminbi products, winning the *Asia Risk* 'Renminbi House of the Year' award and all seven product categories in *Asiamoney's* 'Offshore Renminbi Survey'.

The following commentary is on a constant currency basis.

Net interest income was 13% higher than in 2011, notably in CMB and RBWM, driven by increased customer loans and deposit balances and by growth in the insurance portfolio.

In RBWM, we continued to grow our average mortgage balances, reflecting continued strength in the property market. In CMB, average term and trade-related lending balances were higher as we capitalised on trade and capital flows.

Asset spreads in CMB were marginally wider than in 2011 on trade-related and other lending due to repricing, though they began to narrow towards the end of the year.

Net interest income also rose due to higher average deposit balances, notably in RBWM, in part reflecting reduced net outflows from customer accounts into investments. In addition, deposit spreads widened.

Net fee income of US$3.3bn was 7% higher than in 2011. Fees rose from increased transaction volumes in trade services, remittances and account services as we continued to intermediate international trade and capital flows. Fee income also increased in both CMB and GB&M as we arranged more debt issues for our customers to satisfy their funding requirements while the market for corporate debt improved. In RBWM, fees from unit trusts rose reflecting increased sales volumes, despite customers increasingly preferring lower risk products with lower fees. These increases were largely offset by a reduction in brokerage income from lower market turnover as a result of weaker investor sentiment.

Net trading income increased by 23% from lower adverse fair value movements on derivatives relating to certain provident funds, following reductions in long-term investment returns in 2011. There was also a strong performance in GB&M, notably in Rates trading activities, which reflected increased client demand for risk management products, particularly in yen and renminbi, in part from increased cross-currency debt issuance by corporates. Credit trading revenues also rose, in part due to increased client activity. This was partly offset by a net charge as a result of a change in estimation methodology in respect of the valuation adjustments on derivatives.

Net income from financial instruments designated at fair value was US$447m compared with an expense of US$540m in 2011, due to net investment gains on assets held by the Insurance business (compared with net losses in 2011) as a result of more favourable equity market conditions. To the extent that these investment gains were attributed to policyholders of unit-linked insurance policies and insurance contracts with DPF, there was a corresponding increase in '*Net insurance claims incurred and movement in liabilities to policyholders*'.

Gains less losses from financial investments were US$322m compared with US$25m in 2011, largely from the gain of US$314m on the sale of our shares in four non-strategic investments in India.

Net earned insurance premiums grew by 17% following increased new sales and renewals of life insurance products. The growth in premiums resulted in a corresponding increase in 'Net insurance claims incurred and movement in liabilities to policyholders'.

Other operating income of US$1.9bn was US$235m higher than in 2011. We completed the sale of our shares in Global Payments Asia-Pacific Ltd and the HSBC and Hang Seng Bank general insurance businesses, realising gains of US$212m, US$117m and US$46m, respectively. While the value of the PVIF asset rose, this was not to the same extent as in 2011 as increased insurance sales in 2012 were more than offset by lower positive assumption updates during 2012 compared with 2011and the non-recurrence of the benefit from the refinement to the PVIF asset calculation in 2011.

Net insurance claims incurred and movement in liabilities to policyholders increased by 38%, driven by net investment gains on fair value of the assets held to support policyholder contracts, compared with net losses in 2011. In addition, policyholder liabilities were established for new business, reflecting the higher premiums, though this was partly offset by the disposal of the insurance businesses in 2012.

Loan impairment charges and other credit risk provisions reduced to US$74m from US$157m in 2011, largely due to lower specific impairment charges in CMB and the non-recurrence of charges relating to available-for-sale Greek sovereign debt securities.

Operating expenses increased by 2%, primarily due to higher systems implementation and processing costs as we continued to invest in our technology infrastructure, and increased property rental costs. Salaries and wages were broadly unchanged as wage inflation was largely offset by reduced average staff numbers as we continued to improve efficiency across our operations, generating sustainable annual savings of approximately US$190m.

Profit/(loss) before tax and balance sheet data – Hong Kong

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income/(expense)	2,851	1,629	1,087	149	(482)	82	5,316
Net fee income	1,769	850	548	155	13	–	3,335
Trading income/(expense) excluding net interest income	176	163	666	170	(2)	–	1,173
Net interest income on trading activities	10	2	352	–	8	(82)	290
Net trading income[78]	186	165	1,018	170	6	(82)	1,463
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	–	–	–
Net income/(expense) from other financial instruments designated at fair value	511	(53)	23	–	(34)	–	447
Net income/(expense) from financial instruments designated at fair value	511	(53)	23	–	(34)	–	447
Gains less losses from financial investments	–	–	2	7	313	–	322
Dividend income	–	1	5	–	18	–	24
Net earned insurance premiums	5,294	655	8	–	–	–	5,957
Other operating income	711	253	77	13	1,152	(282)	1,924
Total operating income	11,322	3,500	2,768	494	986	(282)	18,788
Net insurance claims[86]	(5,757)	(602)	(7)	–	–	–	(6,366)
Net operating income[21]	5,565	2,898	2,761	494	986	(282)	12,422
Loan impairment (charges)/ recoveries and other credit risk provisions	(97)	3	17	3	–	–	(74)
Net operating income	5,468	2,901	2,778	497	986	(282)	12,348
Total operating expenses	(1,819)	(719)	(1,263)	(248)	(1,081)	282	(4,848)
Operating profit/(loss)	3,649	2,182	1,515	249	(95)	–	7,500
Share of profit in associates and joint ventures	45	6	3	–	28	–	82
Profit/(loss) before tax	3,694	2,188	1,518	249	(67)	–	7,582
	%	%	%	%	%		%
Share of HSBC's profit before tax	17.9	10.6	7.3	1.2	(0.3)		36.7
Cost efficiency ratio	32.7	24.8	45.7	50.2	109.6		39.0
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	62,533	62,944	40,223	6,464	1,449		173,613
Total assets	96,185	72,056	256,295	20,705	81,085	(7,992)	518,334
Customer accounts	201,649	90,152	34,171	19,566	670		346,208

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Geographical regions > Hong Kong / Rest of Asia-Pacific

Profit/(loss) before tax and balance sheet data – Hong Kong (continued)

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income/(expense)	2,571	1,317	1,051	173	(464)	43	4,691
Net fee income	1,741	706	475	160	15	–	3,097
Trading income/(expense) excluding net interest income	120	169	652	135	(116)	–	960
Net interest income on trading activities	9	1	246	–	16	(43)	229
Net trading income/(expense)[78]	129	170	898	135	(100)	(43)	1,189
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	–	–	–
Net income/(expense) from other financial instruments designated at fair value	(475)	(72)	(5)	–	15	–	(537)
Net income/(expense) from financial instruments designated at fair value	(475)	(72)	(5)	–	15	–	(537)
Gains less losses from financial investments	3	10	21	–	(10)	–	24
Dividend income	–	1	14	–	24	–	39
Net earned insurance premiums	4,317	758	13	–	–	–	5,088
Other operating income	505	175	79	8	1,185	(268)	1,684
Total operating income	8,791	3,065	2,546	476	665	(268)	15,275
Net insurance claims[86]	(3,887)	(697)	(9)	–	–	–	(4,593)
Net operating income[21]	4,904	2,368	2,537	476	665	(268)	10,682
Loan impairment (charges)/recoveries and other credit risk provisions	(77)	(66)	23	(36)	–	–	(156)
Net operating income	4,827	2,302	2,560	440	665	(268)	10,526
Total operating expenses	(1,811)	(703)	(1,248)	(252)	(1,012)	268	(4,758)
Operating profit/(loss)	3,016	1,599	1,312	188	(347)	–	5,768
Share of profit in associates and joint ventures	6	9	4	–	36	–	55
Profit/(loss) before tax	3,022	1,608	1,316	188	(311)	–	5,823
	%	%	%	%	%		%
Share of HSBC's profit before tax	13.8	7.3	6.0	0.9	(1.4)		26.6
Cost efficiency ratio	36.9	29.7	49.2	52.9	152.2		44.5
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	56,296	54,986	39,667	5,447	1,269		157,665
Total assets	85,866	63,516	238,892	20,680	84,782	(20,712)	473,024
Customer accounts	181,316	79,225	35,283	19,622	(101)		315,345

For footnotes, see page 120.

Rest of Asia-Pacific

We offer a full range of banking and financial services in mainland China, mainly through our local subsidiary, HSBC Bank (China) Company Limited. We also participate indirectly in mainland China through our primary associate, Bank of Communications.

Outside mainland China, we conduct business in 21 countries and territories in the Rest of Asia-Pacific region, primarily through branches and subsidiaries of The Hongkong and Shanghai Banking Corporation, with particularly strong coverage in Australia, India, Indonesia, Malaysia and Singapore.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**5,391**	5,102	3,828
Net fee income	**2,083**	2,111	1,932
Net trading income	**1,053**	1,658	1,618
Other income	**5,057**	1,842	1,854
Net operating income[21]	**13,584**	10,713	9,232
LICs[76]	**(436)**	(267)	(439)
Net operating income	**13,148**	10,446	8,793
Total operating expenses	**(5,806)**	(5,806)	(5,143)
Operating profit	**7,342**	4,640	3,650
Income from associates[77]	**3,106**	2,831	2,252
Profit before tax	**10,448**	7,471	5,902
Cost efficiency ratio	**42.7%**	54.2%	55.7%
RoRWA[66]	**3.5%**	3.1%	3.1%
Year-end staff numbers	**85,024**	91,051	91,607

Over US$3bn
gains recognised following strategic disposals in 2012

9%
growth in lending balances
(on a constant currency basis)

'Best Domestic Cash Management Bank'
(Euromoney)
across 14 countries in the region

For footnotes, see page 120.

Economic background

In mainland **China**, economic growth slowed through the first three quarters of 2012 due to a decline in external demand driven by the eurozone crisis, the effect of tightening domestic monetary policy measures and sharp de-stocking by industry. This greater than expected deceleration and increasing pressure on the labour market prompted policy makers to ease monetary policy in the summer of 2012, following two interest rate cuts totalling 50bps and two cuts in the reserve requirement ratio amounting to 100bps in the first half of the year, and speeded up the approval of new infrastructure projects. As these measures took effect, the mainland Chinese economy began to show signs of recovery in the fourth quarter of 2012. GDP slowed to 7.8% in 2012 from 9.3% in 2011, but remained above Beijing's target of 7.5%. CPI inflation was a modest 2.6%.

Japan's economy experienced a turbulent 2012. After a very strong start supported by reconstruction demand and government subsidies, growth turned sharply negative in the third quarter as tepid overseas demand prompted a deep slump in exports and manufacturing. Sentiment improved by the end of 2012. The Bank of Japan took steps to ease monetary policy in 2012, establishing a 1% inflation goal in February 2012 and expanding its Asset Purchase Programme by JPY46 trillion (US$534bn).

Slowing global trade reduced growth in the Rest of Asia-Pacific region. **South Korea's** full-year growth slowed to 2.1% in 2012, the lowest annual rate for three years, as the slowdown in global trade hit the export-dependent economy hard in the third quarter. To support domestic demand, the Bank of Korea lowered its policy rate from 3.25% to 2.75%. **Singapore's** economy slowed notably, with GDP growth declining to 1.2% in 2012 from 5% the year before. 2012 was a tumultuous year for **Taiwan's** export-reliant economy, as both western and mainland China demand weakened, particularly from April onwards. However, the impetus provided by key electronic product launches helped to maintain manufacturing activity and jobs, enabling domestic demand to underpin growth more effectively than it did in earlier recessions. The other ASEAN (Association of Southeast Asian Nations) countries demonstrated more resilience, supported by domestic growth. Growth in **Indonesia** was driven by favourable demographics and a growing middle-income class. In **Thailand**, rebuilding activity and policy support after the floods in 2011 led to a rebound in economic activity. Growth in **India** continued to slow during the course of 2012, with

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Geographical regions > Rest of Asia-Pacific

Profit/(loss) before tax by country within global businesses

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
Australia	**97**	**38**	**184**	**–**	**(44)**	**275**
India	**41**	**89**	**497**	**7**	**175**	**809**
Indonesia	**29**	**124**	**146**	**–**	**7**	**306**
Mainland China	**838**	**1,724**	**1,257**	**(4)**	**2,525**	**6,340**
Ping An	**622**	**82**	**60**	**–**	**2,459**	**3,223**
Other associates	**268**	**1,466**	**591**	**–**	**–**	**2,325**
Other mainland China	**(52)**	**176**	**606**	**(4)**	**66**	**792**
Malaysia	**183**	**131**	**242**	**–**	**8**	**564**
Singapore	**201**	**139**	**296**	**97**	**(65)**	**668**
Taiwan	**62**	**36**	**136**	**–**	**–**	**234**
Vietnam	**9**	**45**	**57**	**–**	**9**	**120**
Other	**57**	**276**	**510**	**59**	**230**	**1,132**
	1,517	**2,602**	**3,325**	**159**	**2,845**	**10,448**
2011						
Australia	88	106	108	–	5	307
India	(14)	122	539	5	161	813
Indonesia	6	89	157	–	7	259
Mainland China	1,112	1,340	1,116	(4)	117	3,681
Ping An	946	–	63	–	117	1,126
Other associates	233	1,150	466	–	–	1,849
Other mainland China	(67)	190	587	(4)	–	706
Malaysia	173	118	228	1	9	529
Singapore	183	133	189	97	(7)	595
Taiwan	45	23	130	–	12	210
Vietnam	–	51	79	–	24	154
Other	48	264	543	(8)	76	923
	1,641	2,246	3,089	91	404	7,471
2010						
Australia	59	96	95	–	8	258
India	(83)	71	508	4	179	679
Indonesia	12	94	116	–	(3)	219
Mainland China	839	833	683	(7)	217	2,565
Ping An	797	–	51	–	188	1,036
Other associates	176	746	392	–	–	1,314
Other mainland China	(134)	87	240	(7)	29	215
Malaysia	120	88	194	–	(1)	401
Singapore	169	87	100	84	84	524
Taiwan	31	36	87	–	(7)	147
Vietnam	(7)	50	61	–	7	111
Other	22	201	644	–	131	998
	1,162	1,556	2,488	81	615	5,902

weaker external demand, the lagged effects of monetary policy normalisation and the absence in recent years of structural policies and infrastructure investment playing a role in the slowdown. Encouragingly, the government embarked on a reform programme towards the end of the year which helped lift sentiment and stabilise growth.

Growth in the **Australian** economy was uneven in 2012 as it absorbed a mining boom which had the effect of slowing investment in other sectors. For 2012 as a whole, growth was strong at around 3.5%. Unemployment edged up to 5.4%. In response to the global slowdown and to help re-balance growth away from mining and towards the non-mining sectors, the Reserve Bank of Australia reduced its cash rate from 4.25% to 3.00%.

Review of performance

Our operations in the Rest of Asia-Pacific region reported pre-tax profits of US$10.4bn compared with US$7.5bn in 2011, an increase of 40% or 41% on a constant currency basis.

Reported profits included a gain on the disposal of our associate, Ping An of US$3.0bn. Our remaining shareholding has been classified as a financial investment (see Note 26 on the Financial Statements). Reported profits also included gains from the sale of the RBWM business in Thailand (US$108m), the GPB business in Japan (US$67m) and our interest in a property company in the Philippines (US$130m). Reported profits in 2011 included an accounting gain of US$181m arising from the dilution of our shareholding in Ping An, offset by a remeasurement loss of US$48m on its consolidation of Ping An Bank (formerly Shenzhen Development Bank).

On an underlying basis, which excludes the items described above and the associated operating results, pre-tax profit rose by 2%. This was driven by higher net interest income, notably from Balance Sheet Management in GB&M in mainland China, and strong growth in average lending balances across most of the region, as well as increased profits from our associates in mainland China. These factors were partly offset by adverse fair value movements of US$553m on the contingent forward sale contract related to the Ping An sale, the effect of which was offset in 2013 on completion of the transaction, and higher operating expenses, in part due to restructuring costs arising from the ongoing strategic review of our businesses and support functions in the region. Loan impairment charges also rose from a small number of specific corporate impairment charges, but remained low as credit quality remained broadly stable.

We maintained our focus on our key priority growth markets in the region. In mainland China, we continued to invest in our branch network and at the end of the year had 141 HSBC China outlets, 20 HSBC rural bank outlets and 46 Hang Seng Bank outlets. We invested a further US$1.7bn in BoCom to maintain our interest of 19.03% in this strategically important associate and reinforce our position as the leading foreign bank in mainland China.

In Malaysia, we now have the largest branch network amongst foreign banks and were designated 'Best Bank' for the 10th consecutive year by the *Asset Triple A Country Awards*.

In RBWM, we made progress in re-shaping the business in line with our strategy, completing the disposal of the non-strategic business in Thailand and announcing the sale of our life insurance business in Taiwan. With our focus on secured lending, we recorded mortgage growth in mainland China, Singapore, Australia and Malaysia, reflecting the continued strength of the property market and the expansion of our distribution network.

In CMB, trade revenues grew as we capitalised on our global network to capture cross-border trade and capital flows, particularly with mainland China. We continued to strengthen our infrastructure to capture the outbound opportunities from mainland China and now have 14 'China desks' established globally to assist customers with their international trade requirements. Significant new mandates in 2012 in CMB and GB&M reflected investment in our Payments and Cash Management infrastructure. We were recognised as 'Best Domestic Cash Management Bank' by *Euromoney* in fourteen countries across the region, 'Best Overall Cash Management Bank in Asia' by *Global Finance* and 'Best International Trade Bank in China' by *Trade Finance Magazine*.

In GB&M, we continued to be a key participant in the internationalisation of the renminbi and enhanced our Payments and Cash Management systems with renminbi capabilities. We continued to build our debt and equity capital markets capabilities in key countries in the region and were involved in several significant government and large corporate issues in Australia, Singapore, India and Indonesia. Revenues from the collaboration between CMB and GB&M increased by 13% as we enhanced sales coordination between the global businesses.

The following commentary is on a constant currency basis.

Net interest income increased by 8%, notably in mainland China from Balance Sheet Management, arising from growth in the debt securities portfolio and improved yields, as well as from increased trade-related and term lending in CMB and GB&M.

We grew average deposit balances, notably in GB&M and CMB reflecting new Payments and Cash Management mandates, and in RBWM from deposit acquisition. The benefit of this growth was partly offset by narrower liability spreads reflecting rate cuts and liquidity easing measures by central banks.

In RBWM, residential mortgage balances grew, primarily in Singapore, Australia, Malaysia and mainland China, reflecting the continued strength of property markets and expansion of our distribution network. However, net interest income was broadly unchanged due to the effect of the sale of the RBWM business in Thailand and narrower asset spreads in a number of countries attributable to competitive pricing pressures.

Net fee income increased by US$29m, primarily in GB&M, from higher fee income from our participation in more debt capital markets transactions across the region as we continued to strengthen our capabilities in this area, and lower regulatory fee expenses on Foreign Exchange and Rates transactions in mainland China as volumes reduced. RBWM reported higher income from cards in Australia from increased spending and card issuance and Wealth Management fees in mainland China. The increase from cards was more than offset by the discontinuation of our Premier business in Japan, the sale of our RBWM business in Thailand, and a fall in fund management fees as we saw a move into lower yielding products reflecting investor's lower risk appetite.

Net trading income decreased by 34% compared with 2011, mainly from adverse fair value movements on the contingent forward sale contract of US$553m relating to Ping An (see Note 2b on the Financial Statements). Trading income was also lower, primarily in mainland China due to lower GB&M revenues in Foreign Exchange reflecting reduced volatility. These were partly offset by a net favourable movement as a result of a change in estimation methodology in respect of the valuation adjustments on derivatives.

Net income from financial instruments designated at fair value was US$110m in 2012 compared with a net expense of US$19m in 2011. This was driven by net investment gains on assets held by the Insurance business, primarily in Singapore, due to positive equity market movements. To the extent that these investment gains were attributed to policyholders of unit-linked insurance policies and insurance contracts with DPF, there was a corresponding increase in *'Net insurance claims incurred and movement in liabilities to policyholders'*.

Gains less losses from financial investments were US$16m compared with net losses of US$23m in 2011, due to a disposal gain on investments managed by a private equity fund and a gain on the sale of government debt securities in India.

Net earned insurance premiums rose by 7% to US$812m as a result of increased renewals and new business volumes in mainland China, Singapore and Taiwan. The growth in premiums resulted in a corresponding increase in 'Net insurance claims incurred and movement in liabilities to policyholders'.

We reported a *Gain on disposal of Ping An*, an associate of Mainland China, of US$3.0bn. Our remaining shareholding has been classified as a financial investment.

Other operating income increased by US$201m due to gains on the sale of our RBWM business in Thailand of US$108m, our GPB business in Japan of US$67m and our interest in a property company in the Philippines of US$130m. These were partly offset by the non-recurrence of an accounting gain of US$181m arising from the dilution of our shareholding in Ping An in 2011.

Net insurance claims incurred and movement in liabilities to policyholders increased by 22%, driven by net investment gains on the fair value of the assets held to support the policyholder contracts compared with net losses in 2011. In addition, policyholder liabilities were established for new business, reflecting the rise in premiums across mainland China, Singapore and Taiwan.

Loan impairment charges and other credit risk provisions increased by US$170m as a result of individually assessed impairments on a single corporate exposure in Australia and a small number of corporate exposures in other countries in the region as well as a credit risk provision on an available-for-sale debt security in GB&M. These were partly offset by an impairment release in Singapore compared with a charge in 2011.

Operating expenses increased by 3%, due to restructuring and other related costs of US$131m (2011: US$45m) incurred across several countries as part of the ongoing strategic review of our businesses and support functions in the region. This resulted in a net reduction of approximately 6,000 FTE staff numbers and generated sustainable annual savings of approximately US$200m, which were more than offset by inflationary pressures and investment for business growth, including branch expansion in mainland China. Costs also increased from a litigation provision of US$98m made in respect of a long-standing court case and the write down by US$51m of our interest in a joint venture.

Share of profit from associates and joint ventures increased by US$212m, driven by higher profits from BoCom and Industrial Bank which reflected loan growth and higher fee income, partly offset by increased operating expenses and loan impairment charges. The contribution from Ping An reduced due to market valuation losses on equity securities held by their insurance business, which reflected volatile domestic equity markets, partly offset by increased income from the banking business, Ping An Bank. The disposal of Ping An and the dilution of our holding in Industrial Bank, following its issue of additional share capital to third parties on 7 January 2013, are expected to have a significant impact on future profits in the region.

Profit before tax and balance sheet data – Rest of Asia-Pacific

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income	1,787	1,396	2,156	102	137	(187)	5,391
Net fee income/(expense)	854	499	666	71	(7)	–	2,083
Trading income/(expense) excluding net interest income	96	188	1,002	67	(592)	–	761
Net interest income/(expense) on trading activities	(6)	(3)	100	–	14	187	292
Net trading income/(expense)[78]	90	185	1,102	67	(578)	187	1,053
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	(4)	–	(4)
Net income/(expense) from other financial instruments designated at fair value	109	1	(3)	–	3	–	110
Net income/(expense) from financial instruments designated at fair value	109	1	(3)	–	(1)	–	106
Gains less losses from financial investments	(1)	2	(10)	–	25	–	16
Dividend income	–	–	1	–	4	–	5
Net earned insurance premiums	569	243	–	–	–	–	812
Gain on disposal of Ping An	–	–	–	–	3,012	–	3,012
Other operating income	211	64	82	68	1,571	(172)	1,824
Total operating income	3,619	2,390	3,994	308	4,163	(172)	14,302
Net insurance claims[86]	(523)	(195)	–	–	–	–	(718)
Net operating income[21]	3,096	2,195	3,994	308	4,163	(172)	13,584
Loan impairment charges and other credit risk provisions	(234)	(154)	(48)	–	–	–	(436)
Net operating income	2,862	2,041	3,946	308	4,163	(172)	13,148
Total operating expenses	(2,238)	(993)	(1,279)	(149)	(1,319)	172	(5,806)
Operating profit	624	1,048	2,667	159	2,844	–	7,342
Share of profit in associates and joint ventures	893	1,554	658	–	1	–	3,106
Profit before tax	1,517	2,602	3,325	159	2,845	–	10,448
	%	%	%	%	%		%
Share of HSBC's profit before tax	7.3	12.6	16.1	0.8	13.8		50.6
Cost efficiency ratio	72.3	45.2	32.0	48.4	31.7		42.7
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	46,027	43,968	44,721	3,238	165		138,119
Total assets	55,509	59,123	201,774	12,142	24,534	(10,813)	342,269
Customer accounts	63,230	44,865	64,392	11,095	39		183,621

Report of the Directors: Operating and Financial Review (continued)

Geographical regions > Rest of Asia-Pacific / Middle East and North Africa

Profit before tax and balance sheet data – Rest of Asia-Pacific (continued)

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit before tax							
Net interest income	1,838	1,254	1,964	116	123	(193)	5,102
Net fee income/(expense)	904	513	621	82	(9)	–	2,111
Trading income/(expense) excluding net interest income	94	156	1,153	66	(90)	–	1,379
Net interest income/(expense) on trading activities	(2)	1	76	–	11	193	279
Net trading income/(expense)[78]	92	157	1,229	66	(79)	193	1,658
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	4	–	4
Net income/(expense) from other financial instruments designated at fair value	(38)	2	1	–	15	–	(20)
Net income/(expense) from financial instruments designated at fair value	(38)	2	1	–	19	–	(16)
Gains less losses from financial investments	–	2	(25)	1	(1)	–	(23)
Dividend income	–	–	2	–	–	–	2
Net earned insurance premiums	493	266	–	–	–	–	759
Other operating income	145	72	75	5	1,592	(178)	1,711
Total operating income	3,434	2,266	3,867	270	1,645	(178)	11,304
Net insurance claims[86]	(351)	(240)	–	–	–	–	(591)
Net operating income[21]	3,083	2,026	3,867	270	1,645	(178)	10,713
Loan impairment (charges)/ recoveries and other credit risk provisions	(222)	10	(57)	2	–	–	(267)
Net operating income	2,861	2,036	3,810	272	1,645	(178)	10,446
Total operating expenses	(2,409)	(945)	(1,268)	(181)	(1,181)	178	(5,806)
Operating profit	452	1,091	2,542	91	464	–	4,640
Share of profit/(loss) in associates and joint ventures	1,189	1,155	547	–	(60)	–	2,831
Profit before tax	1,641	2,246	3,089	91	404	–	7,471
	%	%	%	%	%		%
Share of HSBC's profit before tax	7.5	10.3	14.1	0.4	1.9		34.2
Cost efficiency ratio	78.1	46.6	32.8	67.0	71.8		54.2
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	40,970	38,404	41,114	3,190	190		123,868
Total assets	54,484	50,688	195,549	12,879	16,616	(12,400)	317,816
Customer accounts	60,831	40,423	60,855	11,872	31		174,012

For footnotes, see page 120.

Middle East and North Africa

The network of branches of HSBC Bank Middle East Limited, together with HSBC's subsidiaries and associates, gives us the widest coverage in the region. Our associate in Saudi Arabia, The Saudi British Bank (40% owned), is the Kingdom's sixth largest bank by total assets.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**1,470**	1,432	1,367
Net fee income	**595**	627	677
Net trading income	**390**	482	370
Other income	**(25)**	66	(4)
Net operating income[21]	**2,430**	2,607	2,410
LICs[76]	**(286)**	(293)	(627)
Net operating income	**2,144**	2,314	1,783
Total operating expenses	**(1,166)**	(1,159)	(1,078)
Operating profit	**978**	1,155	705
Income from associates[77]	**372**	337	187
Profit before tax	**1,350**	1,492	892
Cost efficiency ratio	**48.0%**	44.5%	44.7%
RoRWA[66]	**2.2%**	2.6%	1.6%
Year-end staff numbers	**8,765**	8,373	8,676

Completed two acquisitions and made progress on the Group's six filters

Approximately
US$70m
sustainable cost savings from our organisational effectiveness programmes

4th consecutive year:
Best Regional Cash Management Provider in the Middle East
(Euromoney)

5th consecutive year:
Best Trade Finance Bank in the Middle East and North Africa
(Global Trade Review 2012)

For footnotes, see page 120.

Economic background

Real GDP in the **Middle East and North Africa** region grew by an estimated 4.5% in 2012. However, this weighted aggregate figure masked a wide disparity between oil producers (5.1%) and non-oil producers (2.9%). For the Gulf Cooperation Council's top performers, energy output volumes remained high and revenues rose, fuelling government spending-driven domestic demand which fed through to a stronger non-oil private sector performance, job creation and a recovery in bank lending. **Saudi Arabia** (which recorded growth of nearly 7% in 2012), **Qatar** (6%) and **Oman** (5%) fell into this category. In the **UAE**, more muted fiscal and monetary stimuli meant overall growth was slower, but Dubai's export-oriented service sector recorded a good recovery in 2012, and Abu Dhabi picked up in the second half of the year. Despite the strong growth, inflation remained low across the Gulf region.

In **Egypt**, growth remained weak, held back by ongoing political uncertainty which continued to weigh on domestic and foreign investment and consumption. Pressure on public finances and Egypt's external accounts remained pronounced, with the Egyptian pound weakening significantly. Elsewhere in the oil importing parts of the region, the pressures were not as great, but in Lebanon, Jordan, Morocco and Tunisia, growth fell and their external balances deteriorated, with the latter three, following a significant worsening of public finances, approaching the International Monetary Fund for assistance by the end of the year.

Review of performance

Our operations in the Middle East and North Africa reported a profit before tax of US$1.4bn, a decrease of 10% compared with 2011. On a constant currency basis, pre-tax profits decreased by 9%.

Our reported results in 2012 included an investment loss on a subsidiary of US$85m and adverse movements of US$12m on our own debt designated at fair value resulting from tightening credit spreads, partly offset by gains recognised on acquisitions totalling US$21m. Reported profits in 2011 included a dilution gain of US$27m on our holding in HSBC Saudi Arabia Ltd following its merger with SABB Securities Ltd and a loss of US$7m relating to the disposal of our Private Equity business. On an underlying basis, excluding the items noted above, profit before tax decreased by 3% as a result of a small number of significant impairments on GB&M exposures.

Profit/(loss) before tax by country within global businesses

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
Egypt	**67**	**71**	**157**	**–**	**(5)**	**290**
Qatar	**9**	**36**	**84**	**–**	**–**	**129**
United Arab Emirates	**143**	**235**	**141**	**1**	**(56)**	**464**
Other	**(27)**	**125**	**29**	**–**	**(37)**	**90**
MENA (excluding Saudi Arabia)	**192**	**467**	**411**	**1**	**(98)**	**973**
Saudi Arabia	**60**	**120**	**170**	**9**	**18**	**377**
	252	**587**	**581**	**10**	**(80)**	**1,350**
2011						
Egypt	43	55	129	–	(2)	225
Qatar	(4)	35	81	–	–	112
United Arab Emirates	134	240	200	(6)	7	575
Other	17	109	93	–	–	219
MENA (excluding Saudi Arabia)	190	439	503	(6)	5	1,131
Saudi Arabia	57	98	140	4	62	361
	247	537	643	(2)	67	1,492
2010						
Egypt	38	82	77	–	(2)	195
Qatar	19	52	67	–	–	138
United Arab Emirates	17	186	121	1	(1)	324
Other	19	57	(19)	–	–	57
MENA (excluding Saudi Arabia)	93	377	246	1	(3)	714
Saudi Arabia	25	107	53	(16)	9	178
	118	484	299	(15)	6	892

During 2012, we focused on simplifying our operations in the Middle East and North Africa by disposing of non-strategic businesses and continuing to improve our organisational efficiency while investing in strategic acquisitions.

We made significant progress in integrating our operations in Oman with OIB following the merger in June 2012. The combined entity, HSBC Bank Oman S.A.O.G., of which we own 51%, is now the third largest bank in the Sultanate. We also completed the acquisition of the onshore retail and commercial banking business of Lloyds Banking Group in the UAE in the fourth quarter of 2012. Lloyds' strong presence in expatriate retail banking and commercial banking was a good strategic fit with our position as the leading international bank in the UAE. We also completed the disposal of 80.1% of our Private Equity business in December. We announced in September our agreement to sell our operations in Pakistan and, in October, the restructuring of our Amanah business in the region outside Saudi Arabia.

We remained focused on our priority markets, delivering profit growth in Egypt and Saudi Arabia. The strong performance in Egypt was driven by robust deposit growth in RBWM which led to higher net interest income. We also achieved growth in profits from our associates, mainly The Saudi British Bank, which won the *Euromoney* award for excellence as 'The Best Bank in Saudi Arabia' and 'The Best Debt House in Saudi Arabia'. Although profit before tax declined in the UAE as a result of the impairments in GB&M noted above, it remains a priority market for HSBC and the economy continued to improve in 2012.

Delivery of sustainable cost savings remained a priority for 2012. Our organisational effectiveness initiatives included streamlining procedures by delayering our management structure and transferring additional operational processes to our global service centres. We realised about US$70m in sustainable savings from our organisational effectiveness programmes.

In RBWM, we remained focused on growing Wealth Management revenues. We entered into a strategic alliance with Zurich Life International ('Zurich') in 2012 to provide wealth and general insurance products to our customers in the region. Our focus on foreign exchange resulted in increased transaction volumes, which provided us with higher

Wealth Management revenues for 2012. In addition, we enhanced our internet banking capabilities in the UAE to provide improved security and rolled out our digital solution for mobile banking in the region to allow customers greater accessibility.

In CMB, we continued to support internationally oriented SMEs. This was evidenced by the launch of our third SME fund in the UAE of AED1bn (US$272m), targeted at international trade customers. We continued to invest in the Global Trade and Receivables Finance client service and business development teams, and enhanced our Receivables Finance products across the region. We endeavoured to strengthen this position by holding mainland China and Turkey events to focus on these emerging trade routes.

Our Payments and Cash Management business continued to record strong revenue growth, and was named 'The Best Cash Management House in the Middle East 2012' in the *Euromoney* awards for excellence for the fourth consecutive year.

In GB&M, we continued to focus on 'South-South' connectivity. We leveraged our global expertise to provide access to Asian investors for issuers in the region with funding requirements with our dedicated coverage teams on our mainland China, South Korea and India desks in the UAE and Saudi Arabia. We also completed a significant number of bond issuances, reflecting the continuing investor appetite for the region's debt. We won several *Euromoney* awards for excellence including 'The Best Debt House in the Middle East' and 'The Best Flow House in the Middle East'. GB&M also won *Global Investor's* 'The Best Domestic Custodian'.

The following commentary is on a constant currency basis.

Net interest income rose by 3%, driven by higher average deposit balances in RBWM, primarily savings accounts in Egypt, reflecting the competitive pricing introduced at the beginning of the year. Despite this, we benefited from wider spreads as interest rates rose in Egypt. Net interest income in CMB was in line with 2011 as higher income resulting from the merger with OIB was offset by competitive asset pricing across most of the region.

Net fee income decreased by 4% due to a decline in credit and lending, Securities Services and advisory fees in GB&M, which were affected by lower levels of deal activity and the challenging political and economic environment. Fees also declined in RBWM due to higher reward scheme charges in the UAE following revisions to the agreement with our partner aimed at improving card utilisation, partly offset by higher insurance revenues as a result of the strategic alliance with Zurich. The decline in fees was also attributable to our exit from domestic private banking in the UAE. These factors were partly offset by higher trade import fees in CMB in Algeria, Oman and Jordan driven by higher volumes from targeted sales activity.

Net trading income decreased by 18%, mainly due to unfavourable credit valuation adjustments on trading positions relating to a small number of exposures in GB&M. We also reported adverse fair value movements on certain economic hedges as well as on structured liabilities as credit spreads tightened. This was partly offset by higher revaluation gains on equity holdings in Principal Investments.

Gains less losses from financial investments increased by US$17m, driven by the non-recurrence of impairments on two available-for-sale equity securities in 2011, together with gains on the disposal of available-for-sale equity and debt securities in 2012.

Other operating income decreased by US$89m, driven by the US$85m investment loss on a subsidiary.

Loan impairment charges and other credit risk provisions decreased by US$6m. Lower impairments in RBWM attributable to an improvement in delinquency rates reflected the repositioning of the book towards higher quality lending in previous years. In addition, CMB recorded a modest reduction in loan impairment charges as higher customer recoveries were largely offset by individually assessed impairments. These were partly offset by significant loan impairment charges recorded for a small number of large exposures in GB&M.

Operating expenses increased by 1% as a result of employee and legal costs relating to the merger of our Omani operations with OIB and the acquisition of the onshore retail and commercial banking business of Lloyds Banking Group in the UAE. This was partially offset by the benefit arising from sustainable cost saving initiatives implemented in 2011 and throughout 2012. Excluding the effect of the two acquisitions, we reduced both our employee numbers and our cost base.

Share of profits from associates and joint ventures increased by 10%, mainly from The Saudi British Bank. This was driven by higher revenue resulting from strong balance sheet growth, together with lower costs derived from effective control and monitoring.

Report of the Directors: Operating and Financial Review (continued)

Profit/(loss) before tax and balance sheet data – Middle East and North Africa

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income	597	492	367	1	42	(29)	1,470
Net fee income/(expense)	164	279	160	1	(9)	–	595
Trading income excluding net interest income	68	94	208	–	3	–	373
Net interest income/(expense) on trading activities	–	2	30	–	(44)	29	17
Net trading income/(expense)[78]	68	96	238	–	(41)	29	390
Net income from financial instruments designated at fair value	–	–	–	–	(12)	–	(12)
Gains less losses from financial investments	–	–	9	–	–	–	9
Dividend income	–	–	5	–	–	–	5
Other operating income/(expense)	(16)	21	14	1	47	(94)	(27)
Total operating income	813	888	793	3	27	(94)	2,430
Net insurance claims[86]	–	–	–	–	–	–	–
Net operating income[21]	813	888	793	3	27	(94)	2,430
Loan impairment charges and other credit risk provisions	(55)	(110)	(119)	(2)	–	–	(286)
Net operating income	758	778	674	1	27	(94)	2,144
Total operating expenses	(561)	(311)	(264)	–	(124)	94	(1,166)
Operating profit/(loss)	197	467	410	1	(97)	–	978
Share of profit in associates and joint ventures	55	120	171	9	17	–	372
Profit/(loss) before tax	252	587	581	10	(80)	–	1,350
	%	%	%	%	%		%
Share of HSBC's profit before tax	1.2	2.8	2.8	–	(0.3)		6.5
Cost efficiency ratio	69.0	35.0	33.3	–	459.3		48.0
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	5,828	13,559	8,699	–	–		28,086
Total assets	6,562	15,651	36,582	50	6,840	(3,080)	62,605
Customer accounts	19,802	12,826	6,880	3	72		39,583

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income	589	496	371	2	2	(28)	1,432
Net fee income/(expense)	173	271	173	13	(3)	–	627
Trading income/(expense) excluding net interest income	62	95	266	1	(1)	–	423
Net interest income/(expense) on trading activities	–	–	32	–	(1)	28	59
Net trading income/(expense)[78]	62	95	298	1	(2)	28	482
Net income from financial instruments designated at fair value	–	–	–	–	10	–	10
Gains less losses from financial investments	1	1	(7)	–	(3)	–	(8)
Dividend income	1	1	3	–	–	–	5
Other operating income/(expense)	22	11	11	(1)	124	(108)	59
Total operating income	848	875	849	15	128	(108)	2,607
Net insurance claims[86]	–	–	–	–	–	–	–
Net operating income[21]	848	875	849	15	128	(108)	2,607
Loan impairment charges and other credit risk provisions	(126)	(116)	(51)	–	–	–	(293)
Net operating income	722	759	798	15	128	(108)	2,314
Total operating expenses	(535)	(320)	(295)	(21)	(96)	108	(1,159)
Operating profit/(loss)	187	439	503	(6)	32	–	1,155
Share of profit in associates and joint ventures	60	98	140	4	35	–	337
Profit/(loss) before tax	247	537	643	(2)	67	–	1,492
	%	%	%	%	%		%
Share of HSBC's profit before tax	1.1	2.5	2.9	–	0.3		6.8
Cost efficiency ratio	63.1	36.6	34.7	140.0	75.0		44.5
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	4,921	12,446	8,479	26	3		25,875
Total assets	6,549	14,556	34,676	72	4,792	(3,181)	57,464
Customer accounts	18,549	10,943	6,703	114	113		36,422

For footnotes, see page 120.

North America

Our North American businesses are located in the US, Canada and Bermuda. Operations in the US are primarily conducted through HSBC Bank USA, N.A., and HSBC Finance, a national consumer finance company. HSBC Markets (USA) Inc. is the intermediate holding company of, *inter alia*, HSBC Securities (USA) Inc. HSBC Bank Canada and HSBC Bank Bermuda operate in their respective countries.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**8,117**	11,480	12,439
Net fee income	**2,513**	3,308	3,664
Net trading income/(expense)	**507**	(362)	314
Gains on disposals of US branch network and cards business	**4,012**	–	–
Other income/(expense)	**(456)**	1,574	630
Net operating income[21]	**14,693**	16,000	17,047
LICs[76]	**(3,457)**	(7,016)	(8,295)
Net operating income	**11,236**	8,984	8,752
Total operating expenses	**(8,940)**	(8,919)	(8,322)
Operating profit	**2,296**	65	430
Income from associates[77]	**3**	35	24
Profit before tax	**2,299**	100	454
Cost efficiency ratio	**60.8%**	55.7%	48.8%
RoRWA[66]	**0.8%**	–	0.1%
Year-end staff numbers	**22,443**	30,981	33,865

Gross balances in the CML portfolio, including loans held for sale, down by US$6.8bn to US$43bn

US$3.6bn reduction in loan impairment charges, including US$1.3bn relating to Card and Retail Services

Record reported pre-tax profit of US$1.1bn from our Canadian operations

For footnotes, see page 120.

Economic background

In the **US**, real GDP expanded by 2.2% in 2012, following 1.8% growth in 2011. Consumer spending increased at a moderate pace as households continued to pay down debt and rebuild wealth. The housing market improved in 2012. Residential investment rose by 11.9%, climbing from a multi-decade low in 2011. Sales of new and existing homes also increased, and house prices rose modestly during the year. The growth in fixed investment by business faltered in the middle of 2012, evidenced by a slowdown in capital equipment orders, but began to recover towards the end of the year. Export growth slowed to 3.2% in 2012, about half the growth recorded in 2011. Fiscal consolidation continued to hold back the economy. Budgetary caps on spending contributed to a 2.2% decline in federal government expenditure in 2012, in real terms. State and local government expenditure also continued to contract, though the severity of the cutbacks diminished compared with 2011.

Inflation was generally subdued in 2012. Headline and core CPI inflation for the year were each recorded at 2.1%. High unemployment and low wage growth continued to hold back labour costs. In addition, prices for goods imported into the US experienced very little inflation in 2012. The Federal Reserve continued to pursue a highly supportive monetary policy. At meetings in January, September, and December, the Federal Open Market Committee adjusted its forward guidance for an exceptionally low federal funds rate and agreed on open-ended purchases of longer-term securities in an effort to maintain downward pressure on interest rates, support mortgage markets and help make broader financial conditions more accommodating.

In **Canada**, GDP growth slowed in 2012 to 2.0% from 2.6% in 2011. The slowdown in economic activity was particularly notable in the second half of the year. One factor contributing to the slowdown, which took effect in July 2012, was the introduction of measures by the federal government to cool the housing market by tightening mortgage lending conditions. House prices, home sales and housing starts declined after those initiatives came into force. In addition, exports fell sharply with the deceleration in global manufacturing activity and global trade, and temporary disruptions in energy production in Eastern Canada and capacity constraints on Western Canada pipelines. An uncertain US economic outlook together with weakness in key Canadian commodity prices and a sharp decline in corporate performance

Profit/(loss) before tax by country within global businesses

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
US	**2,746**	**637**	**661**	**72**	**(2,901)**	**1,215**
Canada	**207**	**577**	**314**	**(1)**	**(16)**	**1,081**
Bermuda	**42**	**(15)**	**(18)**	**1**	**(7)**	**3**
	2,995	**1,199**	**957**	**72**	**(2,924)**	**2,299**
2011						
US	(2,861)	431	567	83	782	(998)
Canada	147	545	265	–	8	965
Bermuda	49	26	43	7	9	134
Other	–	–	–	–	(1)	(1)
	(2,665)	1,002	875	90	798	100
2010						
US	(2,305)	402	1,284	113	(39)	(545)
Canada	131	505	227	–	4	867
Bermuda	58	32	38	(3)	7	132
Other	–	–	–	1	(1)	–
	(2,116)	939	1,549	111	(29)	454

weighed on business investment. Headline CPI inflation fell steadily through the year to 1.5%, from 2.9% in 2011. Though the Bank of Canada slightly tightened monetary policy early in 2012, the economic slowdown and the decline in the rate of CPI inflation led the Bank to leave rates on hold throughout the year.

Review of performance

Our operations in North America reported a profit before tax of US$2.3bn in 2012, compared with US$100m in 2011. Our reported profits included gains in the US of US$3.1bn and US$864m on completion of the sale of the Card and Retail Services business in May 2012 and the 195 non-strategic retail branches in May and August 2012, respectively. Also included in our reported profits was US$618m relating to profit before tax in Card and Retail Services prior to the disposal (2011: US$2.1bn). In addition, we recorded a gain of US$83m from the sale of the full service retail brokerage business in Canada. We also recognised US$1.2bn of adverse movements on our own debt designated at fair value resulting from tightening in credit spreads, compared with favourable movements of US$964m in 2011.

On an underlying basis, our pre-tax loss of US$1.5bn in 2012 compared with a pre-tax loss of US$3.1bn in 2011. This was due to lower loan impairment charges, primarily in CML, reflecting a decline in lending balances as the portfolio continued to run off, lower delinquency levels, and higher revenue mainly driven by lower adverse movements on non-qualifying hedges in HSBC Finance. This was partly offset by higher operating expenses due to fines and penalties paid of US$1.5bn by HNAH and its subsidiaries as part of the settlement of investigations into inadequate compliance with anti-money laundering laws in the past.

Underlying profit before tax in Canada rose, as revenues benefited from an increase in fees from commercial lending activities and collaboration with GB&M, higher Rates revenue due to increased trading volumes, and higher revenues in Balance Sheet Management reflecting an increase in gains on sales of available-for-sale assets. These results were partly offset by lower net interest income due to the closure of the Canadian consumer finance company to new business, spread compression from strong competition and the prolonged low interest rate environment. Our operations in Bermuda reported a significantly reduced profit before tax, primarily due to higher loan impairment charges on a small number of exposures in GB&M and CMB.

We made significant progress in disposing of businesses not aligned with our long-term strategy. On completing the sale of our US Card and Retail Services business, we transferred over 5,000 employees and certain real estate facilities to the purchaser. In addition, we entered into a transition services agreement to support some of the account servicing operations until all systems, processes and equipment are integrated into the purchaser's existing infrastructure. We also completed the sale of the retail branches, principally in upstate New York, recognising gains of US$586m in RBWM and US$278m in CMB.

In Canada, we completed the sale of the full service retail brokerage business. We also announced the closure of our consumer finance business, which had net customer loan balances of US$1.5bn at 31 December 2012, and ceased the origination of loans as this business did not fit with our core strategy.

We continued to manage the run-off of lending balances in our CML portfolio and, in the third quarter of 2012, we reclassified non-real estate personal loan balances of US$3.7bn, net of impairment allowances, from our CML portfolio to 'Assets held for sale' as we actively marketed the portfolio. We also identified real estate secured loan balances, with a carrying amount of US$3.8bn, which, as part of our strategy, we have announced we plan to actively market in multiple transactions over the next two years. At 31 December 2012, the carrying value of the non-real estate and the real estate secured loans which we intend to sell was approximately US$1bn greater than their estimated fair value. We expect to recognise a loss on sale for these loans over the next few years, the actual amount of which will depend on market conditions at the time of the sales. It is expected that reduction in these loans in our CML portfolio will be capital accretive and will reduce funding requirements, accelerate the winding down of the portfolio and also alleviate some of the operational burdens, given that these loans are servicing intensive and subject to foreclosure delays.

At 31 December 2012, lending balances in CML, including loans held for sale, were US$43bn, a decline of 14% from December 2011, of which 8% was attributable to the balances written off.

We incurred costs of US$221m in 2012 (2011: US$235m) as a result of restructuring activities in the region. These costs were mainly related to the business disposals, the closure of our consumer finance operations in Canada and the continuation of our organisational effectiveness initiatives. We also achieved approximately US$230m of additional sustainable cost savings in 2012, primarily derived from operational efficiencies.

Following the disposals noted above, we are reshaping our US operations to focus on core activities and are continuing to reposition our businesses in both the US and Canada towards international customers.

In RBWM, we continued to develop our Wealth Management capabilities across the region, targeting internationally connected customers in key US and Canadian urban centres. Our relationship-based model offers a suite of wealth services incorporating HSBC and third-party products, enabling our internationally-minded customers to invest in global markets. In the US, we launched a renminbi fixed income fund to provide investors with the opportunity to access mainland China's bond market.

In CMB, we increased the number of relationship managers and specialist sales staff in 2012 in areas with strong international connectivity, notably the West Coast, South East and Midwest of the US, leading to higher lending balances than in 2011. In Canada, we introduced the first renminbi currency account. We also established dedicated sales teams to enhance CMB's collaboration with GB&M. In addition, in CMB and GB&M, we continued to target companies with international banking requirements, leading to a rise in Global Trade and Receivables Finance revenues in both the US and Canada.

In GB&M, we continued to work on delivering integrated solutions for our customers across the region, increasing our lending to Latin American corporates. In addition, we actively reduced our legacy credit exposure in the US by exiting certain positions. We will continue to reduce the size of this portfolio as opportunities arise.

The following commentary is on a constant currency basis.

Net interest income decreased by 29% to US$8.1bn, due to the loss of income from the Card and Retail Services business together with the continued reduction of the CML portfolio in run-off. Also contributing to the decrease was a change in composition of our lending book towards higher levels of lower yielding real estate loans.

Net fee income decreased by 24% to US$2.5bn, primarily due to the sale of the Card and Retail Services business, the retail branches and the full service retail brokerage business in Canada. This was partly offset by fees from the transition service agreement with the purchaser of the Card and Retail Services business and increased revenues from debt capital markets origination activity due to the strong debt issuance market.

Net trading income of US$507m was US$871m higher than in 2011, primarily due to lower adverse fair value movements on non-qualifying hedges in

RBWM as long-term interest rates declined to a lesser extent than in 2011. This was partly offset by an increase from US$92m in 2011 to US$134m in 2012 of loss provisions for mortgage loan repurchase obligations related to loans previously sold.

Net trading income increased in GB&M during 2012 as a result of the improved performance of economic hedges used to manage interest rate risk, which benefited from a more stable interest rate environment. Rates revenue was higher due to increased trading volumes. In addition, credit market conditions generally reflected tighter credit spreads, which led to higher income from our credit-related products. These factors were partly offset by adverse fair value movements on structured liabilities as own credit spreads tightened, together with the closure of our bank notes business in 2011, and a reduction in foreign exchange revenue as a result of lower trading volumes in less volatile markets.

Net loss from financial instruments designated at fair value was US$1.2bn compared with net gains of US$964m in 2011. We recognised adverse fair value movements on our own debt designated at fair value as credit spreads tightened during 2012, having widened in 2011. In addition, there were adverse fair value movements from interest rate ineffectiveness in the economic hedging of our long-term debt during the year.

Gains on disposal of US branch network and cards business included a gain of US$3.1bn from the sale of the Card and Retail Services business and US$864m from the sale of 195 retail branches in upstate New York.

Other operating income increased by US$176m to US$405m, reflecting lower losses on foreclosed properties due to the reduction in foreclosure activity, less deterioration in housing prices during 2012 and, in some markets, improvements in pricing compared with 2011.

Loan impairment charges and other credit risk provisions decreased by 51% to US$3.5bn, mainly in the US, reflecting lower lending balances in CML as we continued to run off the portfolio, and lower delinquency levels. Loan impairment charges remained adversely affected by delays in expected cash flows from mortgage loans due, in part, to delays in foreclosure processing and the higher costs to obtain and realise collateral, although the effects were less pronounced than in 2011. In addition, loan impairment charges declined by US$1.3bn due to the sale of the Card and Retail Services business. These decreases were partly offset by an adjustment made following a review completed in the fourth quarter of 2012 which concluded that the estimated average period of time from current status to write-off was ten months for real estate loans (previously a period of seven months was used).

In CMB and GB&M, loan impairment charges increased, mainly in Bermuda, due to individually assessed impairments on a small number of exposures. Credit quality in Canada remained broadly unchanged.

Operating expenses increased by less than 1% to US$8.9bn, primarily due to a US$1.5bn charge for the settlement of investigations noted above. Compliance costs increased by US$307m, mainly due to investment in process enhancements and infrastructure related to anti-money laundering and Bank Secrecy Act consent orders, along with actions to address the regulatory consent orders relating to foreclosure activities. In addition, following a review of our mortgage foreclosure process, we entered into an agreement in principle with US regulators to pay into a fund and provide other customer assistance to help eligible borrowers who were active in foreclosure during 2009 and 2010 and were financially disadvantaged during the process, for which we recognised a US$104m expense in 2012. These increases were partly offset by the effect of the sale of the Card and Retail Services business and organisational effectiveness initiatives to reduce costs as we achieved approximately US$230m of additional sustainable cost savings primarily derived from operational efficiencies. Average employee numbers decreased from organisational effectiveness initiatives and business disposals. In addition, marketing costs fell and costs of holding foreclosed properties declined, while software impairment charges in 2011 did not recur.

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Profit/(loss) before tax and balance sheet data – North America

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking[89] US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income	5,481	1,443	948	192	118	(65)	8,117
Net fee income	923	562	716	124	188	–	2,513
Trading income/(expense) excluding net interest income	(216)	47	466	20	16	–	333
Net interest income on trading activities	17	1	91	–	–	65	174
Net trading income/(expense)[78]	(199)	48	557	20	16	65	507
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	(1,219)	–	(1,219)
Net income from other financial instruments designated at fair value	–	–	–	–	–	–	–
Net expense from financial instruments designated at fair value	–	–	–	–	(1,219)	–	(1,219)
Gains less losses from financial investments	27	–	223	(7)	8	–	251
Dividend income	15	11	32	3	–	–	61
Net earned insurance premiums	193	–	–	–	–	–	193
Gains on disposal of US branch network and cards business	3,735	277	–	–	–	–	4,012
Other operating income	173	149	191	5	1,787	(1,899)	406
Total operating income	10,348	2,490	2,667	337	898	(1,899)	14,841
Net insurance claims[86]	(148)	–	–	–	–	–	(148)
Net operating income[21]	10,200	2,490	2,667	337	898	(1,899)	14,693
Loan impairment (charges)/ recoveries and other credit risk provisions	(3,241)	(148)	(71)	3	–	–	(3,457)
Net operating income	6,959	2,342	2,596	340	898	(1,899)	11,236
Total operating expenses	(3,966)	(1,144)	(1,639)	(268)	(3,822)	1,899	(8,940)
Operating profit/(loss)	2,993	1,198	957	72	(2,924)	–	2,296
Share of profit in associates and joint ventures	2	1	–	–	–	–	3
Profit/(loss) before tax	2,995	1,199	957	72	(2,924)	–	2,299
	%	%	%	%	%		%
Share of HSBC's profit before tax	14.5	5.8	4.6	0.3	(14.2)		11.1
Cost efficiency ratio	38.9	45.9	61.5	79.5	425.6		60.8
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net) reported in:							
– loans and advances to customers (net)	76,414	36,387	22,498	5,457	–		140,756
– assets held for sale (disposal groups)	3,899	–	–	–	–		3,899
Total assets	101,103	48,604	345,040	8,828	12,659	(25,987)	490,247
Customer accounts reported in:							
– customer accounts	57,758	48,080	29,595	13,553	51		149,037

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking[89] US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income	8,931	1,528	893	187	9	(68)	11,480
Net fee income/(expense)	1,836	551	773	149	(1)	–	3,308
Trading income/(expense) excluding net interest income	(946)	34	261	17	(26)	–	(660)
Net interest income/(expense) on trading activities	25	1	205	–	(1)	68	298
Net trading income/(expense)[78]	(921)	35	466	17	(27)	68	(362)
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	967	–	967
Net income/(expense) from other financial instruments designated at fair value	–	–	(5)	–	2	–	(3)
Net income/(expense) from financial instruments designated at fair value	–	–	(5)	–	969	–	964
Gains less losses from financial investments	58	7	195	–	2	–	262
Dividend income	15	9	13	3	–	–	40
Net earned insurance premiums	236	–	–	–	–	–	236
Other operating income	(125)	110	193	11	2,244	(2,207)	226
Total operating income	10,030	2,240	2,528	367	3,196	(2,207)	16,154
Net insurance claims[86]	(154)	–	–	–	–	–	(154)
Net operating income[21]	9,876	2,240	2,528	367	3,196	(2,207)	16,000
Loan impairment (charges)/ recoveries and other credit risk provisions	(6,929)	(105)	(11)	30	(1)	–	(7,016)
Net operating income	2,947	2,135	2,517	397	3,195	(2,207)	8,984
Total operating expenses	(5,615)	(1,166)	(1,642)	(307)	(2,396)	2,207	(8,919)
Operating profit/(loss)	(2,668)	969	875	90	799	–	65
Share of profit/(loss) in associates and joint ventures	3	33	–	–	(1)	–	35
Profit/(loss) before tax	(2,665)	1,002	875	90	798	–	100
	%	%	%	%	%		%
Share of HSBC's profit before tax	(12.2)	4.6	4.0	0.4	3.7		0.5
Cost efficiency ratio	56.9	52.1	65.0	83.7	75.0		55.7
Balance sheet data[74]	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net) reported in:							
– loans and advances to customers (net)	86,490	32,215	19,289	4,753	–		142,747
– assets held for sale (disposal groups)	31,058	520	–	–	–		31,578
Total assets	144,278	43,747	320,783	7,138	10,378	(22,022)	504,302
Customer accounts reported in:							
– customer accounts	63,558	47,003	30,465	14,862	94		155,982
– liabilities of disposal groups held for sale	10,104	5,040	–	–	–		15,144

For footnotes, see page 120.

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North America RBWM – profit/(loss) before tax and balance sheet data

	2012				2011			
	Card and Retail Services US$m	**Run-off portfolios US$m**	**Rest of RBWM US$m**	**North America RBWM US$m**	Card and Retail Services US$m	Run-off portfolios US$m	Rest of RBWM US$m	North America RBWM US$m
Profit/(loss) before tax								
Net interest income	**1,267**	**2,563**	**1,651**	**5,481**	4,128	2,990	1,813	8,931
Net fee income/(expense)	**395**	**33**	**495**	**923**	1,273	(49)	612	1,836
Trading income/(expense) excluding net interest income	**–**	**(226)**	**10**	**(216)**	–	(1,145)	199	(946)
Net interest income on trading activities	**–**	**–**	**17**	**17**	–	–	25	25
Net trading income/(expense)[78]	**–**	**(226)**	**27**	**(199)**	–	(1,145)	224	(921)
Gains less losses from financial investments	**–**	**–**	**27**	**27**	–	55	3	58
Dividend income	**–**	**3**	**12**	**15**	–	5	10	15
Net earned insurance premiums	**–**	**–**	**193**	**193**	–	230	6	236
Gains on disposal of US branch network and cards business	**3,148**	**–**	**587**	**3,735**	–	–	–	–
Other operating income /(expense)	**7**	**23**	**143**	**173**	61	(185)	(1)	(125)
Total operating income	**4,817**	**2,396**	**3,135**	**10,348**	5,462	1,901	2,667	10,030
Net insurance claims[86]	**–**	**–**	**(148)**	**(148)**	–	(156)	2	(154)
Net operating income[21]	**4,817**	**2,396**	**2,987**	**10,200**	5,462	1,745	2,669	9,876
Loan impairment charges and other credit risk provisions	**(322)**	**(2,569)**	**(350)**	**(3,241)**	(1,600)	(4,982)	(347)	(6,929)
Net operating income/ (expense)	**4,495**	**(173)**	**2,637**	**6,959**	3,862	(3,237)	2,322	2,947
Total operating expenses	**(729)**	**(1,103)**	**(2,134)**	**(3,966)**	(1,801)	(1,238)	(2,576)	(5,615)
Operating profit/(loss)	**3,766**	**(1,276)**	**503**	**2,993**	2,061	(4,475)	(254)	(2,668)
Share of profit in associates and joint ventures	**–**	**2**	**–**	**2**	–	3	–	3
Profit/(loss) before tax	**3,766**	**(1,274)**	**503**	**2,995**	2,061	(4,472)	(254)	(2,665)
	%	**%**	**%**	**%**	%	%	%	%
Share of HSBC's profit before tax	**18.2**	**(6.2)**	**2.4**	**14.5**	9.4	(20.4)	(1.2)	(12.2)
Cost efficiency ratio	**15.1**	**46.0**	**71.4**	**38.9**	33.0	70.9	96.5	56.9
Balance sheet data[74]	**US$m**	**US$m**	**US$m**	**US$m**	US$m	US$m	US$m	US$m
Loans and advances to customers (net) reported in:								
– loans and advances to customers	**–**	**34,260**	**42,154**	**76,414**	–	43,543	42,947	86,490
– assets held for sale	**–**	**3,463**	**436**	**3,899**	29,137	–	1,921	31,058
Total assets	**–**	**54,382**	**46,721**	**101,103**	30,635	56,830	56,813	144,278
Customer accounts reported in:								
– customer accounts	**–**	**–**	**57,758**	**57,758**	–	–	63,558	63,558
– liabilities of disposal groups held for sale	**–**	**–**	**–**	**–**	–	–	10,104	10,104

For footnotes, see page 120.

Latin America

Our operations in Latin America principally comprise HSBC Bank Brasil S.A.-Banco Múltiplo, HSBC México, S.A., HSBC Bank Argentina S.A. and HSBC Bank (Panama) S.A. In addition to banking services, we operate insurance businesses in Brazil, Mexico, Argentina and Panama.

	2012 US$m	2011 US$m	2010 US$m
Net interest income	**6,984**	6,956	6,311
Net fee income	**1,735**	1,781	1,749
Net trading income	**971**	1,378	733
Other income	**1,261**	1,338	938
Net operating income[21]	**10,951**	11,453	9,731
LICs[76]	**(2,137)**	(1,883)	(1,544)
Net operating income	**8,814**	9,570	8,187
Total operating expenses	**(6,430)**	(7,255)	(6,394)
Operating profit	**2,384**	2,315	1,793
Income from associates[77]	**–**	–	2
Profit before tax	**2,384**	2,315	1,795
Cost efficiency ratio	**58.7%**	63.3%	65.7%
RoRWA[66]	**2.4%**	2.3%	2.0%
Year-end staff numbers	**46,556**	54,035	56,044

Significant progress on reducing fragmentation in our portfolio of businesses

Strong underlying revenue growth across all global businesses

US$475m

increase in LICs[76]

(on an underlying basis)

For footnotes, see page 120.

Economic background

Brazil's GDP growth slowed further in 2012, mostly due to the effects of higher input costs, concern about global financial stability, and domestic regulatory uncertainty. Despite growth remaining low, consumer inflation remained above the 4.5% inflation target pursued by the Central Bank, ending 2012 at 5.8%.

By contrast, growth held up well in **Mexico** in 2012 led, in particular, by favourable industrial exports to the US. Enhanced competitiveness helped Mexican exports to gain a larger share of total US imports. Domestically, demand stayed largely unchanged, encouraged by labour reforms passed by the new administration. Despite the growth figures, inflation ended 2012 slightly below 4% and converging on the 3% inflation target pursued by Banco de Mexico.

Argentina reported a sharp slowdown in 2012. Balance of payments restrictions gradually escalated from capital flows to the current account, including imports of intermediate goods, which generated disruption in production and deterioration in business confidence. Despite this sharp slowdown, inflation continued to remain high, partly due to regulated price increases and import restrictions that lowered domestic supply.

Review of performance

Our operations in Latin America reported a profit before tax of US$2.4bn in 2012, 3% higher than in 2011 and an increase of 16% on a constant currency basis. This included a gain of US$102m following the completion of the sale of our general insurance manufacturing business in Argentina, a loss of US$62m on the sale of our operations in Costa Rica, Honduras and El Salvador and a loss of US$96m recognised following the reclassification of our non-strategic businesses in Colombia, Peru, and Paraguay to 'Assets held for sale.'

On an underlying basis, pre-tax profits rose by 19%, primarily due to increased revenues across all global businesses, partly offset by higher loan impairment charges. In RBWM, the revenue increase reflected growth in average lending balances in Argentina and a higher yielding portfolio mix in Brazil while, in CMB, it resulted from continued balance sheet growth in Brazil which was driven by a strong demand for trade-related lending and higher balances of Payment and Cash Management current accounts in Argentina. In addition, there were higher Balance Sheet Management revenues in Brazil following a downward movement in interest rates which lowered the cost of funding. In Brazil, loan

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Profit/(loss) before tax by country within global businesses

	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Total US$m
2012						
Argentina	**209**	**169**	**174**	**–**	**(46)**	**506**
Brazil	**94**	**359**	**696**	**17**	**(43)**	**1,123**
Mexico	**338**	**176**	**201**	**2**	**(18)**	**699**
Panama	**29**	**62**	**48**	**2**	**–**	**141**
Other	**(62)**	**(15)**	**34**	**(1)**	**(41)**	**(85)**
	608	**751**	**1,153**	**20**	**(148)**	**2,384**
2011						
Argentina	91	107	148	–	(2)	344
Brazil	241	566	515	13	(105)	1,230
Mexico	403	129	268	4	(178)	626
Panama	23	59	52	3	(9)	128
Other	(55)	6	66	–	(30)	(13)
	703	867	1,049	20	(324)	2,315
2010						
Argentina	89	90	105	–	–	284
Brazil	151	382	430	6	64	1,033
Mexico	174	24	210	4	(11)	401
Panama	48	57	33	2	–	140
Other	(100)	1	51	(2)	(13)	(63)
	362	554	829	10	40	1,795

impairment charges rose, primarily as a result of increased delinquency rates in RBWM and CMB, particularly in the Business Banking portfolio, reflecting lower economic growth in 2012. Loan impairment charges improved during the second half of 2012, mainly due to lower collective portfolio provisions in Brazil.

We made significant progress in reducing the fragmentation in our Latin American businesses through disposals in our non-strategic markets. In May 2012, we announced the sale of our businesses in Colombia, Peru, Uruguay and Paraguay, with completion expected in 2013. We will continue to offer full branch services to our customers during transition. In the second half of 2012, we completed the sale of our businesses in Costa Rica, El Salvador and Honduras. In addition, we completed the sale of our general insurance manufacturing business in Argentina and announced the agreement to sell a portfolio of general insurance assets and liabilities in Mexico with completion expected in 2013. Under the terms of these agreements, the purchasers will provide general insurance products to HSBC to sell to our retail customers in the two countries. This long-term collaboration will broaden and strengthen the suite of general insurance products available to our customers. In February 2013, we announced an agreement to sell our operations in Panama. The transaction is subject to regulatory approvals and other conditions and is expected to complete by the third quarter of 2013.

In our RBWM business, we made good progress in developing a wealth management service that addresses our customers' needs and we strengthened our sales force capabilities to capture wealth creation in the region. Wealth Management revenues increased by over US$275m or 36%. This included the favourable effect of the recognition of a PVIF asset in Brazil. Excluding this gain, Wealth Management revenues rose by 17%, mainly from insurance and mutual funds.

In CMB, we worked closely with GB&M to ensure our clients had access to appropriate products. In addition, our relationships with CMB payroll customers enabled us to increase personal lending to their employees, who became our RBWM customers. We were able to provide support to companies as they grow internationally through our Global Trade and Receivables Finance products, and used our international expertise to capture trade and capital flows, notably in the Brazil-China trade corridors. We continued to strengthen our service to international SMEs by increasing the number of specialist International Relationship Managers in Brazil.

In GB&M, we continued to target international corporate customers throughout Latin America.

We were awarded 'First place in International Debt Capital Markets' by the Brazilian Financial and Capital Markets Association and 'Best Project Finance House in Latin America' from *Euromoney*. We also maintained a strong presence in the foreign exchange and derivatives markets.

Across the region, we continued to implement measures to improve operational efficiency, incurring US$167m of restructuring costs in 2012. We achieved a 14% net reduction of almost 7,500 FTEs, including more than 4,000 employees transferred with the disposals described earlier, and approximately US$285m of additional sustainable savings.

The following commentary is on a constant currency basis.

Net interest income increased by 12% compared with 2011, with growth across all global businesses.

In RBWM, net interest income rose due to higher average lending volumes, mainly in personal loans and credit cards in Argentina as a result of successful marketing and sales campaigns. We also benefited from a change in the composition of the lending book in Brazil as we increased our balances of higher yielding assets. Net interest income from deposits also increased due to higher balances in current accounts in Mexico and savings accounts in Argentina supported by marketing campaigns.

In CMB, higher net interest income reflected a rise in average loans and advances to customers in Brazil, driven by strong demand for trade-related lending and our focus on corporate relationships and sectors with potential for international expansion. Net interest income also rose in Argentina, mainly in Payments and Cash Management current accounts, reflecting higher balances which were supported by successful marketing campaigns, and wider spreads driven by a rise in interest rates.

In GB&M, net interest income increased, notably in Balance Sheet Management in Brazil, as we benefited from the downward movements in interest rates which lowered the cost of funding assets in this portfolio.

Net fee income increased by 8% to US$1.7bn, mainly due to higher Payments and Cash Management revenues, which benefited from mandates from new customers and repricing initiatives in Argentina and Brazil. Fee income was also higher as a result of the sale of the general insurance business as fee expense associated with this business was no longer incurred.

Net trading income of US$971m was 19% lower than in 2011, primarily due to lower reverse repos driven by positions in GB&M in Brazil that had matured but had not been renewed, and lower income related to government debt securities. This was partly offset by gains in the Rates business as a result of favourable rate movements.

Net income from financial instruments designated at fair value increased by 39%, or US$187m, mainly in Brazil, reflecting higher investment gains arising from favourable equity and debt market movements and growth in policyholder assets from higher sales of unit-linked pension products. To the extent that these investment gains were attributed to policyholders there was a corresponding increase in *'Net insurance claims incurred and movement in liabilities to policyholders'*.

Gains less losses from financial investments of US$227m were 80% or US$100m higher than in 2011, primarily in Brazil due to gains on sale of shares in non-strategic investments and disposals of government debt securities in GB&M in 2012, partly offset by the non-recurrence of a gain in GB&M on the sale of shares in a Mexican listed company in 2011.

Net earned insurance premiums increased by 5% to US$2.5bn, driven by increased sales in Brazil of unit-linked pension products and term life insurance products. Premiums also rose in Mexico, mainly due to growth in sales of an endowment product. In Argentina, premiums were lower, following the sale of the general insurance business in 2012.

Other operating income decreased by 8% to US$253m, driven by a loss of US$62m on the sale of our operations in Costa Rica, Honduras and El Salvador, and a loss of US$96m recognised following the reclassification of our non-strategic businesses in Colombia, Peru, and Paraguay to held for sale. In addition, in 2011, we reported a gain on sale of the Mexican pension administration business, HSBC Afore, of US$83m and a gain on the sale and leaseback of branches of US$53m. These factors were partly offset by the favourable effect of the recognition of a PVIF asset in Brazil of US$119m relating to unit-linked pensions, together with an increase in the value of new term life business in Brazil, as well as the gain on sale of the general insurance business in Argentina of US$102m.

Net insurance claims incurred and movement in liabilities to policyholders increased by 15%, driven by higher net investment gains on the fair value of the assets held to support policyholder contracts. In addition, liabilities to policyholders were established for new business, reflecting the increase in premiums in Brazil, though this was partly offset by the disposal of the general insurance business in Argentina in 2012.

Loan impairment charges and other credit risk provisions increased by 29%. This was mainly in Brazil, driven by increased delinquency rates in RBWM and CMB, particularly in Business Banking, reflecting lower economic growth in 2012. We took a number of steps to reposition our portfolios in RBWM and CMB including reducing third-party originations and lowering credit limits where appropriate. We also improved our collections capabilities. Loan impairment charges improved during the second half of the year in Brazil.

Operating expenses decreased by US$83m compared with 2011. Restructuring costs declined by US$137m as 2011 included costs associated with the consolidation of the branch network and the reorganisation of regional and country support functions. These restructuring initiatives and our continued efforts to exercise strict cost control and progress with our organisational effectiveness programmes resulted in approximately US$285m of additional sustainable cost savings and a net 7% reduction in average FTEs of around 4,000 in 2012. These savings were partly offset by inflationary pressures, union-agreed wage increases in Brazil and Argentina and a payment of fines and penalties of US$29m in connection with non-compliance with anti-money laundering systems and controls including requirements to report unusual transactions, in Mexico.

Profit/(loss) before tax and balance sheet data – Latin America

	2012						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income/(expense)	4,145	2,173	993	30	(2)	(355)	6,984
Net fee income	873	622	207	33	–	–	1,735
Trading income excluding net interest income	85	99	398	3	1	–	586
Net interest income on trading activities	–	–	29	–	1	355	385
Net trading income[78]	85	99	427	3	2	355	971
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	–	–	–
Net income from other financial instruments designated at fair value	503	163	1	–	–	–	667
Net income from financial instruments designated at fair value	503	163	1	–	–	–	667
Gains less losses from financial investments	75	21	131	–	–	–	227
Dividend income	9	5	1	–	–	–	15
Net earned insurance premiums	1,985	450	17	–	–	–	2,452
Other operating income/(expense)	309	(9)	6	3	134	(190)	253
Total operating income	7,984	3,524	1,783	69	134	(190)	13,304
Net insurance claims[86]	(1,875)	(469)	(9)	–	–	–	(2,353)
Net operating income[21]	6,109	3,055	1,774	69	134	(190)	10,951
Loan impairment charges and other credit risk provisions	(1,541)	(581)	(13)	(2)	–	–	(2,137)
Net operating income	4,568	2,474	1,761	67	134	(190)	8,814
Total operating expenses	(3,960)	(1,723)	(608)	(47)	(282)	190	(6,430)
Operating profit/(loss)	608	751	1,153	20	(148)	–	2,384
Share of profit in associates and joint ventures	–	–	–	–	–	–	–
Profit/(loss) before tax	608	751	1,153	20	(148)	–	2,384
	%	%	%	%	%		%
Share of HSBC's profit before tax	2.9	3.6	5.6	0.1	(0.7)		11.6
Cost efficiency ratio	64.8	56.4	34.3	68.1	210.4		58.7
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	17,236	25,379	10,903	91	–		53,609
Total assets	36,141	35,507	58,272	570	1,110	(323)	131,277
Customer accounts	28,688	20,834	12,604	4,430	–		66,556

Report of the Directors: Operating and Financial Review (continued)

Profit/(loss) before tax and balance sheet data - Latin America (continued)

	2011						
	Retail Banking and Wealth Management US$m	Commercial Banking US$m	Global Banking and Markets US$m	Global Private Banking US$m	Other US$m	Inter-segment elimination[85] US$m	Total US$m
Profit/(loss) before tax							
Net interest income/(expense)	4,519	2,229	882	25	(7)	(692)	6,956
Net fee income	939	610	196	36	–	–	1,781
Trading income/(expense) excluding net interest income	68	106	372	5	(7)	–	544
Net interest income on trading activities	–	–	134	–	8	692	834
Net trading income[78]	68	106	506	5	1	692	1,378
Changes in fair value of long-term debt issued and related derivatives	–	–	–	–	–	–	–
Net income from other financial instruments designated at fair value	424	124	2	–	–	–	550
Net income from financial instruments designated at fair value	424	124	2	–	–	–	550
Gains less losses from financial investments	11	1	124	1	–	–	137
Dividend income	10	3	1	–	–	–	14
Net earned insurance premiums	2,068	551	34	–	–	–	2,653
Other operating income	265	57	32	2	222	(250)	328
Total operating income	8,304	3,681	1,777	69	216	(250)	13,797
Net insurance claims[86]	(1,850)	(478)	(16)	–	–	–	(2,344)
Net operating income[21]	6,454	3,203	1,761	69	216	(250)	11,453
Loan impairment charges and other credit risk provisions	(1,369)	(501)	(12)	–	(1)	–	(1,883)
Net operating income	5,085	2,702	1,749	69	215	(250)	9,570
Total operating expenses	(4,382)	(1,835)	(700)	(49)	(539)	250	(7,255)
Operating profit/(loss)	703	867	1,049	20	(324)	–	2,315
Share of profit in associates and joint ventures	–	–	–	–	–	–	–
Profit/(loss) before tax	703	867	1,049	20	(324)	–	2,315
	%	%	%	%	%		%
Share of HSBC's profit before tax	3.2	4.0	4.8	0.1	(1.5)		10.6
Cost efficiency ratio	67.9	57.3	39.8	71.0	249.5		63.3
Balance sheet data[74]							
	US$m	US$m	US$m	US$m	US$m		US$m
Loans and advances to customers (net)	19,025	25,834	11,011	62	6		55,938
Total assets	39,231	38,410	66,241	1,660	417	(1,070)	144,889
Customer accounts	28,629	24,050	18,940	7,079	62		78,760

For footnotes, see page 120.

Disposals, held for sale and run-off portfolios

In implementing our strategy, we have sold or agreed to sell a number of businesses and investments across the Group. We expect these disposals to have a significant effect on both the revenue and the profitability of the geographical regions in the future. In addition, significant portfolios are being run down. We expect the losses on these portfolios to continue to affect the geographical regions in the future.

The table below presents the contribution of these businesses and investments to the historical results of geographical regions. We do not expect the historical results to be indicative of future results because of disposal or run-off. Fixed allocated costs, included in total operating costs, will not necessarily be removed upon disposal and have been separately identified on page 53.

Summary income statements for disposals, held for sale and run-off portfolios[69,70]

	2012					
	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m
Net interest income	(54)	15	40	31	4,051	372
Net fee income/(expense)	(4)	(45)	(3)	10	401	30
Net trading income/(expense)	68	(6)	5	54	(186)	27
Net income/(expense) from financial instruments designated at fair value	10	–	5	–	(785)	3
Gains less losses from financial investments	(70)	–	–	–	26	7
Dividend income	–	–	–	–	3	–
Net earned insurance premiums	1	229	133	–	190	192
Other operating income/(expense)	(1)	–	17	–	29	11
Total operating income/(expense)	(50)	193	197	95	3,729	642
Net insurance claims incurred and movement in liabilities to policyholders	(1)	(119)	(95)	–	(138)	(90)
Net operating income/(expense)[21]	(51)	74	102	95	3,591	552
Loan impairment charges and other credit risk provisions	(167)	–	–	(2)	(2,919)	(64)
Net operating income/(expense)	(218)	74	102	93	672	488
Total operating expenses	(66)	(37)	(122)	(47)	(2,104)	(371)
Operating profit/(loss)	(284)	37	(20)	46	(1,432)	117
Share of profit in associates and joint ventures	2	9	772	–	2	1
Profit/(loss) before tax	(282)	46	752	46	(1,430)	118
By global business						
Retail Banking and Wealth Management	2	27	612	10	(656)	41
Commercial Banking	–	13	91	–	9	42
Global Banking and Markets	(283)	6	57	36	2	54
Global Private Banking	(1)	–	(8)	–	–	–
Other	–	–	–	–	(785)	(19)
Profit/(loss) before tax	(282)	46	752	46	(1,430)	118
Net gain/(loss) on sale	(3)	375	3,317	(85)	4,095	40

For footnotes, see page 120.

Other information

Funds under management and assets held in custody

Funds under management

	2012 US$bn	2011 US$bn
Funds under management		
At 1 January	**847**	925
Net new money	**5**	2
Value change	**49**	(40)
Exchange and other	**9**	(40)
At 31 December	**910**	847

	At 31 December	
	2012 US$bn	2011 US$bn
Funds under management by business		
Global Asset Management	**425**	396
Global Private Banking	**288**	259
Affiliates	**3**	3
Other	**194**	189
	910	847

Funds under management ('FuM') at 31 December 2012 amounted to US$910bn, an increase of 7% compared with 31 December 2011. Total fund holdings increased in 2012, reflecting favourable market movements, the inclusion of custody assets in client assets in GPB and net new money inflows from Global Asset Management.

Global Asset Management funds, including emerging market funds, increased by 7% to US$425bn compared with 31 December 2011, driven by favourable global market movements and net inflows of US$16bn, mainly from sales of long-term funds, notably fixed income and multi-asset products, in Rest of Asia-Pacific, Hong Kong and Latin America.

GPB funds increased by 11% on 31 December 2011 to US$288bn, mainly due to the inclusion of custody assets in client assets and favourable equity market and foreign exchange movements. Negative net new money was driven by net outflows in Europe, primarily due to a programme to reposition our client base towards higher net worth international and domestic relationships, and a review of certain client relationships with a view to reducing control risk, largely offset by net inflows originating from emerging markets.

Other FuM increased by 3% to US$194bn, primarily due to favourable equity market movements partly offset by the disposal of the full service retail brokerage business in Canada.

Assets held in custody and under administration

Custody is the safekeeping and servicing of securities and other financial assets on behalf of clients. At 31 December 2012, we held assets as custodian of US$6.0 trillion, 16% higher than the US$5.2 trillion held at 31 December 2011. This was mainly driven by favourable market movements together with increased new business and favourable movements in foreign exchange.

Our assets under administration business, which includes the provision of various support function activities including the valuation of portfolios of securities and other financial assets on behalf of clients, complements the custody business. At 31 December 2012, the value of assets held under administration by the Group amounted to US$2.9 trillion, compared with US$2.6 trillion in 2011.

Property

At 31 December 2012, we operated from some 8,650 operational properties worldwide, of which approximately 2,150 were located in Europe, 2,600 in Hong Kong and Rest of Asia-Pacific, 550 in North America, 2,950 in Latin America and 400 in the Middle East and North Africa. These properties had an area of approximately 59.7m square feet (2011: 65.7m square feet).

Our freehold and long leasehold properties, together with all our leasehold land in Hong Kong, were valued in 2012. The value of these properties was US$9.7bn (2011: US$8.9bn) in excess of their carrying amount in the consolidated balance sheet an historical cost based measure. In addition, properties with a net book value of US$1.3bn (2011: US$1.3bn) were held for investment purposes.

Our operational properties are stated at cost, being historical cost or fair value at the date of transition to IFRSs (their deemed cost) less any impairment losses, and are depreciated on a basis calculated to write off the assets over their estimated useful lives. Properties owned as a consequence of an acquisition are recognised initially at fair value.

Further details are included in Note 24 on the Financial Statements.

Detailed list of disclosures in this report arising from EDTF recommendations

Type of risk	Recommendation	Disclosure	Page
General	1	The risks to which the business is exposed.	124 to 126
	2	Our risk appetite and stress testing.	126 to 128
	3	Top and emerging risks, and the changes during the reporting period.	130 to 136
	4	Discussion of future regulatory developments affecting our business model and Group profitability, and its implementation in Europe.	132 and 288 to 292
Risk governance, risk management and business model	5	Group Risk Committee, and their activities.	323 to 328
	6	Risk culture and risk governance and ownership.	124
	7	Diagram of the risk exposure by global business segment.	20
	8	Stress testing and the underlying assumptions.	127 to 128
Capital adequacy and risk-weighted assets	9	Pillar 1 capital requirements, and the impact for global systemically important banks.	294 to 296 and 291 to 292
		For calculation of Pillar 1 capital requirements, see pages 10 to 14 of *Pillar 3 Disclosures 2012*.	
	10	Reconciliation of the accounting balance sheet to the regulatory balance sheet.	287
	11	Flow statement of the movements in regulatory capital since the previous reporting period, including changes in core tier 1, tier 1 and tier 2 capital.	285
	12	Discussion of targeted level of capital, and the plans on how to establish this.	288
	13	Analysis of risk-weighted assets by risk type, global business and geographical region, and market risk RWAs.	282 to 283
	14	For analysis of the capital requirements for each Basel asset class, see pages 10 to 14, 23, 58 and 61 of *Pillar 3 Disclosures 2012*.	
	15	For analysis of credit risk for each Basel asset class, see pages 23 to 28 and 32 to 38 of *Pillar 3 Disclosures 2012*.	
	16	Flow statements reconciling the movements in risk-weighted assets for each risk-weighted asset type.	283 and 284
	17	For discussion of Basel credit risk model performance, see pages 39 to 41 of the *Pillar 3 Disclosures 2012* document.	
Liquidity	18	Analysis of the Group's liquid asset buffer.	206 to 207
Funding	19	Encumbered and unencumbered assets analysed by balance sheet category.	211 to 214
	20	Consolidated total assets, liabilities and off-balance sheet commitments analysed by remaining contractual maturity at the balance sheet date.	485 to 492
	21	Analysis of the Group's sources of funding and a description of our funding strategy.	209 to 211
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet, by business segment.	218 to 219
	23	Discussion of significant trading and non-trading market risk factors.	220 to 223
	24	VAR assumptions, limitations and validation.	266 to 267
	25	Discussion of stress tests, reverse stress tests and stressed VAR.	267
Credit risk	26	Analysis of the aggregate credit risk exposures, including details of both personal and wholesale lending.	139 to 141
	27	Discussion of the policies for identifying impaired loans, defining impairments and renegotiated loans, and explaining loan forbearance policies.	162 and 254 to 259
	28	Reconciliations of the opening and closing balances of impaired loans and impairment allowances during the year.	163 and 172
	29	Analysis of counterparty credit risk that arises from derivative transactions.	145
	30	Discussion of credit risk mitigation, including collateral held for all sources of credit risk.	163 to 168
Other risks	31	Quantified measures of the management of operational risk.	227 to 230
	32	Discussion of publicly known risk events.	130 to 136

The 32 recommendations listed above are made in the report 'Enhancing the Risk Disclosures of Banks' issued by the Enhanced Disclosure Task Force of the Financial Stability Board on 29 October 2012.

Report of the Directors: Operating and Financial Review (continued)

Footnotes

Footnotes to pages 3 to 119

Financial highlights

1 *Dividends recorded in the financial statements are dividends per ordinary share declared in a year and are not dividends in respect of, or for, that year. The third interim dividend for 2011 of US$0.09 was paid on 18 January 2012. The fourth interim dividend for 2011 of US$0.14 was paid on 2 May 2012. First, second and third interim dividends for 2012, each of US$0.09 per ordinary share, were paid on 5 July 2012, 4 October 2012 and 12 December 2012, respectively. Note 10 on the Financial Statements provides more information on the dividends declared in 2012. On 4 March 2013 the Directors declared a fourth interim dividend for 2012 of US$0.18 per ordinary share in lieu of a final dividend, which will be payable to ordinary shareholders on 8 May 2013 in cash in US dollars, or in pounds sterling or Hong Kong dollars at exchange rates to be determined on 29 April 2013, with a scrip dividend alternative. The reserves available for distribution at 31 December 2012 were US$38,175m.*
Quarterly dividends of US$15.50 per 6.2% non-cumulative Series A US dollar preference share, equivalent to a dividend of US$0.3875 per Series A American Depositary Share, each of which represents one-fortieth of a Series A US dollar preference share, were paid on 15 March 2012, 15 June 2012, 17 September 2012 and 17 December 2012.
Quarterly coupons of US$0.508 per security were paid with respect to 8.125% capital securities on 17 January 2012, 16 April 2012, 16 July 2012 and 15 October 2012.
Quarterly coupons of US$0.50 per security were paid with respect to 8% capital securities on 15 March 2012, 15 June 2012, 17 September 2012 and 17 December 2012.
2 *The return on average ordinary shareholders' equity is defined as profit attributable to ordinary shareholders of the parent company divided by average ordinary shareholders' equity.*
3 *Return on average invested capital is based on the profit attributable to ordinary shareholders. Average invested capital is measured as average total shareholders' equity after adding back goodwill previously amortised or written-off directly to reserves, deducting average equity preference shares issued by HSBC Holdings and deducting/(adding) average reserves for unrealised gains/(losses) on effective cash flow hedges and available-for-sale securities and property revaluation reserves. This measure reflects capital initially invested and subsequent profit.*
4 *The cost efficiency ratio is defined as total operating expenses divided by net operating income before loan impairment charges and other credit risk provisions.*
5 *Each American Depositary Share represents five ordinary shares.*
6 *Total shareholder return is defined as the growth in share value and declared dividend income during the relevant period.*
7 *The Financial Times Stock Exchange 100 Index.*
8 *The Morgan Stanley Capital International World Index.*
9 *The Morgan Stanley Capital International World Bank Index.*
10 *The core tier 1 capital ratio for 2012 and 2011 includes the effect of the Basel 2.5 rules.*

Business and operating models and KPIs

11 *Based upon pro forma post-tax profits allocation. See page 349 for details.*
12 *Intermediation of securities, funds and insurance products, including Securities Services in GB&M.*
13 *Merger and acquisition, ECM, event and project financing, and co-investments in GPB.*
14 *Including Foreign Exchange, Rates, Credit and Equities.*
15 *Including portfolio management.*
16 *Including private trust and estate planning (for financial and non-financial assets).*
17 *Including hedge funds, real estate and private equity.*
18 *Vehicle Finance was sold in 2010.*
19 *'Transactions' refers to the sale or closure of non-strategic businesses or non-core investment.*
20 *Hong Kong, Rest of Asia-Pacific, Middle East and North Africa, and Latin America.*
21 *Net operating income before loan impairment charges and other credit risk provisions, also referred to as 'revenue.'*
22 *The sum of balances presented does not agree to consolidated amounts because inter-company eliminations are not presented here.*
23 *For definitions of HSBC UK, HBAP and HSBC US, see footnotes 40 to 42, respectively, on page 249. Subsidiaries of these entities are not included unless there is unrestricted transferability of liquidity between the subsidiaries and the parent. 'Other entities' (footnote 43 on page 249) comprise our other main banking subsidiaries and, as such, includes businesses spread across a range of locations, in many of which we may require a higher ratio of net liquid assets to customer liabilities to reflect local market conditions.*

Reconciliations of reported and underlying profit/(loss) before tax

24 *'Currency translation adjustment' is the effect of translating the results of subsidiaries and associates for the previous year at the average rates of exchange applicable in the current year.*
25 *Positive numbers are favourable: negative numbers are unfavourable.*
26 *Changes in fair value due to movements in own credit spread on long-term debt issued. This does not include the fair value changes due to own credit spread on structured notes issued, derivatives and other hybrid instruments included within trading liabilities.*
27 *Other income in this context comprises where applicable net trading income, net income/(expense) from other financial instruments designated at fair value, gains less losses from financial investments, dividend income, net earned insurance premiums and other operating income less net insurance claims incurred and movement in liabilities to policyholders.*
28 *Individual reconciliations by global businesses and geographical regions are available on www.hsbc.com.*
29 *Underlying performance eliminates the effects of acquisitions, disposals and changes of ownership levels of subsidiaries, associates and businesses so we can view results on a like-for-like basis. We achieve this by eliminating gains and losses on disposal or dilution in the year incurred and by removing material results of operations from all the years presented. For example, if a disposal was made in the current year after four months of operations, the results of the disposed of business would be removed from the results of the current year and the previous year as if the disposed of business did not exist in those years.*
30 *In addition, the operating results of these disposals were removed from underlying results.*
31 *The presentation of the 'Reconciliation of reported and underlying profit/(loss) before tax' for 2011 compared with 2010 has not been updated to reflect the change in presentation in 2012 splitting underlying reconciliations from the constant currency reconciliations. The presentational change had no material impact on results.*
32 *These columns comprise the net increments or decrements in profits in the current year compared with the previous year which are attributable to acquisitions or disposals, gains on the dilution of interests in associates and/or movements in fair value of own debt*

attributable to credit spread. The inclusion of acquisitions and disposals is determined in the light of events each year.
33 *Excluding adjustments in 2010.*

Financial summary

34 *In 2008, an impairment charge of US$10,564m to fully write off goodwill in PFS in North America was reported in 'Total operating expenses'. This amount is excluded from 'Total operating expenses' in calculating the ratio.*
35 *The effect of the bonus element of the rights issue in 2009 has been included within the basic and diluted earnings per share.*
36 *Dividends per ordinary share expressed as a percentage of basic earnings per share.*
37 *For full description of the Ping An forward contract, see page 470.*
38 *In 2011, 'Deferred variable compensation awards-accelerated amortisation' was included as a notable cost item. In 2012, this item recurs but is now considered part of our operating cost base and therefore has been excluded from notable items in both years.*
39 *Net interest income includes the cost of funding trading assets, while the related external revenues are reported in 'Trading income'. In our global business results, the cost of funding trading assets is included with GB&M's net trading income as interest expense.*
40 *Gross interest yield is the average annualised interest rate earned on average interest-earning assets ('AIEA').*
41 *Net interest spread is the difference between the average annualised interest rate earned on AIEA, net of amortised premiums and loan fees, and the average annualised interest rate paid on average interest-bearing funds.*
42 *Net interest margin is net interest income expressed as an annualised percentage of AIEA.*
43 *In 2011, 'Other interest-earning assets' includes the average assets of disposal groups held for sale. In prior years other interest-earning assets included intercompany eliminations. In 2012, intercompany eliminations have been included in the relevant line item.*
44 *Interest income on trading assets is reported as 'Net trading income' in the consolidated income statement.*
45 *Interest income on financial assets designated at fair value is reported as 'Net income from financial instruments designated at fair value' in the consolidated income statement.*
46 *Including interest-bearing bank deposits only.*
47 *Interest expense on financial liabilities designated at fair value is reported as 'Net income on financial instruments designated at fair value' in the consolidated income statement, other than interest on own debt which is reported in 'Interest expense'.*
48 *Including interest-bearing customer accounts only.*
49 *The cost of internal funding of trading assets was US$511m (2011: US$1,161m; 2010: US$902m) and is excluded from the reported 'Net trading income' line and included in 'Net interest income'. However, this cost is reinstated in 'Net trading income' in our global business reporting.*
50 *Net trading income includes a charge of US$629m (2011: income of US$458m; 2010: income of US$23m), associated with changes in the fair value of issued structured notes and other hybrid instrument liabilities derived from movements in HSBC issuance spreads.*
51 *Other changes in fair value include gains and losses arising from changes in the fair value of derivatives that are managed in conjunction with HSBC's long-term debt issued.*
52 *Discretionary participation features.*
53 *Net insurance claims incurred and movement in liabilities to policyholders arise from both life and non-life insurance business. For non-life business, amounts reported represent the cost of claims paid during the year and the estimated cost of notified claims. For life business, the main element of claims is the liability to policyholders created on the initial underwriting of the policy and any subsequent movement in the liability that arises, primarily from the attribution of investment performance to savings-related policies. Consequently, claims rise in line with increases in sales of savings-related business and with investment market growth.*

Consolidated balance sheet

54 *Net of impairment allowances.*
55 *The calculation of capital resources, capital ratios and risk-weighted assets for 2012 and 2011 is on a Basel 2.5 basis. All other comparatives are on a Basel II basis.*
56 *Capital resources are total regulatory capital, the calculation of which is set out on page 286.*
57 *Including perpetual preferred securities, details of which can be found in Note 33 on the Financial Statements.*
58 *The definition of net asset value per share is total shareholders' equity, less non-cumulative preference shares and capital securities, divided by the number of ordinary shares in issue.*
59 *'Currency translation adjustment' is the effect of translating the assets and liabilities of subsidiaries and associates for the previous year-end at the rates of exchange applicable at the current year-end.*
60 *See Note 26 on the Financial Statements.*
61 *France primarily comprises the domestic operations of HSBC France, HSBC Assurances Vie and the Paris branch of HSBC Bank plc.*
62 *The classification of customer accounts by country within Europe has changed from amounts formerly disclosed. Certain balances which were previously presented within the country of domicile of the consolidating legal entity are now presented on the basis of the country of account origination. The most significant effect of this change is on Switzerland, where the balance of US$45,283m previously disclosed at 31 December 2011 has been restated as US$19,888m on the new basis.*

Economic profit

63 *Expressed as a percentage of average invested capital.*
64 *Average invested capital is measured as average total shareholders' equity after:*
- *adding back the average balance of goodwill amortised pre-transition to IFRSs or subsequently written-off, directly to reserves (less goodwill previously amortised in respect of the French regional banks sold in 2008);*
- *deducting the average balance of HSBC's revaluation surplus relating to property held for own use. This reserve was generated when determining the deemed carrying cost of such properties on transition to IFRSs and will run down over time as the properties are sold;*
- *deducting average preference shares and other equity instruments issued by HSBC Holdings; and*
- *deducting average reserves for unrealised gains/(losses) on effective cash flow hedges and available-for-sale securities.*

65 *Return on invested capital is profit attributable to ordinary shareholders of the parent company, which can be found in Note 11 on the Financial Statements on page 426.*

Reconciliation of RoRWA measures

66 *Risk-weighted assets ('RWA's) and pre-tax return on average risk-weighted assets ('RoRWA').*

67 *Underlying RoRWA is calculated using underlying pre-tax return and reported average RWAs at constant currency and adjusted for the effects of business disposals.*

68 *'Other' includes treasury services related to the US Consumer and Mortgage Lending business and commercial operations in run-off. US CML includes loan portfolios within the run-off business that are designated held for sale.*

Disposals, held for sale and run-off portfolios

69 *The results of operations of disposed businesses are stated up to and including the date of disposal. The results of operations of businesses held for sale and run-off portfolios are for 2012.*

70 *The summary income statements present the historical results of disposals, held-for-sale and run-off portfolios to provide information on trends. The historical results are those which appear in the Group IFRS income statement and include fixed allocated costs which will not necessarily be removed or reduced upon disposal or run-off. Fixed allocated costs included in total operating expenses are disclosed separately on page 38. The results of disposed businesses exclude gains on sale and post disposal income and expenditure items; for example, restructuring costs. The results of businesses held for sale exclude losses recognised upon reclassification to the held-for-sale category. These losses are disclosed in Note 26 on the Financial Statements.*

71 *'US CML' includes non-real estate personal loans that were reclassified to 'Assets held for sale' during 2012. At 31 December 2012, the carrying value of this portfolio, net of transferred impairment allowances, was US$3.4bn. The portfolio contributed interest income of US$813m and loan impairment charges of US$347m to profit before tax in 2012. 'Other' includes treasury services related to the US Consumer and Mortgage Lending business and commercial operations in run-off.*

72 *'Reduction in RWAs on disposal' for disposal and held-for-sale portfolios are shown exclusive of operational risk RWAs as these are not immediately released on disposal. RWAs for held-for-sale and run-off portfolios are shown inclusive of operational risk RWAs.*

Global businesses and geographical regions

73 *The main items reported under 'Other' are certain property activities, unallocated investment activities, centrally held investment companies, gains arising from the dilution of interests in associates and joint ventures, part of the movement in the fair value of our long-term debt designated at fair value (the remainder of the Group's movement on own debt is included in GB&M) and HSBC's holding company and financing operations. The results also include net interest earned on free capital held centrally, operating costs incurred by the head office operations in providing stewardship and central management services to HSBC, and costs incurred by the Group Service Centres and Shared Service Organisations and associated recoveries. In addition, fines and penalties as part of the settlement of investigations into past inadequate compliance with anti-money laundering and sanctions laws together with the UK bank levy are recorded in 'Other'.*

74 *Assets by geographical region and global businesses include intra-HSBC items. These items are eliminated, where appropriate, under the heading 'Intra-HSBC items' or 'inter-segment elimination', as appropriate.*

75 *For divested businesses, this includes the gain or loss on disposal and material results of operations as described on page 26.*

76 *Loan impairment charges and other credit risk provisions.*

77 *Share of profit in associates and joint ventures.*

78 *In the analysis of global businesses, net trading income comprises all gains and losses from changes in the fair value of financial assets and financial liabilities classified as held for trading, together with related external and internal interest income and interest expense, and dividends received; in the statutory presentation internal interest income and expense are eliminated.*

79 *In 2012, Global Markets included an adverse fair value movement of US$629m on the widening of credit spreads on structured liabilities (2011: favourable fair value movement of US$458m; 2010: favourable fair value movement of US$23m).*

80 *Total income earned on payments and cash management products in the Group amounted to US$6.2bn (2011: US$5.6bn; 2010: US$4.4bn), of which US$4.5bn was in CMB (2011: US$4.0bn; 2010: US$3.3bn) and US$1.7bn was in GB&M (2011: US$1.5bn; 2010: US$1.1bn).*

81 *Total income earned on other transaction services in the Group amounted to US$3.6bn (2011: US$3.2bn; 2010: US$2.7bn), of which US$2.8bn was in CMB relating to trade and receivables finance (2011: US$2.6bn; 2010: US$2.1bn) and US$753m was in GB&M of which US$738m related to trade and receivables finance (2011: US$601m; 2010: US$523m) and US$15m related to banknotes and other (2011: US$33m; 2010: US$113m).*

82 *In each Group entity, Balance Sheet Management is responsible for managing liquidity and funding under the supervision of the local Asset and Liability Management Committee. Balance Sheet Management also manages the non-trading interest rate positions of the entity transferred to it within a Global Markets limit structure. Balance Sheet Management revenues include notional tax credits on income earned from tax-exempt investments of US$116m in 2012, US$85m in 2011 and US$50m in 2010, which are offset within 'Other'.*

83 *'Other' in GB&M includes net interest earned on free capital held in the global business not assigned to products, allocated funding costs and gains resulting from business disposals. Within the management view of total operating income, notional tax credits are allocated to the businesses to reflect the economic benefit generated by certain activities which is not reflected within operating income, for example notional credits on income earned from tax-exempt investments where the economic benefit of the activity is reflected in tax expense. In order to reflect the total operating income on an IFRS basis, the offset to these tax credits are included within 'Other'.*

84 *'Client assets' are translated at the rates of exchange applicable for their respective period-ends, with the effects of currency translation reported separately. The main components of client assets are funds under management, which are not reported on the Group's balance sheet, and customer deposits, which are reported on the Group's balance sheet.*

85 *Inter-segment elimination comprises (i) the costs of shared services and Group Service Centres included within 'Other' which are recovered from global businesses, and (ii) the intra-segment funding costs of trading activities undertaken within GB&M. HSBC's Balance Sheet Management business, reported within GB&M, provides funding to the trading businesses. To report GB&M's 'Net trading income' on a fully funded basis, 'Net interest income' and 'Net interest income/(expense) on trading activities' are grossed up to reflect internal funding transactions prior to their elimination in the inter-segment column.*

86 *Net insurance claims incurred and movement in liabilities to policyholders.*

87 *'Employee expenses' comprise costs directly incurred by each global business. The reallocation and recharging of employee and other expenses directly incurred in the 'Other' category are shown in 'Other operating expenses'.*

88 *RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.*

89 *CMB results include US$128m (2011: US$110m) of net operating income and US$43m (2011: US$23m) of profit before tax, related to low income housing tax credit investments in the US which are offset within the 'Other' segment.*

Risk

1 *Appendix to Risk – risk policies and practices.*

2 *Unaudited.* 3 *Audited.* 4 *Audited where indicated.*

For details of HSBC's policies and practices regarding risk management and governance see the Appendix to Risk on page 252.

Risk profile

(Unaudited)

Managing our risk profile

- A strong balance sheet remains core to our philosophy.
- Our portfolios remain aligned to our risk appetite and strategy.
- Our risk management framework is supported by strong forward-looking risk identification.

Maintaining capital strength and strong liquidity position

- Our core tier 1 capital ratio remains strong at 12.3%.
- We have sustained our strong liquidity position throughout 2012.
- Our ratio of customer advances to deposits remains below 90%.

Strong governance

- Robust risk governance and accountability is embedded across the Group.
- The Board, advised by the Group Risk Committee, approves our risk appetite.
- The compliance control function is being restructured and expanded to improve focus on financial crime and regulatory compliance.
- Our global risk operating model supports adherence to globally consistent standards and risk management policies across the Group.

Our top and emerging risks

- Macroeconomic and geopolitical risk.
- Macro-prudential, regulatory and legal risk to our business model.
- Risks related to our business operations, governance and internal control systems.

Managing risk

(Unaudited)

Risks faced by HSBC

All of our activities involve, to varying degrees, the analysis, evaluation, acceptance and management of risks or combinations of risks. These are described in the table below.

Risk culture

All staff are required to identify, assess and manage risk within the scope of their assigned responsibilities. Our global standards set the tone from the top and are central to our approach to balancing risk and reward. Personal accountability is reinforced by our HSBC Values, with staff expected to act with courageous integrity in conducting their duties and being:

- dependable, doing the right thing;
- open to different ideas and culture; and
- connected to our customers, regulators and each other.

Staff are supported by a disclosure line which enables them to raise concerns in a confidential manner. We also have in place a suite of mandatory training to ensure a clear and consistent attitude is communicated to staff; our mandatory training not only focuses on the technical aspects of risk but also on our attitude towards risk and the behaviours expected by our policies.

Our risk culture is reinforced by our approach to remuneration, which is discussed in the Report of the Remuneration Committee on page 347. Individual awards are based on the achievement of both financial and non-financial (relating to our values) objectives which are aligned to our global strategy.

Risk governance and ownership

An established risk governance framework and ownership structure ensures oversight of and accountability for the effective management of risk at Group, regional and global business levels. The governance structure for the management of risk is set out in the report of the Group Risk Committee on page 323, with similar arrangements in place in major operating subsidiaries. This structure has been augmented by the establishment of the Financial System Vulnerabilities Committee, details of which are set out on page 328. Our risk management framework fosters the continuous monitoring of the risk environment and an integrated evaluation of risks and their interactions. Integral to our risk management framework are risk appetite, stress testing and the identification of top and emerging risks, all of which are discussed below.

Description of risks

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
The risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.	Credit risk: • is measured as the amount which could be lost if a customer or counterparty fails to make repayments. In the case of derivatives, the measurement of exposure takes into account the current mark to market value to HSBC of the contract and the expected potential change in that value over time caused by movements in market rates; • is monitored within limits, approved by individuals within a framework of delegated authorities. These limits represent the peak exposure or loss to which HSBC could be subjected should the customer or counterparty fail to perform its contractual obligations; and • is managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.
Liquidity and funding risk		
The risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we can only do so at excessive cost.	Liquidity risk arises from mismatches in the timing of cash flows. Funding risk arises when the liquidity needed to fund illiquid asset positions cannot be obtained at the expected terms and when required.	Liquidity and funding risk: • is measured using internal metrics including stressed operational cash flow projections, coverage ratio and advances to core funding ratios; • is monitored against the Group's liquidity and funding risk framework and overseen by regional Asset and Liability Management Committees ('ALCO's), Group ALCO and the Risk Management Meeting; and • is managed on a stand-alone basis with no reliance on any Group entity (unless pre-committed) or central bank unless this represents routine established business as usual market practice.

Risks	Arising from	Measurement, monitoring and management of risk
Market risk		
The risk that movements in market factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices, will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: • Trading portfolios comprise positions arising from market-making and warehousing of customer-derived positions • Non-trading portfolios comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments designated as available for sale and held to maturity, and exposures arising from our insurance operations	Market risk: • is measured in terms of value at risk, which is used to estimate potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence, augmented with stress testing to evaluate the potential impact on portfolio values of more extreme, though plausible, events or movements in a set of financial variables; • is monitored using measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange which are applied to the market risk positions within each risk type; and • is managed using risk limits approved by the GMB for HSBC Holdings and our various global businesses. These units are allocated across business lines and to the Group's legal entities.
Operational risk		
The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk (along with accounting, tax, security and fraud, people, systems, projects, operations and organisational change risk).	Operational risk arises from day to day operations or external events, and is relevant to every aspect of our business	Operational risk: • is measured using both the top risk analysis process and the risk and control assessment process, which assess the level of risk and effectiveness of controls; • is monitored using key indicators and other internal control activities; and • is primarily managed by global business and functional managers. They identify and assess risks, implement controls to manage them and monitor the effectiveness of these controls utilising the operational risk management framework. The Global Operational Risk and Internal Control function is responsible for the framework and for overseeing the management of operational risks within businesses and functions.
Compliance risk		
The risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.	Compliance risk is part of operational risk, and arises from rules, regulations, other standards and Group policies, including those relating to anti-money laundering, anti-bribery and corruption, conduct of business, counter-terrorist financing and sanctions compliance.	Compliance risk: • is measured by reference to identified metrics, incident assessments (whether affecting HSBC or the wider industry), regulatory feedback and the judgement and assessment of the managers of our global businesses and functions; • is monitored against our compliance risk assessments and metrics, the results of the monitoring and control activities of the second line of defence functions, including the Global Compliance function, and the results of internal and external audits and regulatory inspections; and • is managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to assure their observance. Proactive risk control and/or remediation work is undertaken where required.
Insurance risk		
The risk that over time, the combined cost of acquiring and administering a contract, claims and benefits may exceed the aggregate amount of premiums received and investment income.	Insurance risk arises from mortality and morbidity experience. Lapse and surrender rates and if, the policy has a savings element, the performance of the assets held to support the liabilities also impact the cost of claims and benefits. The performance of assets supporting insurance liabilities depends on financial risks such as market, credit and liquidity.	Insurance risk: • is measured in terms of life insurance liabilities and non-life written premiums for their respective contract types; • is monitored by the Group Insurance Risk Management Committee, which checks the risk profile of the insurance operations against a risk appetite for insurance business agreed by the GMB; and • is managed both centrally and locally using product design, underwriting, reinsurance and claims-handling procedures.

Risks	Arising from	Measurement, monitoring and management of risk
Fiduciary risk		
The risk of breaching our fiduciary duties.	Fiduciary risk arises from our business activities where we act in a fiduciary capacity as Trustee, Investment Manager or as mandated by law or regulation.	Fiduciary risk: • is measured by monitoring against risk appetite; • is monitored through the use of key indicators; and • is managed within the designated businesses via a comprehensive policy framework.
Reputational risk		
The risk that illegal, unethical or inappropriate behaviour by the Group itself, members of staff or clients or representatives of the Group will damage HSBC's reputation, leading, potentially, to a loss of business, fines or penalties.	Reputational risk encompasses negative reaction not only to activities which may be illegal or against regulations, but also to activities that may be counter to societal standards, values and expectations. It arises from a wide variety of causes, including how we conduct our business and the way in which clients to whom we provide financial services, and bodies who represent HSBC, conduct themselves.	Reputational risk: • is measured by reference to our reputation as indicated by our dealings with all relevant stakeholders, including media, regulators, customers and employees; • is monitored through a reputational risk management framework, taking into account the results of the compliance risk monitoring activity outlined above; and • is managed by every member of staff and is covered by a number of policies and guidelines. There is a clear structure of committees and individuals charged with mitigating reputational risk, including the Group Reputational Risk Policy Committee and regional/business equivalents.
Pension risk		
The risk that contributions from Group companies and members fail to generate sufficient funds to meet the cost of accruing benefits for the future service of active members, and the risk that the performance of assets held in pension funds is insufficient to cover existing pension liabilities.	Pension risk arises from investments delivering an inadequate return, economic conditions leading to corporate failures, adverse changes in interest rates or inflation, or members living longer than expected (longevity risk). Pension risk includes operational risks listed above.	Pension risk: • is measured in terms of the schemes' ability to generate sufficient funds to meet the cost of their accrued benefits; • is monitored through the specific risk appetite that has been developed at both Group and regional levels; and • is managed locally through the appropriate pension risk governance structure and globally through the Risk Management Meeting.
Sustainability risk		
The risk that the environmental and social effects of providing financial services outweigh the economic benefits.	Sustainability risk arises from the provision of financial services to companies or projects which run counter to the needs of sustainable development.	Sustainability risk: • is measured by assessing the potential sustainability effect of a customer's activities and assigning a Sustainability Risk Rating to all high risk transactions; • is monitored quarterly by the Risk Management Meeting and monthly by Group Sustainability Risk management; and • is managed using sustainability risk policies covering project finance lending and sector-based sustainability polices for sectors with high environmental or social impacts.

Risk profile

Risks are assumed by our global businesses in accordance with their risk appetite and are managed at Group, global business and regional levels. All risks are identified through our risk map process, which sets out the Group's risk profile in relation to key risk categories in different regions and global businesses. In addition to those listed above, risks including model, financial management, capital, Islamic finance and strategic risk are identified and monitored through the risk map process.

These risks are then regularly assessed through our risk appetite framework, subjected to stress testing and considered for classification as top and emerging risks. These processes are discussed in further detail below.

Credit, market and operational risks are measured using the Pillar 1 framework for regulatory capital through the allocation of risk-weighted assets. We measure other risks using our economic capital model under Pillar 2 (as described in our *Pillar 3 Disclosures 2012* report.)

Risk appetite

Risk appetite is set out in the Group's Risk Appetite Statement, which describes the types and levels of risk that the Group is prepared to accept in executing our strategy. It is approved by the Board on the advice of the Group Risk Committee, and is a key component of our risk management framework. It is central to the annual planning process, in which global businesses, geographical regions and functions are required to articulate their risk appetite statements. These are aligned with Group strategy, and provide a risk profile of each global business, region or function in the context of the risk categories discussed above.

Quantitative and qualitative metrics are assigned to nine key categories: earnings, capital, liquidity and funding, securitisations, cost of risk, intra-group lending, strategic investments, risk categories and risk diversification and concentration. Measurement against the metrics:

- guides underlying business activity, ensuring it is aligned to risk appetite statements;
- informs risk-adjusted remuneration;
- enables the key underlying assumptions to be monitored and, where necessary, adjusted through subsequent business planning cycles; and
- promptly identifies business decisions needed to mitigate risk.

Some of the core metrics that are measured, monitored and presented to the Board monthly are tabulated below:

Risk appetite metrics

	Target	Actual
Core tier 1 ratio	9.5% to 10.5%	**12.3%**
Return on equity	12% to 15%	**8.4%**
Return on RWAs	1.8% to 2.6%	**1.8%**
Dividend payout ratio	40% to 60%	**55.4%**
Cost efficiency ratio	48% to 52%	**62.8%**
Advances to customer accounts ratio	Below 90%	**74.4%**
Cost of risk (LICs)	Below 20% of operating income	**9.9%**

Stress testing

Our stress testing and scenario analysis programme is central to the monitoring of top and emerging risks. We conduct a range of Group stress-testing scenarios including, but not limited to, severe global economic downturn, country, sector and counterparty failures and a variety of projected major operational risk events. The outcomes of the stress testing are used to assess the potential demand for regulatory capital under the various scenarios. We also participate, where appropriate, in scenario analyses requested by regulatory bodies.

In the course of 2012, we examined several scenarios reflecting potential developments in the eurozone and more widely. Those reported to senior management during 2012 included an assessment of the annual operating plan 2012 under two macroeconomic stress scenarios, as described below. The results of the two scenarios demonstrated that HSBC would remain satisfactorily capitalised under the mild and severe scenarios after taking account of assumed management actions.

In addition to the suite of risk scenarios considered for the Group, each major HSBC subsidiary conducts regular macroeconomic and event-driven scenario analyses specific to their region.

Stress testing is used across risk categories such as market risk, liquidity and funding risk and credit risk to evaluate the potential impact of stress scenarios on portfolio values, structural long-term funding positions, income or capital.

Stress scenario assumptions

Scenario	**Mild scenario assumptions**	**Severe scenario assumptions**
Assumptions	• the situation in Greece worsens and there is an orderly default in Greece; • Greek banks also default and, with support from the EU and the International Monetary Fund, are bailed out; • increasing bond yields in Portugal, Ireland, Spain and Italy trigger further fiscal austerity measures, and governments strive to disassociate their countries from Greece; • through financial and trade linkages, an orderly default in Greece results in the spread of contagion to the rest of the world; • the UK, US and emerging markets are adversely affected, albeit to varying degrees; and • slower global demand curbs growth and increases the risk premium on interest rates as well as commodity prices.	• a disorderly default in Greece, where the eurozone governments are unable to ring-fence peripheral countries and their banks; • default of Portugal and Ireland with increases in bond yields for high debt countries; • the ensuing credit crunch together with declining business and consumer confidence more than offset any relief gained from the depreciation of the euro; • investors become increasingly uncomfortable with the US and the UK's fiscal positions, with the severe scenario resulting in a global slowdown; and • emerging economies are less affected by the financial shock.

We also conduct reverse stress testing.

Reverse stress testing is a process of working backwards from the event of non-viability of the business model to identification of a range of events that could bring that event about. Non-viability might occur before the bank's capital is depleted, and could result from a variety of events. These include idiosyncratic, systemic or combinations of events, and/or could imply failure of the Group's holding company or one of its major subsidiaries and does not necessarily mean the simultaneous failure of all the major subsidiaries.

We use reverse stress testing as part of our risk management process to strengthen resilience by helping to inform early-warning triggers, management actions and contingency plans to mitigate against potential stresses and vulnerabilities which the Group might face.

Areas of special interest

(Unaudited)

Compliance

In 2012, we experienced increasing levels of compliance risk as regulators and other agencies pursued investigations into historical activities, and we continued to work with them in relation to existing issues. Manifestation of these risks included an appearance before the US Senate Permanent Subcommittee on Investigations and the Deferred Prosecution Agreement reached with US authorities in relation to investigations regarding inadequate compliance with anti-money laundering and sanctions law, plus a related undertaking with the FSA. We have also been involved in investigations into the mis-selling of interest rate derivative products to SMEs in the UK and investigations and reviews related to certain past submissions made by panel banks and the process for making submissions in connection with the setting of Libor, Euribor and other benchmark interest and foreign exchange rates.

With a new senior leadership team and a new strategy in place since 2011, we have already taken significant steps to address these issues including making changes to strengthen compliance, risk management and culture. These steps, which should also enhance our compliance risk management capabilities, include the following:

- the creation of a new global structure which will make HSBC easier to manage and control;
- simplifying our business through the ongoing implementation of our organisational effectiveness programme and our five economic filters strategy;
- developing a sixth global risk filter which should help to standardise our approach to doing business in higher risk countries;
- substantially increasing resources, doubling global expenditure and significantly strengthening Compliance as a control (rather than as an advisory) function;
- continuing to roll out the HSBC Values programme that defines the way everyone in the Group should act;
- appointing a new Chief Legal Officer and Head of Group Financial Crime Compliance with particular expertise and experience in US law and regulation;
- appointing a new Global Head of Regulatory Compliance and starting to restructure the Global Compliance function accordingly;
- designing and implementing new global standards by which we conduct our businesses; and
- enforcing a consistent global sanctions policy.

It is clear from both our own and wider industry experience that the level of activity among regulators and law enforcement agencies in investigating possible breaches of regulations has increased, and that the direct and indirect costs of such breaches can be significant. Coupled with a substantial increase in the volume of new regulation, much of which has some element of extra-territorial reach, and the geographical spread of our businesses, we believe that the level of inherent compliance risk that we face as a Group will continue to remain high for the foreseeable future.

Commercial real estate

Our exposure to commercial real estate lending continued to be concentrated in Hong Kong, the UK, Rest of Asia-Pacific and North America. The market in Hong Kong and most other Asian markets in which we conduct commercial real estate lending, after relative buoyancy in 2011, began to stabilise in 2012, partly due to initiatives taken by various supervisory authorities. In the UK, many regions were negatively affected by weak growth in the economy, though London and the South East, where more than 50% of our UK CRE lending is based, continued to exhibit relative strength. In North America, the market remained stable, in part supported by the continued low levels of interest rates.

Refinance risk, which is subject to close scrutiny in key commercial real estate markets, is the risk that a loan which is due to be repaid through refinancing over the short term cannot, at maturity, be refinanced on current market terms. Such cases may either lead to the loan being treated as impaired because the borrower's ability to pay is considered doubtful or, if refinanced by HSBC, may result in it being treated as a renegotiated loan because of the degree of forbearance required (see page 158 for a description of renegotiated loans). In commercial real estate markets, refinance risk can arise particularly when a loan is serviced exclusively by the property to which it relates, i.e. when the bank does not, or is not able to, place principal reliance on other cash flows available to the borrower. We monitor the commercial real estate portfolio, assessing those drivers that may indicate potential issues with refinancing. The principal driver is the vintage of the loan, where origination reflected previous market norms which no longer apply in the current market. Examples are higher loan-to-value ratios and/or lower interest cover ratios. The range of refinancing sources in the local market is also an important consideration, with concern increasing when this is restricted to banks and when bank liquidity is limited. In addition, the quality of underlying fundamentals such as tenant reliability, ability to let, and the condition of the property itself is also important, as it influences property value. With the exception of the UK, in our material commercial real estate portfolios globally, the behaviour of the market and the quality of assets does not cause undue concern. In the UK, the above drivers combine to cause a concern regarding our sensitivity to risks of refinance that warrant enhanced management attention.

At 31 December 2012, the UK had US$24.5bn of commercial real estate loans, of which US$7.4bn were due to be refinanced within the next 12 months, of which US$2.4bn were assessed as possessing characteristics that indicated an increased risk of refinancing difficulty. Such cases are monitored closely with US$1.9bn already under special management within our Loan Management Units. US$0.9bn were disclosed as impaired with impairment allowances of US$0.4bn. Where these loans are not considered impaired it is because, while they may possess characteristics that indicate a potential issue with refinancing, as described above, there is no evidence to indicate that all contractual cash flows will not be recovered or that the loans will need to be refinanced on terms we would consider below market norms.

The relevance of current market conditions to impairment assessment is particularly relevant over a 12-month period. Over a 12 to 24-month horizon, US$3.3bn of UK commercial real estate and other property-related lending loans are due to be refinanced. Reviews of more sensitive assets due between 12 and 24 months have been conducted to ensure that there are no further cases currently requiring special management or that should be considered impaired.

Eurozone crisis

Eurozone countries are members of the EU and part of the euro single currency bloc. The peripheral eurozone countries are those that have exhibited levels of market volatility that exceeded other eurozone countries, demonstrating fiscal or political uncertainty which may persist through the first half of 2013. In 2012, in spite of improvements through austerity and structural reforms, the peripheral eurozone countries of Greece, Ireland, Italy, Portugal, Spain and Cyprus continued to exhibit a high ratio of sovereign debt to GDP or short to medium-term maturity concentration of their liabilities, with Greece, Spain and Cyprus seeking assistance.

Exposure to eurozone countries is analysed in the table on page 193.

Risk reduction in 2012

At 31 December 2012, our net exposure to the peripheral eurozone countries was US$38bn, including net exposure to sovereign borrowers, agencies and banks of US$12bn. During the year, we continued to reduce our overall net exposure to sovereigns, agencies and banks of peripheral eurozone countries. In addition, we continued to actively reduce exposures to counterparties domiciled in other eurozone countries that had exposures to sovereigns and/or banks in peripheral eurozone countries of sufficient size to threaten their on-going viability in the event of an unfavourable conclusion to the current crisis.

This was undertaken through an analysis of publicly available information, reviews of external analyst reports and meetings with the counter-parties' officials. Vulnerable counterparties were identified and subjected to enhanced monitoring, and our exposure was managed in a similar manner to the monitoring and management of direct exposures to the peripheral eurozone countries. One of the primary issues underpinning this process was the management of our surplus liquidity, resulting in the placement of funds directly with central banks in the most highly-rated countries.

Our businesses in peripheral eurozone countries are funded from a mix of local deposits, local wholesale funding and intra-Group loans extended from HSBC operations with surplus funds. Intra-Group funding carries the risk that a member country might exit the eurozone and redenominate its national currency, which could result in a significant currency devaluation. A description of risks relating to currency redenomination in the event of the exit of a eurozone member is provided on page 131.

Risk management and contingency planning

There is an established framework for dealing with counterparty and systemic crisis situations, both regionally and globally, which is complemented by regular specific and enterprise-wide stress testing and scenario planning. The framework functions both in pre and in-crisis situations and ensures that we have detailed operational plans in the event of an adverse scenario materialising. It was deployed in 2011 and has continued to operate throughout 2012 to ensure that pre-crisis preparation remains apposite and robust.

The main focus of preparation for eurozone exit continues to be on Greece and Spain although, as the eurozone situation has developed in 2012, we have also considered other scenarios including contagion risk to non-eurozone countries or the exit of a higher impact eurozone member. Management actions include regular meetings of a Eurozone Major Incident Group and a tested regional eurozone contingency plan covering all global businesses and functions. The plan considers payments, legal, client account, internal and external communication and regulatory and compliance issues associated with eurozone breakup.

Personal lending – US lending

The slight improvement in US economic conditions continued throughout 2012. Real GDP grew by 2.2% and consumer spending growth remained moderate. Threats to economic growth remained, primarily with the uncertainty in the housing market and elevated unemployment levels, although both of them demonstrated modest improvements during the year.

We remained focused on managing the run-off of balances in our HSBC Finance portfolio and completed the sales of our US Card and Retail Services business and 195 retail branches principally in upstate New York in 2012. Total lending balances, including loans held for sale, within HSBC Finance were US$43bn at 31 December 2012, a decline of US$6.8bn compared with the end of 2011. The rate at which balances in the CML portfolio are declining continues to be affected by the lack of refinancing opportunities available to customers and the continued impact of the temporary suspension of foreclosure activity in 2010. Foreclosure processing has now resumed in substantially all states, although there continues to be a backlog of loans which have not yet been referred to foreclosure. In addition, our loan modification programmes, which are designed to improve cash collections and avoid foreclosure, continued to slow repayment rates.

In the third quarter of 2012, we reclassified non-real estate personal loan balances of US$3.7bn, net of impairment allowances, from our consumer finance portfolio to 'Assets held for sale' as we actively marketed the portfolio. We also identified real estate secured loan balances, with a carrying amount of US$3.8bn which, as part of our strategy, we have announced that we plan to actively market in multiple transactions generally over the next two years. At 31 December 2012, the carrying value of the non-real estate and the real estate secured loans which we intend to sell was approximately US$1bn greater than their estimated fair value. We expect to recognise a loss on sale for these loans over the next few years, the actual amount of which will depend on market conditions at the time of the sales.

Total mortgage lending in the US was US$55bn at 31 December 2012, a decline of 7% compared with the end of 2011, mainly due to the continued run-off of the CML portfolio.

Top and emerging risks

(Unaudited)

Identifying and monitoring top and emerging risks is integral to our approach to risk management. We define a 'top risk' as being a current, emerged risk which has arisen across any of our risk categories, regions or global businesses and has the potential to have a material impact on our financial results or our reputation and the sustainability of our long-term business model, and which may form and crystallise within a one-year horizon. We consider an 'emerging risk' to be one which has large uncertain outcomes that may form beyond a one-year horizon which, if they were to crystallise, could have a material effect on our long-term strategy. Our top and emerging risk framework enables us to focus on current and forward looking aspects of our risk exposures and ensure our risk profile remains in line with our risk appetite and that our appetite remains appropriate. Our current top and emerging risks are as follows:

Macroeconomic and geopolitical risk

- Emerging market slowdown.
- Macroeconomic risks within developed economies.
- Increased geopolitical risk in certain regions.

Emerging market slowdown

World growth is slowing as demand in mature economies is subdued and credit availability and investment activity remain constrained. A number of mature economies are implementing austerity measures in order to reduce their deficits and public debt. This is expected to help resolve the sovereign and banking crisis in the medium term but, in the short term, it is limiting growth, leaving labour markets weak and thereby making fiscal consolidation a bigger challenge. This is affecting the rest of the world through lower trade, reduced international financing as banks are deleveraging, and the potential disruption to capital flows. In addition, it makes emerging countries more vulnerable to a slowdown in mature economies.

Potential impact on HSBC

- Trade and capital flows may contract as a result of lower world production, banks deleveraging, the introduction of protectionist measures in certain markets or the emergence of geopolitical risks, which in turn might curtail profitability.
- A prolonged period of low interest rates due to policy actions taken to address the economic crisis in mature economies will constrain through spread compression and low returns on assets the interest income we earn from investing our excess deposits.
- During 2012, we continued to reduce our sovereign and financial institution counterparty credit positions in peripheral eurozone countries. In addition, we actively sought to identify and reduce exposures to those counterparties domiciled in core European countries that had exposures to sovereigns and/or banks in peripheral eurozone countries of sufficient size to threaten their ongoing viability in the event of an unfavourable conclusion to the current situation.

Macroeconomic risks within developed economies

There is still some risk of one or more countries leaving the euro, although the situation improved in 2012. Even without a eurozone break-up, the currency will remain vulnerable to market perception. Banks in some countries remain very fragile and the rest of the European banking industry could be affected through its exposure to the weakest countries. Banks are therefore expected to continue to deleverage. In the current context of very low growth due to austerity measures, this could further aggravate the economic crisis and could push European countries into a vicious circle of economic crisis and sovereign difficulties. Although our exposure to the peripheral eurozone countries is relatively limited, we are exposed to counterparties in the core European countries which could be affected by any sovereign or currency crisis. Our eurozone exposures are described in more detail on page 192.

Potential impact on HSBC

- We could incur significant losses stemming from the exit of one or more countries from the eurozone and the redenomination of their currencies.
- Our exposures to European banks may come under stress, heightening the potential for credit and market risk losses, if the sovereign debt and banking system crisis in the region increases the need to recapitalise parts of the sector.
- In the event of contagion from stress in the peripheral eurozone sovereign and financial sectors, our ability to borrow from other financial institutions or to engage in funding transactions may be adversely affected by market dislocation and tightening liquidity.
- A sovereign default without co-ordinated intervention to protect the rest of the eurozone could trigger banking defaults in companies with which we do business and have a knock-on effect on the global banking system. We have actively managed the risk of sovereign defaults during 2012 by reducing exposures and other measures.
- In seeking to manage and mitigate these risks, we have prepared and tested detailed operational contingency plans to deal with such a scenario. However, such plans may not be adequate or may not prove effective.

Increased geopolitical risk in certain regions

Weak global economic growth is exacerbating the risk of protectionism and some countries may impose restrictions on trade or on capital flows to protect their domestic economies.

In Egypt, the political process remains in transition with a continuing risk of instability. In addition, the fighting in Syria may disrupt global international relations, with tensions between Israel and Iran adding to the risks in the region.

Potential impact on HSBC

- Our results are subject to the risk of loss from unfavourable political developments, currency fluctuations, social instability and changes in government policies on matters such as expropriation, authorisations, international ownership, interest-rate caps, foreign exchange transferability and tax in the jurisdictions in which we operate. Actual conflict could bring about loss of life among our staff and physical damage to our assets.
- We have increased our monitoring of the geopolitical and economic outlook, in particular in countries where we have material exposures and a physical presence. Our internal credit risk rating of sovereign counterparties takes these factors into account and drives our appetite for conducting business in those countries. Where necessary, we adjust our country limits and exposures to reflect our appetite and mitigate these risks as appropriate.

Macro-prudential, regulatory and legal risks to our business model

- Regulatory developments affecting our business model and Group profitability.
- Regulatory investigations, fines, sanctions and requirements relating to conduct of business and financial crime negatively affecting our results and brand.
- Dispute risk.

Financial service providers face increasingly stringent and costly regulatory and supervisory requirements, particularly in the areas of capital and liquidity management, conduct of business, operational structures and the integrity of financial services delivery. Increased government intervention and control over financial institutions, together with measures to reduce systemic risk, may significantly alter the competitive landscape. These measures may be introduced as formal requirements in a supra-equivalent manner and to differing timetables across regulatory regimes.

Regulatory developments affecting our business model and Group profitability

Several regulatory changes are likely to affect our activities, both of the Group as a whole and of some or all of our principal subsidiaries. These changes include (i) the introduction of Basel III measures in the EU through CRD IV and uncertainty on both the timing and final form of implementation given that certain areas, such as, the operation of capital buffers have yet to be finalised and the technical guidance from the European Banking Authority ('EBA') across numerous areas has yet to be published, (ii) a new regulatory structure within the UK comprising the Financial Policy Committee ('FPC'), Prudential Regulatory Authority ('PRA') and Financial Conduct Authority ('FCA') and, in particular, the effects of the ability of the FPC to seek additional capital for lending to sectors perceived as higher risk, (iii) the designation of the Group by the Financial Stability Board as a global systemically important bank; (iv) proposed legislation in the UK to give effect to the recommendations of the ICB in relation to 'ring-fencing' of the UK retail banking from wholesale banking activities, the structural separation of other activities envisaged in legislative proposals in the US (including the Volcker Rule proposed under the Dodd-Frank Act) and in France and, in the EU, considerations following the Liikanen Group recommendations; (v) changes in the regime for the operation of capital markets with increasing standardisation, central clearing, reporting and margin requirements; (vi) requirements flowing from arrangements for the recovery and resolution of the Group and its main operating entities; and (v) changing standards for the conduct of business. There is also continued risk of further changes to regulation relating to remuneration and other taxes.

Potential impact on HSBC

- Proposed changes relating to capital and liquidity requirements, remuneration and/or taxes could increase the Group's cost of doing business, reducing future profitability.
- Proposed changes in and the implementation of regulations for derivatives and central counterparties, the ICB ring-fencing proposals, recovery and resolution plans, the Volcker Rule and the Foreign Account Tax Compliance Act ('FATCA') may affect the manner in which we conduct our activities and structure ourselves, with the potential both to increase the costs of doing business and curtail the types of business we can carry out, with the risk of decreased profitability as a result. Due to the fact that the development and implementation of many of

these various regulations are in their early stages, it is not possible to estimate the effect, if any, on our operations.

We are closely engaged with the governments and regulators in the countries in which we operate to help ensure that the new requirements are properly considered and can be implemented in an effective manner. We are also ensuring that our capital and liquidity plans take into account the potential effects of the changes. Capital allocation and liquidity management disciplines have been expanded to incorporate future increased capital and liquidity requirements and drive appropriate risk management and mitigating actions.

Regulatory investigations, fines, sanctions and requirements relating to conduct of business and financial crime negatively affecting our results and brand

Financial service providers are at risk of regulatory sanctions or fines related to conduct of business and financial crime. The incidence of regulatory proceedings and other adversarial proceedings against financial service firms is increasing.

In December 2012, HSBC reached agreement with US authorities in relation to investigations regarding inadequate compliance with anti-money laundering, the US Bank Secrecy Act and sanctions law. This includes a DPA with the US Department of Justice ('DoJ'). We also reached agreement to achieve a resolution with all other US government agencies that have investigated our past conduct related to these issues, and finalised an undertaking with the FSA to comply with certain forward-looking obligations with respect to anti-money laundering and sanctions requirements over a five-year term. Under these agreements, we made payments totalling US$1,921m to US authorities and undertook to continue cooperating fully with US and UK regulatory and law enforcement authorities and take further action to strengthen our compliance policies and procedures. Over the five-year term of the agreement with the DoJ and the FSA, an independent monitor (who will, for FSA purposes, be a 'skilled person' under section 166 of the Financial Services and Markets Act (FSMA)) will evaluate and assess our progress in fully implementing these and other measures it recommends and will produce regular assessments of the effectiveness of our Compliance function.

As reflected in the agreement entered into with the Office of the Comptroller of the Currency ('OCC') in December 2012 (the 'GLBA Agreement'), the OCC has determined that HSBC Bank USA is not in compliance with the requirements which provide that a national bank and each depository institution affiliate of the national bank must be both well capitalised and well managed in order to own or control a financial subsidiary. As a result, HSBC Bank USA and its parent holding companies, including HSBC, no longer meet the qualification requirements for financial holding company status, and may not engage in any new types of financial activities without the prior approval of the Federal Reserve Board. In addition, HSBC Bank USA may not directly or indirectly acquire control of, or hold an interest in, any new financial subsidiary, nor commence a new activity in its existing financial subsidiary, unless it receives prior approval from the OCC.

In the UK, the FSA has continued to increase its focus on 'conduct risk' including attention to sales processes and incentives, product and investment suitability and conduct of business concerns more generally. These measures are concerned principally, but not exclusively, with the conduct of business with retail customers and in conjunction with this focus, the UK regulators are making increasing use of existing and new powers of intervention and enforcement, including powers to consider past business undertaken and implement customer compensation and redress schemes or other, potentially significant remedial work. Additionally, the UK and other regulators increasingly take actions in response to customer complaints either specific to an institution or more generally in relation to a particular product. We have seen recent examples of this approach in the context of the mis-selling of payment protection insurance and of interest rate derivative products to SMEs.

The Group also continues to be subject to a number of other regulatory proceedings, including investigations and reviews by various regulators and competition and enforcement authorities around the world, including in the UK, the US, Canada, the EU, Switzerland and Asia, who are conducting investigations and reviews related to certain past submissions made by panel banks and the process for making submissions in connection with the setting of London interbank offered rates ('Libor'), European interbank offered rates ('Euribor') and other benchmark interest and foreign exchange rates. As certain HSBC entities are members of such panels, HSBC and/or its subsidiaries have been the subject of regulatory demands for information and are cooperating with those investigations and reviews. In addition, HSBC and other panel banks have been named as defendants in private lawsuits filed in the US with respect to the setting of Libor, including putative class action lawsuits which have been consolidated before the US District Court for the Southern District of New York. The complaints in those actions assert claims against HSBC and other panel banks under various US laws including US antitrust laws, the US Commodities Exchange Act, and state law.

Potential impact on HSBC

- It is difficult to predict the outcome of the regulatory proceedings involving our businesses. Unfavourable outcomes may have a material adverse effect on our reputation, brand and results, including loss of business and withdrawal of funding.
- In relation to the DPA, the Group has committed to take or continue to adhere to a number of remedial measures. Breach of the DPA at any time during its term may allow the DoJ or the New York County District Attorney's Office to prosecute HSBC in relation to the matters which are the subject of the DPA.
- In relation to the GLBA Agreement, if all of our affiliate depositary institutions are not in compliance with these requirements within the time periods specified in the GLBA Agreement, HSBC could be required either to divest HSBC Bank USA or to divest or terminate any financial activities conducted in reliance on the Gramm-Leach Bliley Act ('GLB Act'). Similar consequences could result for subsidiaries of HSBC Bank USA that engage in financial activities in reliance on expanded powers provided for in the GLB Act. Any such divestiture or termination of activities would have an adverse material effect on the consolidated results and operation of HSBC.
- The UK and other regulators may identify future industry-wide mis-selling or other issues that could affect the Group. This may lead from time to time to: (i) significant direct costs or liabilities (including in relation to mis-selling); and (ii) changes in the practices of such businesses which benefit customers at a cost to shareholders. Further, decisions taken in the UK by the Financial Ombudsman Service in relation to customer complaints (or any overseas equivalent that has jurisdiction) could, if applied to a wider class or grouping of customers, have a material adverse effect on the operating results, financial condition and prospects of the Group.

Steps to address many of the requirements of the DPA and the GLBA Agreement have either already been taken or are under way. These include simplifying the Group's control structure, strengthening the governance structure with new leadership appointments, revising key policies and establishing bodies to implement single global standards shaped by the highest or most effective standards available in any location where the Group operates, as well as substantially increasing spending and staffing in the anti-money laundering and regulatory compliance areas in the past few years. There can be no assurance that these steps will be effective or that HSBC will not have to take additional remedial measures in the future to comply with the terms of the DPA or the GLBA Agreement.

Dispute risk

The current economic environment has increased the Group's exposure to actual and potential litigation. Further details are provided in Note 43 on the Financial Statements.

Potential impact on HSBC

Dispute risk gives rise to potential financial loss and significant reputational damage which could adversely affect customer and investor confidence.

Risks related to our business operations, governance and internal control systems

- Regulatory commitments and consent orders including under the Deferred Prosecution Agreements.
- Challenges to achieving our strategy in a downturn.
- Internet crime and fraud.
- Level of change creating operational complexity and heightened operational risk.
- Information security risk.
- Model risk.

Regulatory commitments and consent orders including under the Deferred Prosecution Agreements

There is a risk that we fail to meet our deadlines or we are judged to have material gaps in our plans or implementation compared with the requirements of the DPAs and other orders. Further details of this risk are provided on page 128.

Potential impact on HSBC

If, during the term of the DPA, HSBC is determined to have breached the DPA, the DoJ or the New York County District Attorney's Office may prosecute HSBC in relation to the matters which are the subject of the DPA. The FSA may, in similar vein, take enforcement action against the Group as a result of a breach of the DPA or of our related undertakings to the FSA.

Challenges to achieving our strategy in a downturn

The external environment remains challenging and the structural changes which the financial sector is going through are creating obstacles to the achievement of strategic objectives. This, combined with the prolonged global economic slowdown, could affect the achievement of our strategic targets for the Group as a whole and our global businesses.

Potential impact on HSBC

- The slowdown may put pressure on our ability to earn returns on equity in excess of our cost of equity while operating within the overall parameters of our risk appetite.
- Through our strategic initiatives, which have heightened the focus on capital allocation and cost efficiency, we are actively seeking to manage and mitigate this risk.

Internet crime and fraud

With the ever-growing acceptance of and demand for internet and mobile services by customers, HSBC is increasingly exposed to fraudulent and criminal activities via these channels. Internet crime could result in financial loss and/or customer data and sensitive information being compromised. Along with internet fraud, the overall threat of external fraud may increase during adverse economic conditions, particularly in retail and commercial banking.

We also face the risk of breakdowns in processes or procedures and systems failure or unavailability, and our business is subject to disruption from events that are wholly or partially beyond our control, such as internet crime and acts of terrorism.

Potential impact on HSBC

- Internet crime and fraud may give rise to losses in service to customers and/or economic loss to HSBC. The same threats apply equally when we rely on external suppliers or vendors to provide services to us and our customers.
- We have increased our defences through enhanced monitoring and have implemented additional controls, such as two-factor authentication, to reduce the possibility of losses from fraud. We continually assess these threats as they evolve and adapt our controls to mitigate them.

Level of change creating operational complexity and heightened operational risk

There are many drivers of change affecting HSBC and the banking industry, including new banking regulations, the increased globalisation of economic and business activities, new products and delivery channels and organisational change.

Operational complexity has the potential to heighten all types of operational risk arising from our activities. These risks include process errors, systems failures and fraud. Complexity can also increase operational costs.

The implementation of our strategy to simplify our business, which involves withdrawing from certain markets, presents disposal risks which must be carefully managed. Implementing organisational changes to support the Group's strategy also requires close management oversight.

Potential impact on HSBC

- The implementation of our strategy has involved the re-organisation and clarification of management accountabilities. There is consequently a risk that issues are missed during the transition. This change activity is being monitored through a comprehensive review programme and robust governance arrangements.
- Critical systems failure and a prolonged loss of service availability could cause serious damage to our ability to serve our customers, breach regulations under which we operate and cause long-term damage to our business, reputation and brand. Systems and controls could be degraded as a result of organisational effectiveness initiatives unless there is strong governance and an oversight framework to monitor the risk and control environment. We seek to ensure that our critical systems infrastructure, including IT services, essential buildings, offshore processes and key vendors, is constantly monitored and properly resourced to mitigate against systems failures.

- We pro-actively review relevant external events and assess the impact they may have on our systems. Within HSBC, we have a strong focus on industry best practices. We rigorously test and review all planned updates to our systems environment. All changes are risk-assessed, and appropriate mitigating controls are required for any planned changes classified as high risk. During periods of heightened risk, comprehensive change embargoes are imposed to minimise the risk of customers being affected. Following the systems outage at a major UK bank in 2012, we assessed our own exposure to similar risks and implemented appropriate steps in mitigation. We also assessed the systems scheduling tools used in the Group. There are controls in place to manage inter-dependencies, report exceptions and alert file data corruption. These additional controls are intended to ensure that the effect of any similar product failure at HSBC would be limited. In addition, a continuity test of a similar problem within our major datacentres in the UK and Hong Kong was conducted in the second half of 2012.

- The potential effects of disposal risks include regulatory breaches, industrial action, loss of key personnel and interruption to systems and processes during business transformation, and they can have both financial and reputational implications. Steps taken to manage these risks proactively include maintaining a close dialogue with regulators and customers and involving HR, legal, compliance and other functional experts. Some disposals also involve Transitional Service Agreements where there are ongoing risks, which are subject to close management oversight.

Information security risk

The security of our information and technology infrastructure is crucial for maintaining our banking applications and processes while protecting our customers and the HSBC brand.

Potential impact on HSBC

- These risks give rise to potential financial loss and reputational damage which could adversely affect customer and investor confidence. Loss of customer data would also trigger regulatory breaches which could result in fines and penalties being incurred.

- We have invested significantly in addressing this risk through increased training to raise staff awareness of the requirements and enhanced multi-layered controls protecting our information and technical infrastructure.

Model risk

More stringent regulatory requirements governing the development of parameters applied to and controls around models used for measuring risk can give rise to changes, including increases in capital requirements. Furthermore, the changing external economic and legislative environment and changes in customer behaviour can lead to the assumptions we have made in our models becoming invalid.

Potential impact on HSBC

- These model risks can result in a potentially increased and volatile capital requirement.

- We continue to address these risks through enhanced model development, independent review and model oversight to ensure our models remain fit for purpose.

Credit risk

1 *Appendix to Risk - risk policies and practices.*

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. It arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and credit derivatives and from holding assets in the form of debt securities.

There were no material changes to our policies and practices for the management of credit risk in 2012.

A summary of our current policies and practices regarding credit risk is provided in the Appendix to Risk on page 252.

Summary of credit risk in 2012

(Unaudited)

Maximum exposure to credit risk

	At 31 December 2012 US$m	2011 US$m
Trading assets	**367,177**	309,449
Financial assets designated at fair value	**12,714**	12,926
Derivatives	**357,450**	346,379
Loans and advances held at amortised cost	**1,150,169**	1,121,416
– to banks	**152,546**	180,987
– to customers	**997,623**	940,429
Financial investments	**415,312**	392,834
Assets held for sale	**9,292**	37,808
Other assets	**203,561**	192,024
Off-balance sheet exposures	**624,462**	694,228
– financial guarantees and similar contracts	**44,993**	39,324
– loan and other credit-related commitments	**579,469**	654,904
	3,140,137	3,107,064

In 2012, net loans and advances to customers continued to represent our most significant exposure to credit risk, making up 32% of total credit exposure compared with 30% in 2011. Other significant components of our credit exposures were financial investments at 13%, unchanged from 2011, trading assets at 12% (2011: 10%) and derivatives at 11% (unchanged from 2011). Loans and advances to banks fell as a proportion of the Group's credit exposure from 6% in 2011 to 5% in 2012. Off-balance sheet assets contributed 20% of our total credit exposure, mainly relating to loan and other credit-related commitments (2011: 22%).

Of our net loans and advances to customers, corporate and commercial lending made up the largest proportion at 51% (2011: 49%), with significant exposures in Europe, Hong Kong and Rest of Asia-Pacific. First lien residential mortgages represented 30% of total gross loans and advances, mainly in the UK, the US and Hong Kong. Other personal lending (including second lien residential mortgages) made up the bulk of the remaining exposure.

Loans and advances excluding held for sale: total exposure, impairment allowances and charges

(Unaudited)

	2012 US$bn	2011 US$bn
At 31 December		
Total gross loans and advances (A)	**1,166.3**	1,139.1
Impairment allowances	**16.2**	17.6
– as a percentage of A	**1.39%**	1.55%
Loans and advances net of impairment allowances	**1,150.2**	1,121.5
Year ended 31 December		
Impairment charges	**8.2**	11.5

The increase in corporate and commercial lending stemmed mainly from Europe, due to a rise in overdrafts which did not meet accounting criteria for netting against corresponding current account balances. Increases in North America reflected CMB's focus on target segments in the US, partly offset by the continued decline in balances in the run-off CML portfolio. In addition, during the year we reclassified US$3.7bn of non-real estate personal loan balances in the CML portfolio and US$2.2bn of lending balances associated with certain operations in Latin America, net of impairment allowances, to 'Assets held for sale'. The disposal of the Card and Retail Services business in the US during the year did not contribute to the decline as the related balances had been transferred to 'Assets held for sale' during 2011.

The increase in first lien residential mortgages reflected the success of marketing campaigns and competitive pricing in the UK, the continued strength of the property market in Hong Kong and distribution network expansion in Rest of Asia-Pacific.

Within net loans and advances, loan impairment allowances fell by US$1.4bn, driven by run-off in the CML portfolio and the reclassification of non-real estate personal loan balances to 'Assets held for sale'.

Trading assets include debt securities (principally government and government-related securities), reverse repo and stock borrowing balances. Balances recovered in 2012 from the subdued levels seen at the end of 2011, when client activity declined due to the eurozone debt concerns dominating the global economy.

Loans and advances to banks fell, driven by a reduction in reverse repo balances, in part reflecting the redeployment of liquidity in Europe to central banks, together with maturities and repayments in Hong Kong.

Loan and other credit-related commitments declined from US$655bn to US$579bn. The reduction in exposure in 2012 was largely driven by the sale of Card and Retail Services in the US.

For a more detailed analysis of our maximum exposure to credit risk, see page 144.

Personal lending

(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
First lien residential mortgages							
Gross amount (B)	**135,172**	**52,296**	**36,906**	**2,144**	**70,133**	**5,211**	**301,862**
Impairment allowances	**489**	**4**	**66**	**136**	**4,163**	**47**	**4,905**
– as a percentage of B	**0.4%**	**0.0%**	**0.2%**	**6.3%**	**5.9%**	**0.9%**	**1.6%**
Other personal lending[1]							
Gross amount (C)	**51,102**	**18,045**	**12,399**	**4,088**	**14,221**	**13,376**	**113,231**
Impairment allowances	**977**	**57**	**143**	**189**	**684**	**1,257**	**3,307**
– as a percentage of C	**1.9%**	**0.3%**	**1.2%**	**4.6%**	**4.8%**	**9.4%**	**2.9%**
Total personal lending							
Gross amount (D)	**186,274**	**70,341**	**49,305**	**6,232**	**84,354**	**18,587**	**415,093**
Impairment allowances	**1,466**	**61**	**209**	**325**	**4,847**	**1,304**	**8,212**
– as a percentage of D	**0.8%**	**0.1%**	**0.4%**	**5.2%**	**5.7%**	**7.0%**	**2.0%**
2011							
First lien residential mortgages							
Gross amount (E)	119,902	46,817	32,136	1,837	73,278	4,993	278,963
Impairment allowances	441	12	58	126	4,578	106	5,321
– as a percentage of E	0.4%	0.0%	0.2%	6.9%	6.2%	2.1%	1.9%
Other personal lending[1]							
Gross amount (F)	46,245	16,364	11,445	3,432	22,058	15,118	114,662
Impairment allowances	1,111	52	138	198	1,768	1,172	4,439
– as a percentage of F	2.4%	0.3%	1.2%	5.8%	8.0%	7.8%	3.9%
Total personal lending							
Gross amount (G)	166,147	63,181	43,581	5,269	95,336	20,111	393,625
Impairment allowances	1552	64	196	324	6,346	1,278	9,760
– as a percentage of G	0.9%	0.1%	0.4%	6.1%	6.7%	6.4%	2.5%

For footnote, see page 249.

Our personal lending balances increased from US$394bn at 31 December 2011 to US$415bn at 31 December 2012. This was primarily due to growth in residential mortgages in Europe, Hong Kong and Rest of Asia-Pacific. In Europe, this was due to successful marketing campaigns and competitive pricing in the UK. The growth in mortgage balances in Hong Kong was driven by the low interest rate environment, and robust residential property market. The latter was also a factor in Rest of Asia-Pacific, most notably in Singapore, mainland China, Australia and Malaysia. This growth in total personal lending balances was partly offset by a decline in North America, in part due to the run-off of the CML portfolio and the reclassification of non-real estate personal loan balances to 'Assets held for sale'. In Latin America personal lending decreased, mainly reflecting the transfer of balances relating to the operations in Colombia, Peru and Paraguay to 'Assets held for sale' in the second quarter of 2012, as well as lower balances in Brazil, where we continued to manage down our exposure to non-strategic portfolios.

Impairment allowances declined by 16%, primarily in North America in the CML portfolio, reflecting the reclassification of non-real estate personal loan balances to 'Assets held for sale' and the continued run-off. In Hong Kong and Rest of Asia-Pacific, impairment allowances remained at low levels throughout 2012. In Europe, in other personal lending, impairment allowances as a percentage of lending balances, declined from 2.4% to 1.9% as we focused our lending growth on higher quality assets.

For a more detailed analysis of our personal lending, see page 147.

Wholesale lending

(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
Corporate and commercial							
Gross amount (H)	**226,755**	**99,199**	**85,305**	**22,452**	**48,083**	**35,590**	**517,384**
Impairment allowances	**3,537**	**383**	**526**	**1,312**	**732**	**856**	**7,346**
– as a percentage of H	**1.56%**	**0.39%**	**0.62%**	**5.84%**	**1.52%**	**2.41%**	**1.42%**
Financial[2]							
Gross amount (I)	**101,052**	**28,046**	**48,847**	**10,394**	**27,400**	**18,122**	**233,861**
Impairment allowances	**358**	**29**	**11**	**174**	**37**	**2**	**611**
– as a percentage of I	**0.35%**	**0.10%**	**0.02%**	**1.67%**	**0.14%**	**0.01%**	**0.26%**
2011							
Corporate and commercial							
Gross amount (J)	209,760	91,592	77,887	21,152	41,775	35,930	478,096
Impairment allowances	3,256	492	576	1,242	756	729	7,051
– as a percentage of J	1.55%	0.54%	0.74%	5.87%	1.81%	2.03%	1.47%
Financial[2]							
Gross amount (K)	118,077	38,632	50,492	9,739	27,648	22,743	267,331
Impairment allowances	484	26	11	166	135	3	825
– as a percentage of K	0.41%	0.07%	0.02%	1.70%	0.49%	0.01%	0.31%

For footnote, see page 249.

At 31 December 2012, our corporate and commercial lending balances were US$517bn. The increase of 8% compared with the end of 2011 was mainly in the international trade and services sector, largely in Europe despite muted demand for credit, and in Hong Kong, driven by growth in trade finance volumes as we capitalised on trade and capital flows. In the manufacturing sector in Europe, balances increased due to growth in the UK of overdraft balances and corresponding customer accounts which did not, however, meet netting criteria under accounting rules.

Financial sector lending decreased from US$267bn at 31 December 2011 to US$234bn at 31 December 2012. This was mainly in Europe due to a fall in reverse repo activity as liquidity was redeployed to central banks, together with maturities and repayments in Hong Kong and Rest of Asia-Pacific.

Impairment allowances remained at low levels as a percentage of wholesale lending balances. In North America, impairment allowances as a percentage of financial lending balances declined from 0.49% to 0.14% reflecting a few large write-offs in 2012. Lending balances in this category remained broadly unchanged. In Europe, impairment allowances declined from US$484m to US$358m reflecting the disposal of a small number of exposures.

For a more detailed analysis of our wholesale lending, see page 152.

Credit quality of gross loans and advances

(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
Neither past due nor impaired	**500,599**	**200,110**	**179,337**	**35,628**	**127,457**	**65,520**	**1,108,651**
Of which renegotiated	**3,871**	**275**	**199**	**1,300**	**6,061**	**1,109**	**12,815**
Past due but not impaired	**2,339**	**1,311**	**2,974**	**975**	**7,721**	**3,591**	**18,911**
Of which renegotiated	**371**	**8**	**35**	**168**	**3104**	**133**	**3,819**
Impaired	**11,145**	**477**	**1,147**	**2,474**	**20,345**	**3,188**	**38,776**
Of which renegotiated	**5,732**	**109**	**318**	**921**	**16,997**	**1516**	**25,593**
2011							
Neither past due nor impaired	480,173	191,691	168,571	32,550	131,785	72,534	1,077,304
Of which renegotiated	5,136	309	264	1,532	6,570	909	14,720
Past due but not impaired	1,990	1,107	2,319	1,165	10,216	3,212	20,009
Of which renegotiated	282	4	47	311	4,061	168	4,873
Impaired	11,819	608	1,070	2,445	22,758	3,039	41,739
Of which renegotiated	6,046	134	137	812	17,844	1,399	26,372

At 31 December 2012, US$1,109bn of gross loans and advances were classified as neither past due nor impaired. This was an increase of 3%, mainly in Europe and in Rest of Asia-Pacific.

At 31 December 2012, US$19bn of gross loans and advances were classified as past due but not impaired compared with US$20bn at the end of 2011. The largest concentration of these balances was in HSBC Finance. The decline of 5% was mainly in North America due to the reclassification of non-real estate personal loan balances to ‘Assets held for sale’, as well as the continued run-off of the mortgage balances in the CML portfolio. This was partly offset by an increase in Rest of Asia-Pacific in the personal and corporate and commercial sectors.

Gross loans and advances classified as impaired decreased by 7%, mainly in North America due to the continued run-off of the CML portfolio, as well as the reclassification of non-real estate personal loan balances to ‘Assets held for sale’ in our CML portfolio.

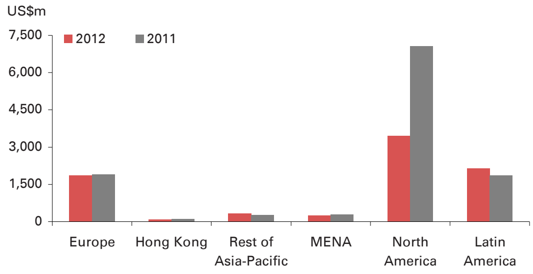
Renegotiated loans totalled US$42bn at 31 December 2012, compared with US$46bn at the end of 2011. North America accounted for the largest volume of renegotiated loans which amounted to US$26bn or 62% of total renegotiated loans at 31 December 2012 (2011: US$28bn or 62%), most of which were first lien residential mortgages held by HSBC Finance. Of the total renegotiated loans in North America, US$17bn were presented as impaired at 31 December 2012 (2011: US$18bn). Of total renegotiated loans, US$3.8bn were presented as past due but not impaired at 31 December 2012, down from US$4.9bn at 31 December 2011. This was mainly in North America in the CML portfolio due to the reclassification of non-real estate personal loan balances to ‘Assets held for sale’ as well as the continued run-off of the lending balances.

For a more detailed analysis of the credit quality of financial instruments, see page 154.

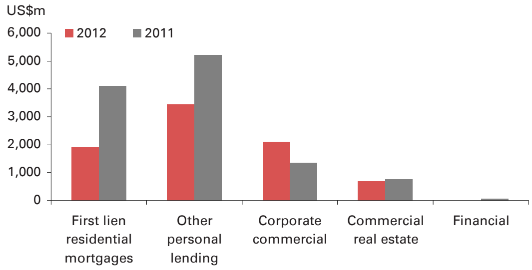
Impairment of loans and advances

(Unaudited)

Loan impairment charges by geographical region



Loan impairment charges by industry



Loan impairment charges decreased from US$12bn to US$8.2bn on a reported basis, a decline of 29% compared with 2011. On a constant currency basis, they were 27% lower.

The improvement in loan impairment charges was most significant in RBWM in North America due to the continued decline in the CML portfolio that is in run-off and the sale of the Card and Retail Services business.

This was in part reduced by higher loan impairment charges in Latin America. In Brazil, delinquencies in RBWM and CMB increased, reflecting lower economic growth in 2012. In Rest of Asia-Pacific, loan impairment charges increased as a result of individually assessed impairments on a single corporate exposure in Australia and a small number of corporate exposures in other countries.

For a more detailed analysis of the impairment of loans and advances, see page 168.

Assets held for sale

During 2012, the growth in gross loans and advances was affected by a reclassification of certain lending balances to 'Assets held for sale'. Disclosures relating to assets held for sale are provided in the following credit risk management tables, primarily where the disclosure is relevant to the measurement of these financial assets:

- Maximum exposure to credit risk (page 146);
- Distribution of financial instruments by credit quality (page 155); and
- Ageing analysis of days past due but not impaired gross financial instruments (page 157).

Although gross loans and advances and related impairment allowances are reclassified from 'Loans and advances to customers' and 'Loans and advances to banks' in the balance sheet, there is no equivalent income statement reclassification. As a result, charges for loan impairment losses shown in the credit risk disclosures include loan impairment charges relating to financial assets classified as 'Assets held for sale'.

Loans and advances to customers and banks measured at amortised cost

(Audited)

	At 31 December 2012		At 31 December 2011	
	Gross loans and advances US$m	**Impairment allowances on loans and advances US$m**	Gross loans and advances US$m	Impairment allowances on loans and advances US$m
Reported in 'Loans and advances to customers and banks'	**1,166,338**	**16,169**	1,139,052	17,636
Reported in 'Assets held for sale'	**7,350**	**718**	37,273	1,614
	1,173,688	**16,887**	1,176,325	19,250

The lending balances in 'Assets held for sale' at the end of 2012 included non-real estate personal loan balances from our CML portfolio in North America and balances associated with the disposal of our operations in Colombia, Paraguay and Peru, net of impairment allowances. The lending balances and impairment allowances reported in 'Assets held for sale' at the end of 2011 included the US Card and Retail Services portfolio which was disposed of in 2012. As the latter was reclassified in 2011, the disposal had no impact on the year-on-year movement in loans and advances or impairment allowances in 2012.

Lending balances held for sale continue to be measured at amortised cost less allowances for impairment; such carrying amounts may differ from fair value. Any difference between the carrying amount and the sales price, which is the fair value at the time of sale, would be recognised as a gain or loss. See Note 16 on the Financial Statements for the carrying amount and the fair value at 31 December 2012 of loans and advances to banks and customers classified as held for sale.

The table below analyses the amount of loan impairment charges and other credit risk provisions ('LIC's) arising from assets held for sale. They primarily related to the non-real estate personal loans reclassified to held-for-sale in the CML portfolio, as well as to the US Card and Retail Services business classified as such at 31 December 2011 which was sold in 2012.

Loan impairment charges and other credit risk provisions

(Unaudited)

	2012 US$m
LICs arising from:	
– disposals and assets held for sale	766
– assets not held for sale	7,545
	8,311

Credit exposure

Maximum exposure to credit risk

(Audited)

In 2012, our exposure to credit risk remained well diversified across asset classes. We increased our overall exposure to credit risk in 2012, largely from increases in trading assets in Europe and North America, driven by higher client trading activity. Loans and advances to customers also rose, mainly in the UK, Hong Kong and Rest of Asia-Pacific.

'Maximum exposure to credit risk' table (page 146)

The table presents our maximum exposure to credit risk from balance sheet and off-balance sheet financial instruments before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). For financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments that are irrevocable over the life of the respective facilities, it is generally the full amount of the committed facilities.

Loans and advances

Our maximum exposure to loans and advances carried at amortised cost increased by 3% compared with the end of 2011. The rise primarily reflected growth in residential mortgage balances in the UK following the continued focus on sales and competitive pricing, the ongoing strength of the property market in Hong Kong and in Rest of Asia-Pacific, coupled with expansion of our distribution network in the latter. Term and trade-related lending rose in Europe despite muted demand for credit in the UK and in Hong Kong and Rest of Asia-Pacific, reflecting our focus on corporate and commercial customers that trade internationally. Lending also rose in Europe as overdraft balances that did not meet netting criteria increased in the UK, with a corresponding rise in related customer accounts. In North America corporate and commercial lending increased, reflecting our focus on target segments in the US.

These increases were partly offset by a decline in North America from repayments and write-offs on the run-off CML portfolio. In addition, during the year we reclassified US$3.7bn of non real estate personal loan balances in the CML portfolio and US$2.2bn of lending balances associated with certain operations in Latin America, net of impairment allowances, to 'Assets held for sale'. Reverse repo balances also declined, mainly in Europe.

Our exposure to loans and advances to banks decreased in Hong Kong and Rest of Asia-Pacific due to maturities and repayments, and in Europe as reverse repo balances declined due, in part, to the redeployment of liquidity to central banks. Balances also decreased in Latin America.

The loans and advances offset adjustment in the table on page 146 primarily relates to customer loans and deposits and balances arising from repo and reverse repo transactions where there is a legally enforceable right of offset in the event of counterparty default and where, as a result, there is a net exposure for credit risk management purposes.

However, as there is no intention to settle these balances on a net basis under normal circumstances, they do not qualify for net presentation for accounting purposes.

Financial investments

Maximum exposure to financial investments increased by 6% compared with the end of 2011. This largely reflected the deployment of surplus liquidity into available-for-sale investments, notably treasury bills in Hong Kong and highly-rated debt securities in North America.

Trading assets

In 2012, our exposure to trading assets rose by 19% reflecting increased client activity compared with the subdued levels seen in 2011. This resulted in higher reverse repo balances in Europe and North America, and higher securities borrowing balances in Rest of Asia-Pacific and Europe, which vary in line with levels of trading activity.

Cash and balances at central banks

The Group's maximum exposure to cash and balances at central banks increased by 9%, driven by redeployment of excess liquidity in Europe and Hong Kong to central banks. This reflected the Group's risk appetite coupled with growth in customer deposit balances. In North America, we reduced balances at the US Federal Reserve as surplus liquidity was redeployed into highly-rated financial investments.

Derivatives

Our maximum exposure to derivatives increased slightly, primarily reflecting a rise in the fair value of interest rate derivative contracts in Europe and, to a lesser extent, in the US due to downward movements in yield curves in major currencies. This was partly offset by a decrease in the fair value of credit derivative contracts, primarily in Europe and the US, as credit spreads tightened. Nearly half of all trades are exchange traded or otherwise settled centrally, the majority of these being interest rate derivatives.

The derivative offset amount in the table on page 146 relates to exposures where the counterparty has an offsetting derivative exposure with HSBC, a master netting arrangement is in place and the credit risk exposure is managed on a net basis, or the position is specifically collateralised, normally in the form of cash. At 31 December 2012, the total amount of such offsets was US$311bn (2011: US$306bn), of which US$270bn (2011: US$272bn) were offsets under a master netting arrangement, US$39bn (2011: US$33bn) was collateral received in cash and US$1.8bn (2011: US$0.7bn) was other collateral. These amounts do not qualify for net presentation for accounting purposes as settlement is not intended to be made on a net basis.

Other credit risk mitigants

While not disclosed as offset in the maximum exposure to credit risk table on page 146, other arrangements including short positions in securities and financial assets held as part of linked insurance/investment contracts where the risk is predominately borne by the policyholder, reduce our maximum exposure to credit risk. In addition, we hold collateral in respect of individual loans and advances (see page 163).

Loans and other credit-related commitments

Loans and other credit-related commitments remain well diversified across geographical regions. For more details, see page 146.

Counterparty analysis of notional contract amounts of derivatives by product type
(Unaudited)

	Traded on recognised exchanges US$m	Traded over the counter: Settled by central counterparties US$m	Traded over the counter: Not settled by central counterparties US$m	Total US$m
At 31 December 2012				
HSBC				
Foreign exchange	**27,869**	**11,156**	**4,413,532**	**4,452,557**
Interest rate	**837,604**	**12,316,673**	**8,459,665**	**21,613,942**
Equity	**225,452**	**–**	**270,216**	**495,668**
Credit	**–**	**73,281**	**828,226**	**901,507**
Commodity and other	**19,006**	**–**	**61,213**	**80,219**
	1,109,931	**12,401,110**	**14,032,852**	**27,543,893**

The purpose for which HSBC uses derivatives is set out in Note 19 on the Financial Statements.

Report of the Directors: Operating and Financial Review (continued)

Maximum exposure to credit risk

(Audited)

	At 31 December 2012			At 31 December 2011		
	Maximum exposure US$m	**Offset US$m**	**Net US$m**	Maximum exposure US$m	Offset US$m	Net US$m
Cash and balances at central banks	**141,532**	**–**	**141,532**	129,902	–	129,902
Items in the course of collection from other banks	**7,303**	**–**	**7,303**	8,208	–	8,208
Hong Kong Government certificates of indebtedness	**22,743**	**–**	**22,743**	20,922	–	20,922
Trading assets	**367,177**	**(19,700)**	**347,477**	309,449	(4,656)	304,793
Treasury and other eligible bills	**26,282**	**–**	**26,282**	34,309	–	34,309
Debt securities	**144,677**	**–**	**144,677**	130,487	–	130,487
Loans and advances to banks	**78,271**	**–**	**78,271**	75,525	–	75,525
Loans and advances to customers	**117,947**	**(19,700)**	**98,247**	69,128	(4,656)	64,472
Financial assets designated at fair value	**12,714**	**–**	**12,714**	12,926	–	12,926
Treasury and other eligible bills	**54**	**–**	**54**	123	–	123
Debt securities	**12,551**	**–**	**12,551**	11,834	–	11,834
Loans and advances to banks	**55**	**–**	**55**	119	–	119
Loans and advances to customers	**54**	**–**	**54**	850	–	850
Derivatives	**357,450**	**(310,859)**	**46,591**	346,379	(305,616)	40,763
Loans and advances held at amortised cost	**1,150,169**	**(95,578)**	**1,054,591**	1,121,416	(87,978)	1,033,438
– to banks	**152,546**	**(3,732)**	**148,814**	180,987	(3,066)	177,921
– to customers	**997,623**	**(91,846)**	**905,777**	940,429	(84,912)	855,517
Financial investments	**415,312**	**–**	**415,312**	392,834	–	392,834
Treasury and other similar bills	**87,550**	**–**	**87,550**	65,223	–	65,223
Debt securities	**327,762**	**–**	**327,762**	327,611	–	327,611
Assets held for sale	**9,292**	**(164)**	**9,128**	37,808	(204)	37,604
– disposal groups	**5,359**	**(164)**	**5,195**	37,746	(204)	37,542
– non-current assets held for sale	**3,933**	**–**	**3,933**	62	–	62
Other assets	**31,983**	**–**	**31,983**	32,992	–	32,992
Endorsements and acceptances	**12,032**	**–**	**12,032**	11,010	–	11,010
Other	**19,951**	**–**	**19,951**	21,982	–	21,982
Financial guarantees and similar contracts	**44,993**	**–**	**44,993**	39,324	–	39,324
Loan and other credit-related commitments[3]	**579,469**	**–**	**579,469**	654,904	–	654,904
	3,140,137	**(426,301)**	**2,713,836**	3,107,064	(398,454)	2,708,610

For footnote, see page 249.

Loan and other credit-related commitments

(Unaudited)

	Asia US$m	**Europe US$m**	**Americas US$m**	**Total US$m**
At 31 December 2012				
Personal	**79,021**	**80,596**	**31,566**	**191,183**
Corporate and commercial	**139,897**	**91,957**	**110,401**	**342,255**
Financial	**10,330**	**15,080**	**20,621**	**46,031**
	229,248	**187,633**	**162,588**	**579,469**
At 31 December 2011				
Personal	76,901	76,658	139,458	293,017
Corporate and commercial	122,618	84,797	101,861	309,276
Financial	8,646	21,060	22,905	52,611
	208,165	182,515	264,224	654,904

A description of loan and other credit related commitments is set out in Note 40 on the Financial Statements. The reduction in the total amount from 2011 to 2012 is mainly due to the disposal of the US Cards business and US branch network in 2012. In the table above, Asia includes amounts in Hong Kong, Rest of Asia-Pacific and the Middle East and North Africa.

Personal lending

(Unaudited)

We provide a broad range of secured and unsecured personal lending products to meet customer needs. Given the diverse nature of the markets in which we operate, the range is not standard across all countries but is tailored to meet the demands of individual markets.

Personal lending includes advances to customers for asset purchases, such as residential property, where the loans are typically secured by the assets being acquired. We also offer loans secured on existing assets, such as first and second liens on residential property; unsecured lending products such as overdrafts, credit cards and payroll loans; and debt consolidation loans which may be secured or unsecured.

Total personal lending

(Unaudited)

	UK US\$m	Rest of Europe US\$m	Hong Kong US\$m	US[4] US\$m	Rest of North America US\$m	Other regions[5] US\$m	Total US\$m
At 31 December 2012							
First lien residential mortgages	**127,024**	**8,148**	**52,296**	**49,417**	**20,716**	**44,261**	**301,862**
Other personal lending	**23,446**	**27,656**	**18,045**	**7,382**	**6,839**	**29,863**	**113,231**
– motor vehicle finance	**–**	**24**	**–**	**–**	**20**	**3,871**	**3,915**
– credit cards	**11,369**	**3,060**	**5,930**	**821**	**735**	**8,881**	**30,796**
– second lien residential mortgages	**508**	**–**	**–**	**5,959**	**363**	**131**	**6,961**
– other	**11,569**	**24,572**	**12,115**	**602**	**5,721**	**16,980**	**71,559**
Total personal lending (A)	**150,470**	**35,804**	**70,341**	**56,799**	**27,555**	**74,124**	**415,093**
Impairment allowances on personal lending							
First lien residential mortgages	**(425)**	**(64)**	**(4)**	**(4,133)**	**(30)**	**(249)**	**(4,905)**
Other personal lending	**(576)**	**(401)**	**(57)**	**(590)**	**(94)**	**(1,589)**	**(3,307)**
– motor vehicle finance	**–**	**(4)**	**–**	**–**	**(1)**	**(144)**	**(149)**
– credit cards	**(150)**	**(184)**	**(28)**	**(40)**	**(14)**	**(385)**	**(801)**
– second lien residential mortgages	**(44)**	**–**	**–**	**(542)**	**(6)**	**–**	**(592)**
– other	**(382)**	**(213)**	**(29)**	**(8)**	**(73)**	**(1,060)**	**(1,765)**
Total	**(1,001)**	**(465)**	**(61)**	**(4,723)**	**(124)**	**(1,838)**	**(8,212)**
– as a percentage of A	**0.7%**	**1.3%**	**0.1%**	**8.3%**	**0.5%**	**2.5%**	**2.0%**
At 31 December 2011							
First lien residential mortgages	111,224	8,678	46,817	52,484	20,794	38,966	278,963
Other personal lending	22,218	24,027	16,364	14,087	7,971	29,995	114,662
– motor vehicle finance	–	24	–	20	29	4,494	4,567
– credit cards	11,279	2,192	5,304	833	1,262	8,618	29,488
– second lien residential mortgages	694	–	–	7,063	468	233	8,458
– other	10,245	21,811	11,060	6,171	6,212	16,650	72,149
Total personal lending (B)	133,442	32,705	63,181	66,571	28,765	68,961	393,625
Impairment allowances on personal lending							
First lien residential mortgages	(383)	(58)	(12)	(4,551)	(27)	(290)	(5,321)
Other personal lending	(745)	(366)	(52)	(1,659)	(109)	(1,508)	(4,439)
– motor vehicle finance	–	(4)	–	–	–	(164)	(168)
– credit cards	(177)	(148)	(22)	(46)	(35)	(406)	(834)
– second lien residential mortgages	(42)	(1)	–	(740)	(9)	–	(792)
– other	(526)	(213)	(30)	(873)	(65)	(938)	(2645)
Total	(1,128)	(424)	(64)	(6,210)	(136)	(1,798)	(9,760)
– as a percentage of B	0.8%	1.3%	0.1%	9.3%	0.5%	2.6%	2.5%

For footnotes, see page 249.

In 2012, the credit quality of the majority of our personal lending portfolios improved, reflecting the continued low levels of interest rates and strong customer repayments in many markets, as well as actions taken in previous years to tighten our lending criteria and focus on higher quality and secured assets.

In the US, the origination of new personal lending was limited as we have discontinued all new consumer finance real estate lending following the closure of the consumer finance distribution network. Customer lending balances across HSBC Finance portfolios continued to decline and, in May and August 2012 respectively, we completed the sales of the Card and Retail Services business and non-strategic branches, in the US. We continue to explore options to accelerate the liquidation of the CML portfolio and, to this effect, reclassified certain non-real estate personal loan balances, net of impairment allowances, to 'Assets held for sale' as we actively marketed this portfolio.

The commentary that follows is on a constant currency basis.

At 31 December 2012, the Group's exposure to personal lending was US$415bn, 3% higher than at 31 December 2011, reflecting a rise in first lien residential mortgage lending, partly offset by a reduction in other personal lending. Loan impairment allowances on our personal lending portfolios were US$8.2bn compared with US$9.8bn at the end of 2011, while the ratio of loan impairment allowances to total personal lending reduced from 2.4% at 31 December 2011 to 2.0% at 31 December 2012. This decline reflected volume and performance-based improvements, predominantly in our US portfolios, due to the continued run-off of the CML portfolio as well as the reclassification of impairment allowances on non-real estate personal loan balances to 'Assets held for sale'. We also continued to focus on growing our lower-risk residential mortgage portfolios in the UK, Hong Kong and rest of Asia-Pacific, where our loss experience and impairment allowance requirements are typically lower.

Loan impairment charges in our personal lending portfolios were US$5.4bn in 2012, US$3.8bn or 41% lower than in 2011 and representing 66% of the overall Group's LICs. The decline was predominantly in the US reflecting the reduction in balances in the CML portfolio and the sale of the Card and Retail Services business in May 2012.

At 31 December 2012, total personal lending increased by US$13.7bn reflecting growth in first lien residential mortgages, notably in the UK, Hong Kong and Rest of Asia-Pacific. Balances in the UK increased following the success of marketing campaigns and competitive pricing. The rise in Hong Kong reflected the low interest rate environment and active property market, whereas growth in the Rest of Asia-Pacific, mainly in Singapore, mainland China, Australia and Malaysia, reflected the continued strength of property markets and expansion of our distribution network.

Total personal lending balances in the US at 31 December 2012 were US$57bn, a decrease of 15% compared with the end of 2011. The decline reflected the run-off of our CML portfolio, which also fell due to the reclassification of non-real estate personal loan balances to 'Assets held for sale'.

In Latin America, personal lending decreased by 4% compared with 31 December 2011, following a reduction in other personal lending in Brazil, where we managed down our exposure to non-strategic portfolios and focused on higher quality lending including first lien residential mortgage lending. This complemented a range of corrective actions, including improving our collections capabilities, reducing third party originations and improving credit scoring models. These actions were implemented to limit our exposure to further market weakness following a rise in delinquency in 2011 which continued in 2012. We also reclassified lending balances in Colombia, Paraguay and Peru to 'Assets held for sale'.

Mortgage lending

(Unaudited)

We offer a wide range of mortgage products designed to meet customer needs, including capital repayment, interest-only, affordability and offset mortgages.

Group credit policy prescribes the range of acceptable residential property loan-to-value ('LTV') thresholds with the maximum upper limit for new loans set between 75% and 95%. Specific LTV thresholds and debt-to-income ratios are managed at regional and country levels and, although the parameters must comply with Group policy, strategy and risk appetite, they differ in the various locations in which we operate to reflect the local economic and housing market conditions, regulations, portfolio performance, pricing and other product features.

The commentary that follows is on a constant currency basis.

At 31 December 2012, total mortgage lending, comprising first lien and second lien residential mortgages, was US$309bn, 5% higher than at the end of 2011. Our most significant concentrations of mortgage lending were in the UK, the US and Hong Kong.

Mortgage lending products
(Unaudited)

	UK US$m	Rest of Europe US$m	Hong Kong US$m	US[4] US$m	Rest of North America US$m	Other regions[5] US$m	Total US$m
At 31 December 2012							
First lien residential mortgages	**127,024**	**8,148**	**52,296**	**49,417**	**20,716**	**44,261**	**301,862**
Second lien residential mortgages	**508**	**–**	**–**	**5,959**	**363**	**131**	**6,961**
Total mortgage lending (A)	**127,532**	**8,148**	**52,296**	**55,376**	**21,079**	**44,392**	**308,823**
Second lien as a percentage of A	**0.4%**	**–**	**0.0%**	**10.8%**	**1.7%**	**0.3%**	**2.3%**
Impairment allowances on mortgage lending	**(469)**	**(64)**	**(4)**	**(4,675)**	**(36)**	**(249)**	**(5,497)**
First lien residential mortgages	**(425)**	**(64)**	**(4)**	**(4,133)**	**(30)**	**(249)**	**(4,905)**
Second lien residential mortgages	**(44)**	**–**	**–**	**(542)**	**(6)**	**–**	**(592)**
Interest-only (including offset) mortgages	**49,650**	**52**	**30**	**–**	**531**	**1,146**	**51,409**
Affordability mortgages, including adjustable-rate mortgages ('ARM's)	**6**	**532**	**19**	**18,456**	**–**	**5,135**	**24,148**
Other	**99**	**–**	**–**	**–**	**–**	**204**	**303**
Total interest-only, affordability mortgages and other	**49,755**	**584**	**49**	**18,456**	**531**	**6,485**	**75,860**
– as a percentage of A	**39.0%**	**7.2%**	**0.1%**	**33.3%**	**2.5%**	**14.6%**	**24.6%**
At 31 December 2011							
First lien residential mortgages	111,224	8,678	46,817	52,484	20,794	38,966	278,963
Second lien residential mortgages	694	–	–	7,063	468	233	8,458
Total mortgage lending (B)	111,918	8,678	46,817	59,547	21,262	39,199	287,421
Second lien as a percentage of B	0.6%	–	–	11.9%	2.2%	0.6%	2.9%
Impairment allowances on mortgage lending	(425)	(59)	(12)	(5,291)	(36)	(290)	(6,113)
First lien residential mortgages	(383)	(58)	(12)	(4,551)	(27)	(290)	(5,321)
Second lien residential mortgages	(42)	(1)	–	(740)	(9)	–	(792)
Interest-only (including offset) mortgages	46,886	48	46	–	667	1,210	48,857
Affordability mortgages, including ARMs	177	496	31	17,089	277	6,863	24,933
Other	106	–	–	–	–	189	295
Total interest-only, affordability mortgages and other	47,169	544	77	17,089	944	8,262	74,085
– as a percentage of B	42.1%	6.3%	0.2%	28.7%	4.4%	21.1%	25.8%

For footnotes, see page 249.

Mortgage lending in the UK was US$128bn at 31 December 2012, representing the Group's largest concentration of mortgage exposure, an increase of 9% compared with the end of 2011.

The credit quality of our UK mortgage portfolio remained high, reflecting actions taken in previous years which included restrictions on lending to purchase residential property for the purpose of rental. Almost all lending was originated through our own sales force, and the self-certification of income was not permitted. The majority of our mortgage lending in the UK was to existing customers who held current or savings accounts with HSBC. The average LTV ratio for new business was 59% during December 2012, while loan impairment charges and delinquency levels in our UK mortgage book remained stable, aided by the continued low levels of interest rates.

Interest-only mortgage products in the UK totalled US$50bn or 39% of the UK mortgage portfolio, US$23bn or (47%) of which related to the first direct offset product where customers may adopt a capital repayment profile or make significant regular or one-off repayments, but are able to redraw additional funds within the agreed limit.

Our affordability underwriting criteria for interest-only products are consistent with those for equivalent capital repayment mortgages, and such products are typically originated at more conservative LTV ratios. We monitor specific risk characteristics within the interest-only portfolio, such as current LTV ratio, age at expiry, current income levels and credit bureau scores. There are currently no concentrations of higher risk characteristics that cause the interest-only portfolio to be considered as carrying unduly high credit risk, and delinquency and impairment charges remain low, demonstrating similar performance characteristics to our capital repayment products. We run contact programmes to ensure we build an informed relationship with customers whereby they receive the appropriate support in meeting the final repayment of principal and understand the alternative repayment options available.

In Hong Kong, mortgage lending was US$52bn, an increase of 11% compared with the end of 2011. The quality of our mortgage book was strong with loan impairment charges at very low levels. The average LTV ratio on new mortgage lending was 48% and the average LTV for the overall portfolio was 32%.

Mortgage balances in Rest of Asia-Pacific grew by 10% to US$37bn, mainly in Singapore, mainland China, Australia and Malaysia reflecting the continued strength of property markets and expansion of our distribution networks.

Mortgage lending in the US

(Unaudited)

In the US, total mortgage lending balances were US$55bn at 31 December 2012, a decline of 7% compared with the end of 2011. Overall, US mortgage lending represented 13% of our total personal lending and 18% of our total mortgage lending, compared with 15% and 20%, respectively, at 31 December 2011.

HSBC Finance

At 31 December 2012, mortgage lending balances at HSBC Finance were US$39bn, a decline of 12% compared with the end of 2011 due to the continued run-off of the CML portfolio.

Our CML portfolio continued to be affected by high unemployment levels and a housing market that is slow to recover. In addition, our loan modification programmes, which are designed to manage customer relationships, improve cash collections and avoid foreclosure, contributed to slower loan repayment rates.

HSBC Finance US CML[6] – residential mortgages

(Unaudited)

	At 31 December	
	2012	2011
	US$m	US$m
Residential mortgages		
First lien	**35,092**	39,608
Second lien	**3,651**	4,520
Total (A)	**38,743**	44,128
Impairment allowances	**4,480**	5,088
– as a percentage of (A)	**11.6%**	11.5%

For footnote, see page 249.

HSBC Bank USA

In HSBC Bank USA, we continued to sell a substantial portion of new originations to the secondary market as a means of managing our interest rate risk and improving structural liquidity. Mortgage lending balances of US$17bn at 31 December 2012 remained broadly unchanged compared with the end of 2011, despite an increase in first lien residential mortgages, driven by increased origination to our Premier customers including higher balances of adjustable-rate mortgages. This was offset by a decline in other mortgages.

Credit quality of personal lending in the US

(Unaudited)

For further information on renegotiated loans in North America, see page 158.

Mortgage lending

In our CML first lien residential mortgage portfolio, two months and over delinquent balances were US$7.6bn at 31 December 2012, compared with US$7.9bn at 31 December 2011. The decline mainly reflected the continued run-off of balances and the improvement in economic conditions. The reduction was partly offset by the increase in late stage delinquency driven by the suspension of foreclosure activities which began in late 2010. In our HSBC Bank USA portfolio, two months and over delinquent balances increased by 8% to US$1.4bn due also to foreclosure delays.

In the US, second lien mortgage balances declined by 16% to US$6.0bn at 31 December 2012, representing 11% of the overall US mortgage lending portfolio. Two months and over delinquent balances were US$477m at 31 December 2012 compared with US$674m at 31 December 2011.

The majority of second lien residential mortgages are taken up by customers who hold a first lien mortgage issued by a third party. Second lien residential mortgage loans have a risk profile characterised by higher LTV ratios, because in the majority of cases the loans were taken out to complete the refinancing of properties. Loss severity on default of second lien loans has typically approached 100% of the amount outstanding, as any equity in the property is consumed through the repayment of the first lien loan.

Impairment allowances for these loans are determined by applying a roll-rate migration analysis which captures the propensity of these loans to default based on past experience. Once we believe that a second lien residential mortgage loan is likely to progress to write-off, the loss severity assumed in establishing our impairment allowance is close to 100% in the CML portfolios, and more than 80% in HSBC Bank USA.

HSBC Finance: foreclosed properties in the US

(Unaudited)

	Year ended	**Half-year ended**		Year
	31 December	**31 December**	**30 June**	ended
	2012	**2012**	**2012**	2011
Number of foreclosed properties at end of period	**2,973**	**2,973**	**2,836**	3,511
Number of properties added to foreclosed inventory in the period	**6,827**	**3,212**	**3,615**	11,187
Average loss on sale of foreclosed properties[7]	**6%**	**6%**	**7%**	8%
Average total loss on foreclosed properties[8]	**54%**	**53%**	**55%**	56%
Average time to sell foreclosed properties (days)	**172**	**166**	**179**	185

For footnotes, see page 249.

In late 2010, we suspended all new foreclosure proceedings and, in early 2011, ceased foreclosures where judgement had yet to be entered while we enhanced our processes. We have now resumed the processing of suspended foreclosures in substantially all states, although there remains a significant backlog which will take time to resolve. Loss severities may be increased by any additional delays in the processing of foreclosures.

The number of foreclosed properties at HSBC Finance at 31 December 2012 decreased compared with the end of December 2011 as the rate at which properties were added to real estate owned inventory was slow as a result of the backlog in foreclosure activities and the continuing sales of these properties during 2012. We expect that the number of foreclosed properties added to the inventory will increase and this will continue to be affected by ongoing refinements to our processes and extended foreclosure timelines.

The average total loss on foreclosed properties and the average loss on sale of foreclosed properties decreased compared with 2011. This reflected a greater proportion of properties sold where we had accepted a deed-in-lieu. Typically, losses on a deed-in-lieu are lower than losses from properties acquired through a standard foreclosure process. The decrease in the loss on sale also reflected a slowdown in the rate of decline in house prices during 2012 and, in some markets, improvements in pricing compared with 2011.

Valuation of foreclosed properties in the US

We obtain real estate by foreclosing on the collateral pledged as security for residential mortgages. Prior to foreclosure, carrying amounts of the loans in excess of fair value less costs to sell are written down to the discounted cash flows expected to be recovered, including from the sale of the property. Broker price opinions are obtained and updated every 180 days and real estate price trends are reviewed quarterly to reflect any improvement or additional deterioration. Our methodology is regularly validated by comparing the discounted cash flows expected to be recovered based on current market conditions (including estimated cash flows from the sale of the property) to the updated broker price opinion, adjusted for the estimated historical difference between interior and exterior appraisals. The fair values of foreclosed properties are initially determined based on broker price opinions. Within 90 days of foreclosure, a more detailed property valuation is performed reflecting information obtained from a physical interior inspection of the property and additional allowances or write-downs are recorded as appropriate. Updates to the valuation are performed no less than once every 45 days until the property is sold, with declines or increases recognised through changes to allowances.

Credit cards

In the first half of 2012 we completed the sale of our US Card and Retail Services business, transferring general and private label credit card lending balances to the purchaser. The residual balances in the US at 31 December 2012 were related to HSBC Bank USA's credit card programme.

Personal non-credit card lending

Personal non-credit card lending balances and two months and over delinquent balances in the US fell, largely due to the reclassification of non-real estate personal loan balances to 'Assets held for sale' and portfolio run-off, as this business is closed to new advances.

Trends in two months and over contractual delinquency in the US
(Unaudited)

	At 31 December		
	2012	2011	2010
	US$m	US$m	US$m
In personal lending in the US			
First lien residential mortgages	**8,926**	9,065	8,632
Consumer and Mortgage Lending	**7,629**	7,922	7,618
Other mortgage lending	**1,297**	1,143	1,014
Second lien residential mortgages	**477**	674	847
Consumer and Mortgage Lending	**350**	501	668
Other mortgage lending	**127**	173	179
Credit card	**27**	714	957
Private label	**–**	316	404
Personal non-credit card	**335**	513	811
Total	**9,765**	11,282	11,651
	%	%	%
As a percentage of the relevant loans and receivables balances			
First lien residential mortgages	**18.1**	17.1	15.0
Second lien residential mortgages	**8.0**	8.5	9.1
Credit card	**3.3**	3.8	4.7
Private label	**–**	2.5	3.0
Personal non-credit card	**7.4**	8.3	9.5
Total	**16.1**	11.4	10.7

Wholesale lending

(Unaudited)

Wholesale lending covers the range of credit facilities granted to sovereign borrowers, banks, non-bank financial institutions, corporate entities and commercial borrowers. Our wholesale portfolios are well diversified across geographical and industry sectors, with certain exposures subject to specific portfolio controls.

Total wholesale lending

(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Corporate and commercial	**223,061**	**99,199**	**85,305**	**22,452**	**47,886**	**35,590**	**513,493**
– Manufacturing	**56,690**	**10,354**	**19,213**	**3,373**	**9,731**	**12,788**	**112,149**
– International trade and services	**70,954**	**33,832**	**32,317**	**9,115**	**13,419**	**9,752**	**169,389**
– Commercial real estate	**33,279**	**23,384**	**9,286**	**865**	**6,572**	**3,374**	**76,760**
– Other property-related	**7,402**	**16,399**	**6,641**	**2,103**	**7,607**	**380**	**40,532**
– Government	**2,393**	**2,838**	**1,136**	**1,662**	**774**	**1,982**	**10,785**
– Other commercial[9]	**52,343**	**12,392**	**16,712**	**5,334**	**9,783**	**7,314**	**103,878**
Financial (non-bank financial institutions)	**55,732**	**4,546**	**4,255**	**1,196**	**13,935**	**1,594**	**81,258**
Asset-backed securities reclassified	**3,694**	**–**	**–**	**–**	**197**	**–**	**3,891**
Loans and advances to banks	**45,320**	**23,500**	**44,592**	**9,198**	**13,465**	**16,528**	**152,603**
Total wholesale lending (A)	**327,807**	**127,245**	**134,152**	**32,846**	**75,483**	**53,712**	**751,245**
Impairment allowances on wholesale lending							
Corporate and commercial	**3,537**	**383**	**526**	**1,312**	**732**	**856**	**7,346**
– Manufacturing	**611**	**86**	**129**	**210**	**84**	**287**	**1,407**
– International trade and services	**992**	**233**	**185**	**360**	**189**	**329**	**2,288**
– Commercial real estate	**1,011**	**5**	**62**	**156**	**214**	**103**	**1,551**
– Other property-related	**164**	**20**	**81**	**241**	**102**	**13**	**621**
– Government	**15**	**–**	**–**	**42**	**2**	**–**	**59**
– Other commercial	**744**	**39**	**69**	**303**	**141**	**124**	**1,420**
Financial (non-bank financial institutions)	**318**	**29**	**11**	**157**	**37**	**2**	**554**
Loans and advances to banks	**40**	**–**	**–**	**17**	**–**	**–**	**57**
Total	**3,895**	**412**	**537**	**1,486**	**769**	**858**	**7,957**
– as a percentage of A	**1.19%**	**0.32%**	**0.40%**	**4.52%**	**1.02%**	**1.60%**	**1.06%**
At 31 December 2011							
Corporate and commercial	204,984	91,592	77,887	21,152	41,271	35,930	472,816
– Manufacturing	45,632	9,004	16,909	3,517	7,888	13,104	96,054
– International trade and services	64,604	29,066	29,605	8,664	10,710	10,060	152,709
– Commercial real estate	32,099	20,828	9,537	1,002	7,069	3,406	73,941
– Other property-related	7,595	17,367	6,396	1,770	5,729	682	39,539
– Government	3,143	2,918	962	1,563	656	1,837	11,079
– Other commercial[9]	51,911	12,409	14,478	4,636	9,219	6,841	99,494
Financial (non-bank financial institutions)	63,671	3,473	3,183	1,168	12,817	1,907	86,219
Asset-backed securities reclassified	4,776	–	–	–	504	–	5,280
Loans and advances to banks	54,406	35,159	47,309	8,571	14,831	20,836	181,112
Total wholesale lending (B)	327,837	130,224	128,379	30,891	69,423	58,673	745,427
Impairment allowances on wholesale lending							
Corporate and commercial	3,256	492	576	1,242	756	729	7,051
– Manufacturing	571	107	287	202	95	243	1,505
– International trade and services	962	316	154	428	166	298	2,324
– Commercial real estate	892	4	39	159	179	83	1,356
– Other property-related	155	15	22	154	154	16	516
– Government	4	–	–	28	1	–	33
– Other commercial	672	50	74	271	161	89	1,317
Financial (non-bank financial institutions)	435	26	11	149	76	3	700
Loans and advances to banks	49	–	–	17	59	–	125
Total	3,740	518	587	1,408	891	732	7,876
– as a percentage of B	1.14%	0.40%	0.46%	4.56%	1.28%	1.25%	1.06%

For footnote, see page 249.

Corporate and commercial

Corporate and commercial lending, excluding commercial real estate and other property-related lending, increased from US$365bn at 31 December 2011 to US$400bn at 31 December 2012.

At 31 December 2012, this represented 39% of total gross loans and advances to customers, compared with 38% at 31 December 2011. The growth was mainly in the international trade and services sector, where balances mainly increased in Europe despite muted demand for credit and, in Hong Kong, driven by growth in trade finance volumes as we capitalised on trade and capital flows. In the manufacturing sector, balances increased in Europe due to growth in the UK of overdraft balances and corresponding customer accounts which did not meet netting criteria under accounting rules.

The aggregate of our commercial real estate and other property-related lending was US$117bn at 31 December 2012, 3% higher than at 31 December 2011, representing 12% of total loans and advances to customers. This growth was mainly in Hong Kong, where demand for funds remained strong despite a degree of market stabilisation after a sustained period of buoyancy in the property investment and property development sectors. Commercial real estate and other property-related lending also grew in North America due to an increase in originations in commercial mortgages, which reflected our continued focus on expanding our core offering to gain a larger presence in key growth markets, including the West Coast, Southeast and Midwest of the US.

For information on refinancing in commercial real estate lending, see page 128.

Financial (non-bank)

Financial (non-bank) lending decreased from US$86bn at 31 December 2011 to US$81bn at 31 December 2012. This was mainly in Europe due to a decline in reverse repo activity, partly offset by higher balances in North America, due to an increase in reverse repo balances in Canada, and in Hong Kong and Rest of Asia-Pacific, driven by an increase in loans drawn by financial planning companies, leasing companies and insurance companies reflecting higher demand for funds from a small number of corporates.

Loans and advances to banks

Loans and advances to banks decreased from US$181bn at 31 December 2011 to US$153bn at 31 December 2012. This was mainly driven by maturities and repayments in Hong Kong together with a decline in reverse repos in Europe reflecting, in part, the redeployment of liquidity to central banks.

Credit quality of financial instruments

(Audited)

A summary of our current policies and practices regarding the credit quality of financial instruments is provided in the Appendix to Risk on page 253.

The five classifications describing the credit quality of our lending, debt securities portfolios and derivatives are defined on page 253. Additional credit quality information in respect of our consolidated holdings of ABSs is provided on page 259.

For the purpose of the following disclosure, retail loans which are past due up to 89 days and are not otherwise classified as impaired in accordance with our disclosure convention (see page 253), are not disclosed within the expected loss ('EL') grade to which they relate, but are separately classified as past due but not impaired.

2012 compared with 2011

(Unaudited)

We assess credit quality on all financial instruments which are subject to credit risk, as shown in the table on page 155. The balance of these financial instruments was US$2,516bn at 31 December 2012, an increase of 4% over 2011, of which US$1,690bn or 67% was classified as 'strong'. This percentage declined marginally compared with 68% at 31 December 2011. The proportion of financial instruments classified as 'good' remained broadly stable at 16% and the proportion of 'satisfactory' balances increased marginally from 12% to 14%. The proportion of 'sub-standard' financial instruments remained low at 2% in both 2012 and 2011.

The proportion of trading assets classified as 'strong' declined from 75% to 65%. Overall trading assets rose, largely in Europe, due to an increase in holdings of debt securities from 2011's subdued levels which, coupled with the downgrading of certain eurozone countries, resulted in an absolute and relative increase in debt securities classified as 'good'. In addition, holdings of 'strong' treasury and other eligible bills fell both absolutely and relative to the rest of trading assets primarily in Hong Kong due to maturities without replacement of government bonds, while increased levels of reverse repo and stock lending balances with customers increased the proportion of 'good' and 'satisfactory' classifications compared with 'strong'.

The proportion of financial investments categorised as 'strong' remained high at 86% and 87%, at 31 December 2012 and 31 December 2011 respectively, as the year-on-year increase in balances was mainly due to the deployment of surplus liquidity into highly-rated government, quasi-government and supranational debt securities in North America and Hong Kong.

The proportion of cash and balances at central banks considered 'strong' remained high at 98%, reflecting deployment of surplus liquidity into central banks in Europe, Hong Kong and Rest of Asia-Pacific.

The proportion of loans and advances held at amortised cost and categorised as 'strong' remained broadly flat compared with the end of 2011 at 54%. Derivative balances classified as 'strong' declined marginally from 81% to 79%; the movement in balances was mainly in Europe reflecting fair value movements of existing contracts.

The following table shows our distribution of financial instruments by measures of credit quality:

Distribution of financial instruments by credit quality
(Audited)

	Neither past due nor impaired				Past due but not impaired	Impaired	Impairment allowances[10]	Total
	Strong US$m	Good US$m	Satisfactory US$m	Sub-standard US$m	US$m	US$m	US$m	US$m
At 31 December 2012								
Cash and balances at central banks	138,124	3,235	147	26				141,532
Items in the course of collection from other banks	6,661	203	439	–				7,303
Hong Kong Government certificates of indebtedness	22,743	–	–	–				22,743
Trading assets[11]	237,078	60,100	66,537	3,462				367,177
– treasury and other eligible bills	20,793	4,108	1,340	41				26,282
– debt securities	106,453	16,685	20,931	608				144,677
– loans and advances:								
to banks	49,133	21,018	7,418	702				78,271
to customers	60,699	18,289	36,848	2,111				117,947
Financial assets designated at fair value[11]	6,186	5,884	401	243				12,714
– treasury and other eligible bills	54	–	–	–				54
– debt securities	6,089	5,830	391	241				12,551
– loans and advances:								
to banks	43	–	10	2				55
to customers	–	54	–	–				54
Derivatives[11]	284,115	46,214	24,877	2,244				357,450
Loans and advances held at amortised cost	625,091	246,323	213,241	23,996	18,911	38,776	(16,169)	1,150,169
– to banks	117,220	23,921	10,575	772	10	105	(57)	152,546
– to customers[12]	507,871	222,402	202,666	23,224	18,901	38,671	(16,112)	997,623
Financial investments	357,452	27,428	21,143	6,759	–	2,530		415,312
– treasury and other similar bills	80,320	3,818	1,957	1,455	–	–		87,550
– debt securities	277,132	23,610	19,186	5,304	–	2,530		327,762
Assets held for sale	2,425	3,287	2,311	314	387	1,286	(718)	9,292
– disposal groups	2,033	1,118	1,789	268	118	82	(49)	5,359
– non-current assets held for sale	392	2,169	522	46	269	1,204	(669)	3,933
Other assets	9,679	6,007	13,845	1,759	231	462		31,983
– endorsements and acceptances	1,995	4,344	5,195	483	7	8		12,032
– accrued income and other	7,684	1,663	8,650	1,276	224	454		19,951
Total financial instruments	1,689,554	398,681	342,941	38,803	19,529	43,054	(16,887)	2,515,675

Report of the Directors: Operating and Financial Review (continued)

Risk > Credit risk > Credit quality of financial instruments

Distribution of financial instruments by credit quality (continued)

	Neither past due nor impaired				Past due but not impaired	Impaired	Impairment allowances[10]	Total
	Strong US$m	Good US$m	Satisfactory US$m	Sub-standard US$m	US$m	US$m	US$m	US$m
At 31 December 2011								
Cash and balances at central banks	126,926	2,678	263	35				129,902
Items in the course of collection from other banks	7,707	150	350	1				8,208
Hong Kong Government certificates of indebtedness	20,922	–	–	–				20,922
Trading assets[11]	231,594	37,182	39,171	1,502				309,449
– treasury and other eligible bills	33,199	538	564	8				34,309
– debt securities	103,163	8,497	18,188	639				130,487
– loans and advances:								
to banks	49,021	20,699	5,186	619				75,525
to customers	46,211	7,448	15,233	236				69,128
Financial assets designated at fair value[11]	7,176	4,728	830	192				12,926
– treasury and other eligible bills	123	–	–	–				123
– debt securities	6,148	4,728	767	191				11,834
– loans and advances:								
to banks	55	–	63	1				119
to customers	850	–	–	–				850
Derivatives[11]	279,557	45,858	18,627	2,337				346,379
Loans and advances held at amortised cost	609,081	245,352	194,661	28,210	20,009	41,739	(17,636)	1,121,416
– to banks	144,815	28,813	6,722	568	39	155	(125)	180,987
– to customers[12]	464,266	216,539	187,939	27,642	19,970	41,584	(17,511)	940,429
Financial investments	340,173	24,757	22,139	3,532	–	2,233		392,834
– treasury and other similar bills	58,627	3,348	3,144	104	–	–		65,223
– debt securities	281,546	21,409	18,995	3,428	–	2,233		327,611
Assets held for sale	14,365	12,587	7,931	536	2,524	1,479	(1,614)	37,808
– disposal groups	14,317	12,587	7,931	536	2,522	1,467	(1,614)	37,746
– non-current assets held for sale	48	–	–	–	2	12	–	62
Other assets	11,956	6,526	12,379	1,193	421	517		32,992
– endorsements and acceptances	1,789	4,075	4,629	504	10	3		11,010
– accrued income and other	10,167	2,451	7,750	689	411	514		21,982
Total financial instruments	1,649,457	379,818	296,351	37,538	22,954	45,968	(19,250)	2,412,836

For footnotes, see page 249.

Past due but not impaired gross financial instruments

(Audited)

Past due but not impaired loans are those in respect of which the customer is in the early stages of delinquency and has failed to make a payment or a partial payment in accordance with the contractual terms of the loan agreement. This is typically when a loan is less than 90 days past due and there are no other indicators of impairment.

Further examples of exposures past due but not impaired include individually assessed mortgages that are in arrears more than 90 days, but there are no other indicators of impairment and the value of collateral is sufficient to repay both the principal debt and all potential interest for at least one year, or short-term trade facilities past due more than 90 days for technical reasons such as delays in documentation but there is no concern over the creditworthiness of the counterparty. When groups of loans are collectively assessed for impairment, collective impairment allowances are recognised for loans classified as past due but not impaired.

At 31 December 2012, US$19bn of loans and advances held at amortised cost were classified as past due but not impaired (2011: US$20bn). The largest concentration of these balances was in HSBC Finance. The decrease in 2012 was primarily in North America in the CML portfolio, due to the reclassification of non-real estate personal loan balances to 'Assets held for sale' as well as the continued run-off of the lending balances. This was partly offset by increases in Rest of Asia-Pacific relating to a number of corporate exposures across the region. The rise in Latin America was mainly in Panama in the corporate and commercial sector across various industries. In Europe, the increase in past due but not impaired loans mainly related to business expansion in Turkey. In Hong Kong, the rise was mainly in overdrafts and term lending.

Past due but not impaired loans and advances to customers and banks by geographical region
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
31 December 2012							
Banks	**–**	**–**	**10**	**–**	**–**	**–**	**10**
Customers	**2,339**	**1,311**	**2,964**	**975**	**7,721**	**3,591**	**18,901**
Personal	**1,416**	**638**	**1,961**	**248**	**5,806**	**2,198**	**12,267**
Corporate and commercial	**909**	**579**	**953**	**726**	**1,910**	**1,360**	**6,437**
Financial (non-bank financial institutions)	**14**	**94**	**50**	**1**	**5**	**33**	**197**
	2,339	**1,311**	**2,974**	**975**	**7,721**	**3,591**	**18,911**
31 December 2011							
Banks	–	38	1	–	–	–	39
Customers	1,990	1,069	2,318	1,165	10,216	3,212	19,970
Personal	1,362	715	1,626	166	7,941	2,141	13951
Corporate and commercial	614	346	680	997	2,159	1,059	5855
Financial (non-bank financial institutions)	14	8	12	2	116	12	164
	1,990	1,107	2,319	1,165	10,216	3,212	20,009

Ageing analysis of days past due but not impaired gross financial instruments
(Audited)

	Up to 29 days US$m	30-59 days US$m	60-89 days US$m	90-179 days US$m	180 days and over US$m	Total US$m
At 31 December 2012						
Loans and advances held at amortised cost	**14,236**	**3,189**	**1,262**	**200**	**24**	**18,911**
– to banks	**10**	**–**	**–**	**–**	**–**	**10**
– to customers	**14,226**	**3,189**	**1,262**	**200**	**24**	**18,901**
Assets held for sale	**251**	**84**	**48**	**2**	**2**	**387**
– disposal groups	**87**	**17**	**11**	**1**	**2**	**118**
– non-current assets held for sale	**164**	**67**	**37**	**1**	**–**	**269**
Other assets	**122**	**37**	**24**	**12**	**36**	**231**
– endorsements and acceptances	**6**	**1**	**–**	**–**	**–**	**7**
– other	**116**	**36**	**24**	**12**	**36**	**224**
	14,609	**3,310**	**1,334**	**214**	**62**	**19,529**
At 31 December 2011						
Loans and advances held at amortised cost	14,239	3,680	1,727	223	140	20,009
– to banks	39	–	–	–	–	39
– to customers	14,200	3,680	1,727	223	140	19,970
Assets held for sale	1,563	644	307	8	2	2,524
– disposal groups	1,563	644	307	7	1	2,522
– non-current assets held for sale	–	–	–	1	1	2
Other assets	225	80	37	22	57	421
– endorsements and acceptances	7	2	–	1	–	10
– other	218	78	37	21	57	411
	16,027	4,404	2,071	253	199	22,954

Renegotiated loans and forbearance

(Audited)

Current policies and procedures regarding renegotiated loans and forbearance are described in the Appendix to Risk on page 254.

The contractual terms of a loan may be modified for a number of reasons, which include changing market conditions, customer retention and other factors not related to the current or potential credit deterioration of a customer. Loans are classified as 'renegotiated loans' when their contractual payment terms have been modified because we have significant concerns about the borrowers' ability to meet contractual payments when due. For the purposes of this disclosure, the term 'forbearance' is synonymous with the renegotiation of loans for these reasons.

The following tables show the gross carrying amounts of the Group's holdings of renegotiated loans and advances to customers by industry sector, geography and credit quality classification.

Renegotiated loans and advances to customers

(Audited)

	At 31 December 2012				At 31 December 2011			
	Neither past due nor impaired US\$m	**Past due but not impaired US\$m**	**Impaired US\$m**	**Total US\$m**	Neither past due nor impaired US\$m	Past due but not impaired US\$m	Impaired US\$m	Total US\$m
Personal	**7,952**	**3,524**	**18,279**	**29,755**	8,133	4,401	19,125	31,659
First lien residential mortgages	**5,861**	**2,828**	**15,459**	**24,148**	5,916	3,560	15,932	25,408
Other personal[1]	**2,091**	**696**	**2,820**	**5,607**	2,217	841	3,193	6,251
Corporate and commercial	**4,608**	**295**	**6,892**	**11,795**	6,338	472	6,756	13,566
Manufacturing and international trade services	**2,381**	**154**	**3,012**	**5,547**	2,396	255	2,755	5,406
Commercial real estate and other property-related	**1,796**	**10**	**3,484**	**5,290**	2,949	122	3,550	6,621
Governments	**177**	**–**	**–**	**177**	113	2	132	247
Other commercial[9]	**254**	**131**	**396**	**781**	880	93	319	1,292
Financial	**255**	**–**	**422**	**677**	249	–	491	740
	12,815	**3,819**	**25,593**	**42,227**	14,720	4,873	26,372	45,965
Total renegotiated loans and advances to customers as a percentage of total gross loans and advances to customers				**4.2%**				4.8%

For footnotes, see page 249.

Renegotiated loans and advances to customers by geographical region

(Audited)

	Europe US\$m	**Hong Kong US\$m**	**Rest of Asia-Pacific US\$m**	**MENA US\$m**	**North America US\$m**	**Latin America US\$m**	**Total US\$m**
31 December 2012							
Personal	**2,817**	**245**	**248**	**190**	**25,474**	**781**	**29,755**
First lien residential mortgages	**1,896**	**68**	**78**	**112**	**21,896**	**98**	**24,148**
Other personal[1]	**921**	**177**	**170**	**78**	**3,578**	**683**	**5,607**
Corporate and commercial	**6,829**	**147**	**300**	**1,859**	**685**	**1,975**	**11,795**
Manufacturing and international trade services	**3,002**	**22**	**193**	**659**	**191**	**1,480**	**5,547**
Commercial real estate and other property-related	**3,641**	**25**	**37**	**899**	**486**	**202**	**5,290**
Governments	**–**	**–**	**–**	**2**	**–**	**175**	**177**
Other commercial[9]	**186**	**100**	**70**	**299**	**8**	**118**	**781**
Financial	**328**	**–**	**4**	**340**	**3**	**2**	**677**
	9,974	**392**	**552**	**2,389**	**26,162**	**2,758**	**42,227**
Total impairment allowances on renegotiated loans	**1,547**	**16**	**96**	**546**	**3,864**	**485**	**6,554**
Individually assessed	**1,545**	**15**	**63**	**543**	**39**	**213**	**2,418**
Collectively assessed	**2**	**1**	**33**	**3**	**3,825**	**272**	**4,136**

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
31 December 2011							
Personal	2,524	285	267	220	27,773	590	31,659
First lien residential mortgages	1,630	86	85	93	23,442	72	25,408
Other personal[1]	894	199	182	127	4,331	518	6,251
Corporate and commercial	8,453	157	181	2,198	700	1,877	13,566
Manufacturing and international trade services	3,013	32	104	887	174	1,196	5,406
Commercial real estate and other property-related	4,897	29	45	913	522	215	6,621
Governments	–	–	–	5	–	242	247
Other commercial[9]	543	96	32	393	4	224	1,292
Financial	487	5	–	237	2	9	740
	11,464	447	448	2,655	28,475	2,476	45,965
Total impairment allowances on renegotiated loans	1,821	20	64	300	5,017	448	7,670
Individually assessed	1,760	19	41	300	44	147	2,311
Collectively assessed	61	1	23	–	4,973	301	5,359

For footnotes, see page 249.

2012 compared with 2011

(Unaudited)

Renegotiated loans totalled US$42bn at 31 December 2012 (2011: US$46bn). North America accounted for the largest volume of renegotiated loans which amounted to US$26bn or 62% of total renegotiated loans at 31 December 2012 (2011: US$28bn or 62%), most of which were first lien residential mortgages held by HSBC Finance. Of the total renegotiated loans in North America, US$17bn were impaired at 31 December 2012 (2011: US$18bn). The ratio of total impairment allowances to impaired loans at 31 December 2012 was 23% (2011: 28%). This decrease was driven by a reduction in both impaired loans and impairment allowances as we continued to run-off the CML portfolio. As the portfolio has been closed to new business since 2007, the volume of first time renegotiations has reduced significantly.

In Europe, renegotiated loans at 31 December 2012 amounted to US$10bn (2011: US$11bn), constituting 24% of total renegotiated loans (2011: 25%). Of the total renegotiated loans in Europe, US$5.7bn were impaired at 31 December 2012 (2011: US$6.0bn), and the ratio of total impairment allowances to impaired loans at 31 December 2012 was 27% (2011: 30%). This decline was driven by a reduction in both impaired loans and impairment allowances due to releases and write-offs of a number of non-performing loans as well as the sale of a number of exposures. The renegotiated loans in Europe largely consisted of commercial real estate and other property-related sector lending of 37% (2011: 43%) mainly in the UK, and manufacturing and international trade services sector lending of 30% (2011: 26%).

Forbearance within Latin America (primarily in Mexico and Brazil) was predominantly undertaken in the manufacturing and international trade services sector. The largest increase in renegotiated loans compared with 2011 was in this sector in Mexico. In addition, renegotiation activity in the personal lending portfolios increased in Brazil, where a collections campaign led to a significant increase in both the refinancing and debt consolidation portfolios.

In the Middle East and North Africa, renegotiated loans decreased compared with 2011, mainly in the corporate and commercial sector due to repayments and reduced exposures. Forbearance activity in Hong Kong and Rest of Asia-Pacific remained insignificant.

HSBC Finance loan modifications and re-ageing

(Unaudited)

HSBC Finance maintains loan modification and re-age (‘loan renegotiation’) programmes in order to manage customer relationships, improve collection opportunities and, if possible, avoid foreclosure.

Since 2006, HSBC Finance has implemented an extensive loan renegotiation programme, and a significant portion of its loan portfolio has been subject to renegotiation at some stage in the life of the customer relationship as a consequence of the economic conditions in the US and the nature of HSBC Finance’s customer base.

The volume of loans that qualify for modification has reduced significantly in recent years. We expect this trend to continue as HSBC Finance believes the percentage of its customers with unmodified loans who would benefit from loan modification in a way that would avoid non-payment of future cash flows is decreasing. In addition, volumes of new loan modifications are expected to decrease due to gradual improvements in economic conditions, the cessation of new real estate secured and personal non-credit card receivables originations and the continued run-off of the CML portfolio.

Types of loan renegotiation programme in HSBC Finance

- A temporary modification is a change to the contractual terms of a loan that results in the giving up of a right to contractual cash flows over a pre-defined period. With a temporary modification the loan is expected to revert back to the original contractual terms, including the interest rate charged, after the modification period. An example is reduced interest payments.

  A substantial number of HSBC Finance modifications involve interest rate reductions. These modifications lower the amount of interest income HSBC Finance is contractually entitled to receive in future periods. Historically, modifications have generally been for six months, although extended modification periods are now more common.

  Loans that have been re-aged are classified as impaired with the exception of first-time loan re-ages that were less than 60 days past due at the time of re-age. These remain classified as impaired until they have demonstrated a history of payment performance against their original contracted terms for at least 12 months.

- A permanent modification is a change to the contractual terms of a loan that results in giving up a right to contractual cash flows over the life of the loan. An example is a permanent reduction in the interest rate charged.

  Permanent or long-term modifications which are due to an underlying hardship event remain classified as impaired for their full life.

- The term 're-age' describes a renegotiation by which the contractual delinquency status of a loan is reset to current after demonstrating payment performance. The overdue principal and/or interest is deferred and paid at a later date. Loan re-ageing enables customers who have been unable to make a small number of payments to have their loan delinquency status reset to current so that their credit score is not affected by the overdue balances.

  Loans that have been re-aged remain classified as impaired until they have demonstrated a history of payment performance against the original contractual terms for at least 12 months.

  A temporary or permanent modification may also lead to a re-ageing of a loan although a loan may be re-aged without any modification to its original terms and conditions.

  Where loans have been granted multiple concessions, subject to the qualifying criteria discussed below, the concession is deemed to have been made due to concern regarding the borrower's ability to pay, and the loan is disclosed as impaired. The loan remains disclosed as impaired from that date forward until the borrower has demonstrated a history of repayment performance for the period of time required for either modifications or re-ages, as described above.

Qualifying criteria

For an account to qualify for renegotiation it must meet certain criteria. However, HSBC Finance retains the right to decline a renegotiation. The extent to which HSBC Finance renegotiates accounts that are eligible under its existing policies will vary depending upon its view of prevailing economic conditions and other factors which may change from year to year. In addition, exceptions to policies and practices may be made in specific situations in response to legal or regulatory agreements or orders.

Renegotiated real estate secured and personal lending receivables are not eligible for a subsequent renegotiation for twelve or six months, respectively, with a maximum of five renegotiations permitted within a five-year period. Borrowers must be approved for a modification and generally make two minimum qualifying monthly payments within 60 days to activate a modification.

In certain circumstances where the debt has been restructured in bankruptcy proceedings, fewer or no payments may be required. Accounts whose borrowers are subject to a Chapter 13 plan filed with a bankruptcy court generally may be re-aged upon receipt of one qualifying payment, whereas accounts whose borrowers have filed for Chapter 7 bankruptcy protection may be re-aged upon receipt of a signed reaffirmation agreement. In addition, for some products, accounts may be re-aged without receipt of a payment in certain special circumstances (e.g. in the event of a natural disaster or a hardship programme).

2012 compared with 2011

At 31 December 2012, renegotiated real estate secured accounts in HSBC Finance represented 86% (2011: 86%) of North America's total renegotiated loans; US$14bn (2011: US$16bn) of these renegotiated real estate secured loans were classified as impaired. This decline was mainly due to lower lending balances as we continued to run-off the CML portfolio. A significant portion of HSBC Finance's renegotiated portfolio has received multiple renegotiations. Consequently, a significant proportion of loans included in the table below have undergone multiple re-ages or modifications. In this regard, multiple modifications have remained consistent at 75% to 80% of total modifications. Further details of HSBC Finance's real estate secured accounts and renegotiation programmes are provided below.

Gross loan portfolio of HSBC Finance real estate secured balances
(Unaudited)

	Re-aged[13] US$m	Modified and re-aged US$m	Modified US$m	Total re-negotiated loans US$m	Total non-renegotiated loans US$m	Total gross loans US$m	Total impair-ment allowances US$m	Impair-ment allowances/ gross loans %
31 December 2012	**9,640**	**11,660**	**1,121**	**22,421**	**16,261**	**38,743**	**4,481**	**12**
31 December 2011	10,265	12,829	1,494	24,588	19,540	44,128	5,088	12

For footnote, see page 249.

Movement in HSBC Finance renegotiated real estate balances
(Unaudited)

	2012 US$m
At 1 January	24,588
Additions	1,221
Payments	(1,133)
Write-offs	(1,796)
Transfer to ‘Assets held for sale’ and ‘Other assets’	(459)
At 31 December	22,421

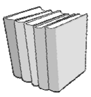
Number of renegotiated real estate secured accounts remaining in HSBC Finance’s portfolio
(Unaudited)

	Number of renegotiated loans (000s)				Total number of loans (000s)
	Re-aged	Modified and re-aged	Modified	Total	
31 December 2012	**117**	**107**	**11**	**235**	**427**
31 December 2011	121	112	14	246	469

During 2012, the aggregate number of renegotiated loans reduced due to the run-off of the portfolio. Within the constraints of our Group credit policy, HSBC Finance’s policies allow for multiple renegotiations under certain circumstances, and a significant number of accounts received a second (or further) renegotiation during the year which does not appear in the statistics tabulated above because they present a loan as an addition to the volume of renegotiated loans on its first renegotiation only. At 31 December 2012, renegotiated loans were 58% (2011: 56%) of the total portfolio of HSBC Finance’s real estate secured accounts.

Corporate and commercial forbearance

(Unaudited)



For the current policies and procedures regarding forbearance in the corporate and commercial sector, see the Appendix to Risk on page 257.

Renegotiated loan balances in the corporate and commercial sector decreased by US$1.8bn. The majority of the decrease was due to falling renegotiated loan balances in the commercial real estate and other property-related sector in 2012, which fell by US$1.3bn. This was primarily in Europe although the commercial real estate sector, particularly in the UK, continued to experience weaker property values, with fewer financial institutions financing commercial real estate lending, renegotiated loan balances fell as refinements in forbearance identification procedures reduced the renegotiated loan balances in UK commercial real estate and other property-related lending. Excluding the change in basis of reporting renegotiated loans, total renegotiated loans in the commercial real estate and other property-related sector remained broadly unchanged.

Within the commercial real estate and other property-related loans, the balances classified as ‘impaired’ declined marginally compared with 2011. Balances classified as ‘past due but not impaired’ declined by US$112m, mainly in the Middle East and North Africa relating to a small number of exposures in the UAE. Balances classified as ‘neither past due nor impaired’ declined by 39%, mainly in Europe reflecting the reduction in balances in the commercial real estate sector described above.

The commercial real estate mid-market sector continued to experience higher levels of renegotiation activity than larger corporates, where borrowers remained generally better capitalised with access to wider funding market opportunities. When considering acceptable restructuring terms for commercial real estate loans in Europe, we take into account the ability of the customer to service the revised interest payments as a prerequisite. Similarly, for principal payment modifications, we require the customer to be capable of complying with the revised terms as a necessary pre-condition. When principal payments are modified and permanent forgiveness results, or when it is otherwise considered that there is no longer a realistic prospect of recovering outstanding principal, the affected balances are written off. When principal repayments are postponed, the customer is expected to be able to pay in line with the renegotiated terms, including meeting the postponed principal repayment if due from refinancing. In all cases, a loan renegotiation is only granted when it is expected that the customer will be able to meet the revised terms.

Renegotiated loan balances in the manufacturing and international trade services sector increased in 2012, mainly in Latin America from the restructuring of a small number of loans in Mexico. In the Middle East and North Africa, renegotiated loan balances decreased, partly due to the repayment of a significant loan in the UAE.

Impaired loans

(Audited)

Impaired loans and advances are those that meet any of the following criteria:

- loans and advances classified as CRR 9, CRR 10, EL 9 or EL 10 (a description of our internal credit rating grades is provided on page 253);
- retail exposures 90 days or more past due, unless individually they have been assessed as not impaired; or
- renegotiated loans and advances that have been subject to a change in contractual cash flows as a result of a concession which the lender would not otherwise consider, and where it is probable that without the concession the borrower would be unable to meet its contractual payment obligations in full, unless the concession is insignificant and there are no other indicators of impairment. Renegotiated loans remain classified as impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, and there are no other indicators of impairment.

For loans that are assessed for impairment on a collective basis, the evidence to support reclassification as no longer impaired typically comprises a history of payment performance against the original or revised terms, depending on the nature and volume of forbearance and the credit risk characteristics surrounding the renegotiation. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case by case basis.

In HSBC Finance, where a significant majority of HSBC's loan forbearance activity occurs, the history of payment performance is assessed with reference to the original terms of the contract, reflecting the higher credit risk characteristics of this portfolio. The payment performance periods are monitored to ensure they remain appropriate to the levels of recidivism observed within the portfolio.

Further disclosure about loans subject to forbearance is provided on page 254. Renegotiated loans and forbearance disclosures are subject to evolving industry practice and regulatory guidance.

Movement in impaired loans by geographical region
(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
Impaired loans at 1 January 2012	11,819	608	1,070	2,445	22,758	3,039	41,739
Personal	2,797	190	388	428	21,094	1,646	26,543
Corporate and commercial	8,113	372	667	1,798	1,517	1,391	13,858
Financial[2]	909	46	15	219	147	2	1,338
Classified as impaired during the year	3,482	292	924	648	8,130	4,507	17,983
Personal	933	169	549	73	7,363	2,807	11,894
Corporate and commercial	2,481	123	375	531	739	1,696	5,945
Financial[2]	68	–	–	44	28	4	144
Transferred from impaired to unimpaired during the year	(1,164)	(47)	(85)	(321)	(4,223)	(1,765)	(7,605)
Personal	(279)	(38)	(69)	(32)	(4,124)	(1,124)	(5,666)
Corporate and commercial	(858)	(5)	(15)	(289)	(99)	(640)	(1,906)
Financial[2]	(27)	(4)	(1)	–	–	(1)	(33)
Amounts written off	(1,891)	(217)	(564)	(264)	(3,514)	(2,112)	(8,562)
Personal	(632)	(127)	(373)	(96)	(3,227)	(1,521)	(5,976)
Corporate and commercial	(1,212)	(90)	(191)	(143)	(202)	(590)	(2,428)
Financial[2]	(47)	–	–	(25)	(85)	(1)	(158)
Net repayments and other	(1,101)	(159)	(198)	(34)	(2,806)	(481)	(4,779)
Personal	(353)	(22)	(56)	(5)	(2,380)	(228)	(3,044)
Corporate and commercial	(466)	(133)	(136)	(26)	(363)	(253)	(1,377)
Financial[2]	(282)	(4)	(6)	(3)	(63)	–	(358)
At 31 December 2012	11,145	477	1,147	2,474	20,345	3,188	38,776
Personal	2,466	172	439	368	18,726	1,580	23,751
Corporate and commercial	8,058	267	700	1,872	1,592	1,604	14,093
Financial[2]	621	38	8	234	27	4	932

For footnote, see page 249.

Collateral

Collateral and other credit enhancements held

(Audited)

Loans and advances held at amortised cost

Although collateral can be an important mitigant of credit risk, it is the Group's practice to lend on the basis of the customer's ability to meet their obligations out of cash flow resources rather than rely on the value of security offered. Depending on the customer's standing and the type of product, facilities may be provided unsecured. However, for other lending a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the bank may utilise the collateral as a source of repayment.

Depending on its form, collateral can have a significant financial effect in mitigating our exposure to credit risk.

The tables below provide a quantification of the value of fixed charges we hold over a borrower's specific asset (or assets) where we have a history of enforcing, and are able to enforce, the collateral in satisfying a debt in the event of the borrower failing to meet its contractual obligations, and where the collateral is cash or can be realised by sale in an established market. The collateral valuation in the tables below excludes any adjustments for obtaining and selling the collateral.

We may also manage our risk by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees, but the valuation of such mitigants is less certain and their financial effect has not been quantified. In particular, loans shown in the tables below as not collateralised or partially collateralised may benefit from such credit mitigants.

Certain credit mitigants are used strategically in portfolio management activities. While single name concentrations arise in portfolios managed by Global Banking and Corporate Banking, it is only in Global Banking that their size requires the use of portfolio level credit mitigants. Across Global Banking risk limits and utilisations, maturity profiles and risk quality are monitored and managed pro-actively. This process is key to the setting of risk appetite for these larger, more complex, geographically distributed customer groups. While the principal form of risk management continues to be at the point of exposure origination, through the lending decision-making process, Global Banking also utilises loan sales and credit default swap ('CDS') hedges to manage concentrations and reduce risk. These transactions are the responsibility of a dedicated Global Banking portfolio management team. Hedging activity is carried out within agreed credit parameters, and is subject to market risk limits and a robust governance structure. CDS mitigants are held at portfolio level and are not reported in the presentation below.

Personal lending

Residential mortgage loans including loan commitments by level of collateral
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Fully collateralised	**141,673**	**53,478**	**43,662**	**2,106**	**59,799**	**5,193**	**305,911**
Loan to value ('LTV') ratio:							
– less than 25%	**11,733**	**8,090**	**4,438**	**125**	**3,703**	**319**	**28,408**
– 25% to 50%	**36,038**	**30,155**	**12,752**	**623**	**10,934**	**1,522**	**92,022**
– 51% to 75%	**60,395**	**12,770**	**19,625**	**1,001**	**26,582**	**2,295**	**122,668**
– 76% to 90%	**27,118**	**1,931**	**6,195**	**189**	**12,307**	**871**	**48,611**
– 91% to 100%	**6,389**	**532**	**652**	**168**	**6,273**	**186**	**14,200**
Partially collateralised:							
– greater than 100% LTV	**2,967**	**2**	**376**	**85**	**10,210**	**16**	**13,656**
– collateral value	**2,565**	**1**	**323**	**76**	**8,684**	**12**	**11,661**
Total residential mortgages	**144,640**	**53,480**	**44,038**	**2,191**	**70,009**	**5,209**	**319,567**
At 31 December 2011							
Fully collateralised	125,702	46,532	38,381	1,761	60,794	4,891	278,061
LTV ratio:							
– less than 25%	9,898	5,364	2,383	58	3,576	282	21,561
– 25% to 50%	31,601	19,643	9,978	336	10,593	1,350	73,501
– 51% to 75%	52,656	17,748	18,006	895	25,138	2,221	116,664
– 76% to 90%	23,919	2,884	7,624	304	13,590	876	49,197
– 91% to 100%	7,628	893	390	168	7,897	162	17,138
Partially collateralised:							
– greater than 100% LTV	3,275	484	295	174	12,503	102	16,833
– collateral value	2,821	466	37	135	10,566	24	14,049
Total residential mortgages	128,977	47,016	38,676	1,935	73,297	4,993	294,894

The above table shows residential mortgage lending including off-balance sheet loan commitments by level of collateral. Off-balance sheet commitments include loans that have been approved but which the customer has not yet drawn, and the undrawn portion of loans that have a flexible drawdown facility such as the offset mortgage product. The collateral included in the table above consists of first charges on real estate.

The LTV ratio is calculated as the gross on-balance sheet carrying amount of the loan and any off-balance sheet loan commitment at the balance sheet date divided by the value of collateral. The methodologies for obtaining residential property collateral values vary throughout the Group, but are typically determined through a combination of professional appraisals, house price indices or statistical analysis. Valuations must be updated on a regular basis and, as a minimum, at intervals of every three years. Valuations are conducted more frequently when market conditions or portfolio performance are subject to significant change or when a loan is identified and assessed as impaired.

The LTV ratio bandings are consistent with our internal risk management reporting. While we do have mortgages in the higher LTV bands, our appetite for such lending is restricted and the larger portion of our portfolio is concentrated in the lower risk LTV bandings of 75% and below.

Other personal lending

Other personal lending consists primarily of overdrafts, credit cards and second lien mortgage portfolios. Second lien lending is supported by portfolios. Second lien lending is supported by collateral but the claim on the collateral is subordinate to the first lien charge. The majority of our second lien portfolios were originated in North America where loss experience on defaulted second lien loans has typically approached 100%; consequently, we do not generally attach any significant financial value to this type of collateral. Credit cards and overdrafts are usually unsecured.

Corporate, commercial and financial (non-bank) lending

Collateral held is analysed separately below for commercial real estate and for other corporate, commercial and financial (non-bank) lending. This reflects the difference in collateral held on the portfolios. In each case, the analysis includes off-balance sheet loan commitments, primarily undrawn credit lines.

Commercial real estate loans and advances including loan commitments by level of collateral
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Rated CRR/EL 1 to 7							
Not collateralised	**7,068**	**10,790**	**3,647**	**569**	**181**	**2,083**	**24,338**
Fully collateralised	**23,450**	**17,355**	**6,106**	**92**	**9,054**	**1,846**	**57,903**
Partially collateralised (A)	**3,088**	**1,476**	**1,150**	**33**	**1,063**	**903**	**7,713**
– collateral value on A	**2,780**	**1,179**	**464**	**29**	**401**	**423**	**5,276**
	33,606	**29,621**	**10,903**	**694**	**10,298**	**4,832**	**89,954**
Rated CRR/EL 8 to 10							
Not collateralised	**418**	**–**	**–**	**14**	**34**	**105**	**571**
Fully collateralised	**1,261**	**2**	**60**	**8**	**408**	**141**	**1,880**
LTV ratio:							
– less than 25%	**34**	**–**	**1**	**–**	**25**	**10**	**70**
– 25% to 50%	**119**	**1**	**55**	**7**	**86**	**8**	**276**
– 51% to 75%	**437**	**–**	**2**	**–**	**69**	**28**	**536**
– 76% to 90%	**501**	**–**	**1**	**–**	**58**	**63**	**623**
– 91% to 100%	**170**	**1**	**1**	**1**	**170**	**32**	**375**
Partially collateralised (B)	**1,585**	**–**	**51**	**204**	**377**	**24**	**2,241**
– collateral value on B	**938**	**–**	**15**	**111**	**265**	**13**	**1,342**
	3,264	**2**	**111**	**226**	**819**	**270**	**4,692**
Total commercial real estate loans and advances	**36,870**	**29,623**	**11,014**	**920**	**11,117**	**5,102**	**94,646**
At 31 December 2011							
Rated CRR/EL 1 to 7							
Not collateralised	5,730	12,552	2,973	631	97	2,136	24,119
Fully collateralised	24,547	11,734	6,929	65	8,506	1,706	53,487
Partially collateralised (C)	3,099	916	1,032	50	1,635	999	7,731
– collateral value on C	1,775	591	280	39	311	559	3,555
	33,376	25,202	10,934	746	10,238	4,841	85,337
Rated CRR/EL 8 to 10							
Not collateralised	434	2	10	55	135	127	763
Fully collateralised	1,413	2	23	74	521	196	2,229
LTV ratio:							
– less than 25%	24	–	–	–	65	9	98
– 25% to 50%	140	2	–	–	5	21	168
– 51% to 75%	935	–	1	–	217	28	1,181
– 76% to 90%	159	–	2	74	61	117	413
– 91% to 100%	155	–	20	–	173	21	369
Partially collateralised (D)	1,921	–	42	181	401	3	2,548
– collateral value on D	1,083	–	26	89	246	1	1,445
	3,768	4	75	310	1,057	326	5,540
Total commercial real estate loans and advances	37,144	25,206	11,009	1,056	11,295	5,167	90,877

The collateral included in the table above consists of fixed first charges on real estate and charges over cash for commercial real estate. These facilities are disclosed as not collateralised if they are unsecured or benefit from credit risk mitigation from guarantees, which are not quantified for the purposes of this disclosure. In Hong Kong, market practice is for lending to major property companies to be typically secured by guarantees or unsecured. In Europe, facilities of a working capital nature are generally not secured by a first fixed charge and are therefore disclosed as not collateralised.

The value of commercial real estate collateral is determined through a combination of professional and internal valuations and physical inspection. Due to the complexity of valuing collateral for commercial real estate, local valuation policies determine the frequency of review based on local market conditions. Revaluations are sought with greater frequency when, as part of the regular credit assessment of the obligor, material concerns arise in relation to the transaction which may reflect on the underlying performance of the collateral, or in circumstances where an obligor's credit quality has declined sufficiently to cause concern that the principal payment source may not fully meet the obligation (i.e. the obligor's credit quality classification indicates it is at the lower end, that is sub-standard, or approaching impaired). Where such concerns exist the revaluation method selected will depend upon the loan-to-value relationship, the direction in which the local commercial real estate market has moved since the last valuation and, most importantly, the specific characteristics of the underlying commercial real estate which is of concern.

Other corporate, commercial and financial (non-bank) loans and advances including loan commitments by level of collateral rated CRR/EL 8 to 10 only

(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Not collateralised	**5,110**	**260**	**572**	**1,186**	**533**	**1,023**	**8,684**
Fully collateralised	**1,463**	**82**	**146**	**132**	**478**	**284**	**2,585**
LTV ratio:							
– less than 25%	**77**	**3**	**11**	**–**	**11**	**68**	**170**
– 25% to 50%	**192**	**4**	**62**	**6**	**49**	**84**	**397**
– 51% to 75%	**290**	**39**	**31**	**33**	**131**	**61**	**585**
– 76% to 90%	**196**	**24**	**11**	**18**	**96**	**17**	**362**
– 91% to 100%	**708**	**12**	**31**	**75**	**191**	**54**	**1,071**
Partially collateralised (A)	**1,106**	**84**	**251**	**828**	**753**	**273**	**3,295**
– collateral value on A	**628**	**41**	**89**	**124**	**359**	**108**	**1,349**
	7,679	**426**	**969**	**2,146**	**1,764**	**1,580**	**14,564**
At 31 December 2011							
Not collateralised	5,583	349	795	1,695	801	1,546	10,769
Fully collateralised	1,765	63	147	60	441	602	3,078
LTV ratio:							
– less than 25%	173	4	10	3	16	106	312
– 25% to 50%	274	47	29	3	38	74	465
– 51% to 75%	587	11	32	31	51	96	808
– 76% to 90%	153	–	32	20	128	21	354
– 91% to 100%	578	1	44	3	208	305	1,139
Partially collateralised (B)	1,367	100	156	498	1,206	390	3,717
– collateral value on B	558	55	76	103	541	214	1,547
	8,715	512	1,098	2,253	2,448	2,538	17,564

The collateral used in the assessment of the above lending primarily includes first legal charges over real estate and charges over cash in the commercial and industrial sector, and charges over cash and marketable financial instruments in the financial sector. Government sector lending is generally unsecured.

It should be noted that the table above excludes other types of collateral which are commonly taken for corporate and commercial lending such as unsupported guarantees and floating charges over the assets of a customer's business. While such mitigants have value, often providing rights in insolvency, their assignable value is insufficiently certain and they are assigned no value for disclosure purposes.

As with commercial real estate, the value of real estate collateral included in the table above is generally determined through a combination of professional and internal valuations and physical inspection. The frequency of revaluation is undertaken on a similar basis to commercial real estate loans and advances; however, for financing activities in corporate and commercial lending that are not predominantly commercial real estate-oriented, collateral value is not as strongly correlated to principal repayment performance. Collateral values will generally be refreshed when an obligor's general credit performance deteriorates and it is necessary to assess the likely performance of secondary sources of repayment should reliance upon them prove necessary. For this reason, the table above reports values only for customers with CRR 8 to 10, recognising that these loans and advances generally have valuations which are comparatively recent. For the table above, cash is valued at its nominal value and marketable securities at their fair value.

The difference between the collateral value and the value of partially collateralised lending disclosed in the tables above cannot be directly compared with any impairment allowances recognised in respect of impaired loans, as the loans may be performing in accordance with their contractual terms. When loans are not performing in accordance with their contractual terms, the recovery of cash flows may be affected by other cash resources of the customer, or other credit risk enhancements not quantified for the tables above. The Group's policy for determining impairment allowances, including the effect of collateral on these impairment allowances, is described on page 258.

Loans and advances to banks

The following table shows loans and advances to banks, including off-balance sheet loan commitments by level of collateral.

Loans and advances to banks including loan commitments by level of collateral
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Not collateralised	**36,043**	**24,622**	**40,694**	**7,290**	**9,050**	**12,838**	**130,537**
Fully collateralised	**25,496**	**2,294**	**5,667**	**–**	**811**	**3,691**	**37,959**
Partially collateralised (A)	**62**	**1,459**	**1,207**	**–**	**–**	**–**	**2,728**
– collateral value on A	**61**	**1,452**	**1,135**	**–**	**–**	**–**	**2,648**
	61,601	**28,375**	**47,568**	**7,290**	**9,861**	**16,529**	**171,224**
At 31 December 2011							
Not collateralised	25,896	34,892	42,586	9,337	14,132	19,516	146,359
Fully collateralised	31,515	1,365	6,927	32	978	1,238	42,055
Partially collateralised (B)	146	50	445	–	784	114	1,539
– collateral value on B	104	50	207	–	702	88	1,151
	57,557	36,307	49,958	9,369	15,894	20,868	189,953

The collateral used in the assessment of the above lending relates primarily to cash and marketable securities. Loans and advances to banks are typically unsecured. Certain products such as reverse repos and stock borrowing are effectively collateralised and have been included in the above as fully or partly collateralised. The fully collateralised loans and advances to banks for Europe in the table above consist primarily of reverse repo agreements and stock borrowing.

Derivatives

The International Swaps and Derivatives Association ('ISDA') Master Agreement is our preferred agreement for documenting derivatives activity. It provides the contractual framework within which dealing activity across a full range of over-the-counter ('OTC') products is conducted, and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or another pre-agreed termination event occurs. It is common, and our preferred practice, for the parties to execute a Credit Support Annex ('CSA') in conjunction with the ISDA Master Agreement. Under a CSA, collateral is passed between the parties to mitigate the counterparty risk inherent in outstanding positions. The majority of our CSAs are with financial institutional clients.

We manage our counterparty exposure arising due to market risk on OTC derivative contracts through the use of collateral agreements with counterparties and netting agreements. We do not currently undertake active management of our general OTC derivative counterparty exposure in the credit markets, although we may manage individual exposures in certain circumstances.

A description of the derivative offset amount in the 'Maximum exposure to credit risk' table is provided on page 145.

Other credit risk exposures

In addition to collateralised lending described above, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are described in more detail below.

Securities issued by governments, banks and other financial institutions may benefit from additional credit enhancement, notably through government guarantees that reference these assets. Details of government guarantees are included in Notes 6, 10 and 12 on the Financial Statements. Corporate issued debt securities are primarily unsecured. Debt securities issued by banks and financial institutions include ABSs and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABSs is reduced through the purchase of CDS protection. Disclosure of the Group's holdings of ABSs and associated CDS protection is provided on page 184.

Trading assets include loans and advances held with trading intent, the majority of which consist of reverse repos and stock borrowing which, by their nature, are collateralised. Collateral accepted as security that the Group is permitted to sell or repledge under these arrangements is described in Note 36 on the Financial Statements. Trading assets also include money market term placements, which are unsecured.

The Group's maximum exposure to credit risk includes financial guarantees and similar arrangements that we issue or enter into, and loan commitments that we are irrevocably committed to. Depending on the terms of the arrangement, we may have recourse to additional credit mitigation in the event that a guarantee is called upon or a loan commitment is drawn and subsequently defaults. Further information about these arrangements is provided in Note 40 on the Financial Statements.

Collateral and other credit enhancements obtained

(Audited)

The carrying amount of assets obtained by taking possession of collateral held as security, or calling upon other credit enhancements, is as follows:

	Carrying amount at 31 December	
	2012	2011
	US$m	US$m
Nature of assets		
Residential property	**353**	420
Commercial and industrial property	**88**	64
Other	**3**	17
	444	501

The significant reduction in residential properties was due to the suspension of foreclosure activities at the end of 2011 and during the first half of 2012 (see page 151).

We make repossessed properties available for sale in an orderly fashion, with the proceeds used to reduce or repay the outstanding indebtedness. If excess funds arise after the debt has been repaid, they are made available to repay other secured lenders with lower priority or returned to the customer. We do not generally occupy repossessed properties for our business use.

Impairment of loans and advances

(Audited)

A summary of our current policies and practices regarding impairment assessment is provided in the Appendix to Risk on page 258.

The tables below analyse by geographical region the impairment allowances recognised for impaired loans and advances that are either individually assessed or collectively assessed, and collective impairment allowances on loans and advances classified as not impaired.

Impairment allowances on loans and advances to customers by geographical region
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
At 31 December 2012							
Gross loans and advances to customers							
Individually assessed impaired loans[14] (A)	**9,959**	**398**	**1,019**	**2,251**	**1,849**	**1,295**	**16,771**
Collectively assessed[15] (B)	**458,802**	**173,688**	**137,846**	**27,629**	**144,523**	**54,476**	**996,964**
Impaired loans[14]	**1,121**	**79**	**128**	**197**	**18,482**	**1,893**	**21,900**
Non-impaired loans[16]	**457,681**	**173,609**	**137,718**	**27,432**	**126,041**	**52,583**	**975,064**
Total (C)	**468,761**	**174,086**	**138,865**	**29,880**	**146,372**	**55,771**	**1,013,735**
Impairment allowances (C)	**5,321**	**473**	**746**	**1,794**	**5,616**	**2,162**	**16,112**
Individually assessed (A)	**3,781**	**192**	**442**	**1,323**	**428**	**406**	**6,572**
Collectively assessed (B)	**1,540**	**281**	**304**	**471**	**5,188**	**1,756**	**9,540**
Net loans and advances	**463,440**	**173,613**	**138,119**	**28,086**	**140,756**	**53,609**	**997,623**
	%	**%**	**%**	**%**	**%**	**%**	**%**
Allowances as a percentage of loans and advances:							
– individually assessed (A)	**38.0**	**48.2**	**43.4**	**58.8**	**23.1**	**31.4**	**39.2**
– collectively assessed (B)	**0.3**	**0.2**	**0.2**	**1.7**	**3.6**	**3.2**	**1.0**
– total (C)	**1.1**	**0.3**	**0.5**	**6.0**	**3.8**	**3.9**	**1.6**
	US$m	US$m	US$m	US$m	US$m	US$m	US$m
At 31 December 2011							
Gross loans and advances to customers							
Individually assessed impaired loans[14] (E)	10,490	519	963	2,187	1,832	563	16,554
Collectively assessed[15] (F)	429,088	157,727	123,687	25,402	148,096	57,386	941,386
Impaired loans[14]	1,261	85	106	238	20,864	2,476	25,030
Non-impaired loans[16]	427,827	157,642	123,581	25,164	127,232	54,910	916,356
Total (G)	439,578	158,246	124,650	27,589	149,928	57,949	957,940
Impairment allowances (G)	5,242	581	782	1,714	7,181	2,011	17,511
Individually assessed (E)	3,754	288	505	1,250	416	324	6,537
Collectively assessed (F)	1,488	293	277	464	6,765	1,687	10,974
Net loans and advances	434,336	157,665	123,868	25,875	142,747	55,938	940,429
	%	%	%	%	%	%	%
Allowances as a percentage of loans and advances:							
– individually assessed (E)	35.8	55.5	52.4	57.2	22.7	57.4	39.5
– collectively assessed (F)	0.3	0.2	0.2	1.8	4.6	2.9	1.2
– total (G)	1.2	0.4	0.6	6.2	4.8	3.5	1.8

For footnotes, see page 249.

Net loan impairment charge to the income statement by geographical region
(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
2012							
Individually assessed impairment allowances	**1,387**	**(8)**	**97**	**205**	**258**	**200**	**2,139**
New allowances	**1,960**	**32**	**239**	**369**	**380**	**292**	**3,272**
Release of allowances no longer required	**(516)**	**(34)**	**(117)**	**(133)**	**(85)**	**(49)**	**(934)**
Recoveries of amounts previously written off	**(57)**	**(6)**	**(25)**	**(31)**	**(37)**	**(43)**	**(199)**
Collectively assessed impairment allowances	**487**	**92**	**243**	**50**	**3,204**	**1,945**	**6,021**
New allowances net of allowance releases	**839**	**117**	**368**	**94**	**3,296**	**2,254**	**6,968**
Recoveries of amounts previously written off	**(352)**	**(25)**	**(125)**	**(44)**	**(92)**	**(309)**	**(947)**
Total charge for impairment losses	**1,874**	**84**	**340**	**255**	**3,462**	**2,145**	**8,160**
Customers	**1,874**	**84**	**340**	**255**	**3,462**	**2,145**	**8,160**
2011							
Individually assessed impairment allowances	1,262	18	67	199	243	126	1,915
New allowances	1,670	79	207	328	398	222	2,904
Release of allowances no longer required	(378)	(41)	(114)	(80)	(111)	(74)	(798)
Recoveries of amounts previously written off	(30)	(20)	(26)	(49)	(44)	(22)	(191)
Collectively assessed impairment allowances	640	99	207	93	6,807	1,744	9,590
New allowances net of allowance releases	1,181	126	366	147	6,894	2,111	10,825
Recoveries of amounts previously written off	(541)	(27)	(159)	(54)	(87)	(367)	(1,235)
Total charge for impairment losses	1,902	117	274	292	7,050	1870	11,505
Banks	(11)	–	–	–	(5)	–	(16)
Customers	1,913	117	274	292	7,055	1,870	11,521

2012 compared with 2011

(Unaudited)

The following commentary is on a constant currency basis.

Loan impairment allowances were US$16.2bn, a decline of 9% compared with 2011, reflecting lower lending balances in our US CML portfolio which included the reclassification of impairment allowances on non-real estate personal loan balances to 'Assets held for sale'. Releases and recoveries of US$2.1bn were 3% lower, mainly in North America due to lower customer repayments in the corporate and commercial sector, as well as the non-recurrence of a number of releases and recoveries incurred in 2011 in Hong Kong and Rest of Asia-Pacific.

Impaired loans were 3% of total gross loans and advances at the end of 2012, compared with 4% at 31 December 2011.

In **Europe**, new loan impairment allowances were US$2.8bn, broadly unchanged compared with 2011. New collectively assessed loan impairment allowances declined by 28%, mainly in the UK personal lending book, as we focused our lending growth on higher quality assets and continued to pro-actively identify and monitor customers facing financial hardship. This resulted in lower delinquency rates across both the secured and unsecured lending portfolios. Individually assessed new loan impairment allowances increased by 21% across a range of sectors reflecting the challenging economic conditions in the UK, Greece, Spain and Turkey. In addition, a rise in impairments in Turkey was due to strong balance sheet growth in customer loans and advances in RBWM, notably in credit cards and personal loans, driven by business expansion. Impaired loans of US$11.1bn were 9% lower than at 31 December 2011, mainly due to increased focus on higher quality loans, lower delinquency rates and the continued low interest rate environment.

Releases and recoveries in Europe were US$925m, broadly unchanged on 2011.

In **Hong Kong**, new individually assessed loan impairment allowances fell by 28% compared with 2011 due to lower specific impairment charges in CMB. New collectively assessed loan impairment allowances also declined as delinquency rates continued to improve, reflecting stable loan growth and sound underlying economic conditions. Impaired loans declined by 22% from 31 December 2011, as a number of corporate loans in the international trade sector were written off or upgraded following repayments, and delinquency rates reduced.

Releases and recoveries in Hong Kong were US$65m, 27% lower than at the end of 2011 when an allowance relating to a loan in GB&M that was no longer considered impaired was released.

New loan impairment allowances in **Rest of Asia-Pacific** increased by 8% to US$607m. This reflected higher new collectively assessed loan impairment allowances, mainly from the growth in Singapore of RBWM's credit card portfolio. New individually assessed loan impairment allowances also increased, as a result of the impairment of a corporate exposure in Australia and individual charges on a small number of corporate exposures in India. Impaired loans in the region increased by 4% to US$1.1bn in 2012 due to the downgrade of a number of customers in Australia and Taiwan, partly offset by the restructuring of a significant loan in Singapore following the renegotiation of terms, which is therefore regarded as no longer impaired.

Releases and recoveries in the region decreased by 7%, mainly in India as the cards portfolio continued to run off, and in Thailand following the sale of the RBWM business. These were partly offset by an impairment allowance release in Singapore compared with a charge in 2011.

In the **Middle East and North Africa**, new loan impairment allowances decreased by 2% to US$463m in 2012. New collectively assessed loan impairment allowances declined, primarily in the UAE, due to the improvement in credit quality reflecting the repositioning of the book towards higher quality lending in previous years. New individually assessed loan impairment allowances rose due to significant loan impairment charges recorded for a small number of large exposures in GB&M. Impaired loans remained broadly unchanged compared with 31 December 2011.

Releases and recoveries in the region increased by 14% to US$208m in 2012, mainly relating to a small number of exposures in UAE.

In **North America**, new loan impairment allowances fell sharply, reducing by 50% to US$3.7bn. New collectively assessed loan impairment allowances declined, largely in the CML portfolio due to the reclassification of impairment allowances on non-real estate personal loan balances to 'Assets held for sale' as well as the continued run-off in the residential portfolios. This was partly offset by a portfolio risk factor adjustment of US$225m which was made to increase the collective loan impairment allowances for our US mortgage lending portfolios. The adjustment was made following a review completed in the fourth quarter of 2012 which concluded that the estimated average period of time from current status to write-off was ten months for real estate loans (previously a period of seven months was used). During 2013, this revised estimate will be incorporated into the statistical impairment allowance models. It was also partly offset by new loan impairment allowances by HSBC Bank Bermuda on a small number of exposures. Releases and recoveries in North America declined by 11% to US$214m. This reflected lower levels of impairments being booked due to improving market conditions within the corporate and commercial sector.

Impaired loans decreased by 11% in 2012 to US$20.3bn, due to the continued run-off of the CML portfolio which included the reclassification of certain non-real estate personal loan balances to held for sale.

In **Latin America**, new loan impairment allowances increased by 23% to US$2.5bn. The increase in new collectively assessed loan impairment allowances was mainly in Brazil, driven by higher delinquency rates in RBWM and CMB, particularly in the Business Banking portfolio, reflecting lower economic growth in 2012. Impaired loans were 9% higher than at the end of 2011, driven by past growth in the CMB portfolio in Brazil.

Releases and recoveries in Latin America decreased by 2% from the end of 2011 to US$401m, mainly in Brazil.

For an analysis of loan impairment charges and other credit risk provisions by global business, see page 76.

Further analysis of impairment

Movement in impairment allowances by industry sector and by geographical region

(Unaudited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
Impairment allowances at 1 January 2012	5,292	581	782	1,731	7,239	2,011	17,636
Amounts written off	(2,375)	(219)	(540)	(305)	(4,181)	(2,192)	(9,812)
Personal	(828)	(128)	(347)	(126)	(3,862)	(1,614)	(6,905)
– first lien residential mortgages	(28)	–	(7)	(2)	(1,952)	(70)	(2,059)
– other personal[1]	(800)	(128)	(340)	(124)	(1,910)	(1,544)	(4,846)
Corporate and commercial	(1,428)	(91)	(193)	(154)	(234)	(577)	(2,677)
– manufacturing and international trade and services	(661)	(91)	(164)	(137)	(59)	(498)	(1,610)
– commercial real estate and other property-related	(377)	–	(8)	(6)	(97)	(18)	(506)
– other commercial[9]	(390)	–	(21)	(11)	(78)	(61)	(561)
Financial[2]	(119)	–	–	(25)	(85)	(1)	(230)
Recoveries of amounts written off in previous years	409	31	150	75	129	352	1,146
Personal	354	30	132	50	88	312	966
– first lien residential mortgages	34	4	2	5	46	49	140
– other personal[1]	320	26	130	45	42	263	826
Corporate and commercial	51	1	18	25	38	39	172
– manufacturing and international trade and services	16	1	5	2	7	28	59
– commercial real estate and other property-related	9	–	11	–	19	2	41
– other commercial[9]	26	–	2	23	12	9	72
Financial[2]	4	–	–	–	3	1	8
Charge to income statement	1,874	84	340	255	3,462	2,145	8,160
Personal	348	96	234	57	3,228	1,399	5,362
– first lien residential mortgages	(56)	(11)	14	7	1,986	(30)	1,910
– other personal[1]	404	107	220	50	1,242	1,429	3,452
Corporate and commercial	1,547	(14)	102	169	252	746	2,802
– manufacturing and international trade and services	670	(12)	32	80	62	625	1,457
– commercial real estate and other property-related	444	7	55	62	94	28	690
– other commercial[9]	433	(9)	15	27	96	93	655
Financial[2]	(21)	2	4	29	(18)	–	(4)
Exchange and other movements[18]	161	(4)	14	55	(1,033)	(154)	(961)
At 31 December 2012	**5,361**	**473**	**746**	**1,811**	**5,616**	**2,162**	**16,169**
Impairment allowances against banks:							
– individually assessed	40	–	–	17	–	–	57
Impairment allowances against customers:							
– individually assessed	3,781	192	442	1,323	428	406	6,572
– collectively assessed[17]	1,540	281	304	471	5,188	1,756	9,540
At 31 December 2012	**5,361**	**473**	**746**	**1,811**	**5,616**	**2,162**	**16,169**

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m
Impairment allowances at 1 January 2011	5,740	629	959	1,669	9,234	2,010	20,241
Amounts written off	(2,781)	(210)	(554)	(187)	(6,830)	(1,918)	(12,480)
Personal	(1,685)	(116)	(391)	(172)	(6,591)	(1,476)	(10,431)
– first lien residential mortgages	(25)	–	(6)	(2)	(2,545)	(84)	(2,662)
– other personal[1]	(1,660)	(116)	(385)	(170)	(4,046)	(1,392)	(7,769)
Corporate and commercial	(1,066)	(94)	(161)	(15)	(233)	(440)	(2,009)
– manufacturing and international trade and services	(554)	(64)	(120)	(4)	(100)	(295)	(1,137)
– commercial real estate and other property-related	(265)	(6)	(13)	(10)	(83)	(15)	(392)
– other commercial[9]	(247)	(24)	(28)	(1)	(50)	(130)	(480)
Financial[2]	(30)	–	(2)	–	(6)	(2)	(40)
Recoveries of amounts written off in previous years	572	47	185	102	132	388	1,426
Personal	525	31	168	53	101	297	1,175
– first lien residential mortgages	21	4	3	–	39	19	86
– other personal[1]	504	27	165	53	62	278	1,089
Corporate and commercial	44	16	12	49	30	91	242
– manufacturing and international trade and services	19	16	8	2	8	82	135
– commercial real estate and other property-related	7	–	1	–	8	4	20
– other commercial[9]	18	–	3	47	14	5	87
Financial[2]	3	–	5	–	1	–	9
Charge to income statement	1,902	117	274	292	7,050	1,870	11,505
Personal	610	77	215	124	6,887	1,405	9,318
– first lien residential mortgages	98	(10)	5	42	3,899	69	4,103
– other personal[1]	512	87	210	82	2,988	1,336	5,215
Corporate and commercial	1,277	37	55	146	122	477	2,114
– manufacturing and international trade and services	416	57	35	25	42	326	901
– commercial real estate and other property-related	498	–	9	150	48	59	764
– other commercial[9]	363	(20)	11	(29)	32	92	449
Financial[2]	15	3	4	22	41	(12)	73
Exchange and other movements[18]	(141)	(2)	(82)	(145)	(2,347)	(339)	(3,056)
At 31 December 2011	5,292	581	782	1,731	7,239	2,011	17,636
Impairment allowances against banks:							
– individually assessed	50	–	–	17	58	–	125
Impairment allowances against customers:							
– individually assessed	3,754	288	505	1,250	416	324	6,537
– collectively assessed[17]	1,488	293	277	464	6,765	1,687	10,974
At 31 December 2011	5,292	581	782	1,731	7,239	2,011	17,636

For footnotes, see page 249.

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Movement in impairment allowances by industry sector
(Unaudited)

	2012 US$m	2011 US$m	2010 US$m	2009 US$m	2008 US$m
Impairment allowances at 1 January	**17,636**	20,241	25,649	23,972	19,212
Amounts written off	**(9,812)**	(12,480)	(19,300)	(24,840)	(17,955)
Personal	**(6,905)**	(10,431)	(16,458)	(22,703)	(16,625)
– first lien residential mortgages	**(2,059)**	(2,662)	(4,163)	(4,704)	(2,110)
– other personal[1]	**(4,846)**	(7,769)	(12,295)	(17,999)	(14,515)
Corporate and commercial	**(2,677)**	(2,009)	(2,789)	(1,984)	(1,294)
– manufacturing and international trade and services	**(1,610)**	(1,137)	(1,050)	(1,093)	(789)
– commercial real estate and other property-related	**(506)**	(392)	(1,280)	(327)	(115)
– other commercial[9]	**(561)**	(480)	(459)	(564)	(390)
Financial[2]	**(230)**	(40)	(53)	(153)	(36)
Recoveries of amounts written off in previous years	**1,146**	1,426	1,020	890	834
Personal	**966**	1,175	846	712	686
– first lien residential mortgages	**140**	86	93	61	19
– other personal[1]	**826**	1,089	753	651	667
Corporate and commercial	**172**	242	156	170	142
– manufacturing and international trade and services	**59**	135	92	123	76
– commercial real estate and other property-related	**41**	20	21	9	6
– other commercial[9]	**72**	87	43	38	60
Financial[2]	**8**	9	18	8	6
Charge to income statement	**8,160**	11,505	13,548	24,942	24,131
Personal	**5,362**	9,318	11,187	19,781	20,950
– first lien residential mortgages	**1,910**	4,103	3,461	4,185	5,000
– other personal[1]	**3,452**	5,215	7,726	15,596	15,950
Corporate and commercial	**2,802**	2,114	2,198	4,711	2,879
– manufacturing and international trade and services	**1,457**	901	909	2,392	1,573
– commercial real estate and other property-related	**690**	764	660	1,492	755
– other commercial[9]	**655**	449	629	827	551
Financial[2]	**(4)**	73	163	450	302
Exchange and other movements[18]	**(961)**	(3,056)	(676)	685	(2,250)
At 31 December	**16,169**	17,636	20,241	25,649	23,972
Impairment allowances against banks:					
– individually assessed	**57**	125	158	107	63
Impairment allowances against customers:					
– individually assessed	**6,572**	6,537	6,457	6,494	3,284
– collectively assessed	**9,540**	10,974	13,626	19,048	20,625
At 31 December	**16,169**	17,636	20,241	25,649	23,972

For footnotes, see page 249.

Movement in impairment allowances on loans and advances to customers and banks
(Audited)

	Banks individually assessed US$m	Customers: Individually assessed US$m	Customers: Collectively assessed US$m	Total US$m
2012				
At 1 January	**125**	**6,537**	**10,974**	**17,636**
Amounts written off	**(70)**	**(2,361)**	**(7,381)**	**(9,812)**
Recoveries of loans and advances previously written off	**–**	**199**	**947**	**1,146**
Charge to income statement	**–**	**2,139**	**6,021**	**8,160**
Exchange and other movements[18]	**2**	**58**	**(1,021)**	**(961)**
At 31 December	**57**	**6,572**	**9,540**	**16,169**
Impairment allowances on loans and advances to customers		**6,572**	**9,540**	**16,112**
– personal		**685**	**7,527**	**8,212**
– corporate and commercial		**5,407**	**1,939**	**7,346**
– financial		**480**	**74**	**554**
	%	**%**	**%**	**%**
As a percentage of loans and advances[19,20]	**0.05**	**0.67**	**0.98**	**1.48**
	US$m	US$m	US$m	US$m
2011				
At 1 January	158	6,457	13,626	20,241
Amounts written off	(16)	(1,633)	(10,831)	(12,480)
Recoveries of loans and advances previously written off	–	191	1,235	1,426
Charge to income statement	(16)	1,931	9,590	11,505
Exchange and other movements[18]	(1)	(409)	(2,646)	(3,056)
At 31 December	125	6,537	10,974	17,636
Impairment allowances on loans and advances to customers		6,537	10,974	17,511
– personal		694	9,066	9,760
– corporate and commercial		5,231	1,820	7,051
– financial		612	88	700
	%	%	%	%
As a percentage of loans and advances[19,20]	0.09	0.71	1.20	1.67

For footnotes, see page 249.

Individually and collectively assessed impairment charge to the income statement by industry sector
(Unaudited)

	2012			2011		
	Individually assessed US$m	**Collectively assessed US$m**	**Total US$m**	Individually assessed US$m	Collectively assessed US$m	Total US$m
Banks	**–**	**–**	**–**	(16)	–	(16)
Personal	**96**	**5,266**	**5,362**	141	9,177	9,318
First lien residential mortgages	**40**	**1,870**	**1,910**	104	3,999	4,103
Other personal[1]	**56**	**3,396**	**3,452**	37	5,178	5,215
Corporate and commercial	**2,029**	**773**	**2,802**	1,703	411	2,114
Manufacturing and international trade and services	**910**	**547**	**1,457**	572	329	901
Commercial real estate and other property-related	**604**	**86**	**690**	768	(4)	764
Other commercial[9]	**515**	**140**	**655**	363	86	449
Financial	**14**	**(18)**	**(4)**	87	2	89
Total charge to income statement	**2,139**	**6,021**	**8,160**	1,915	9,590	11,505

For footnotes, see page 249.

Report of the Directors: Operating and Financial Review (continued)

Net loan impairment charge to the income statement
(Unaudited)

	2012 US$m	2011 US$m	2010 US$m	2009 US$m	2008 US$m
Individually assessed impairment allowances	**2,139**	1,915	2,625	4,458	2,064
New allowances	**3,272**	2,904	3,617	5,173	2,742
Release of allowances no longer required	**(934)**	(798)	(847)	(581)	(565)
Recoveries of amounts previously written off	**(199)**	(191)	(145)	(134)	(113)
Collectively assessed impairment allowances	**6,021**	9,590	10,923	20,484	22,067
New allowances net of allowance releases	**6,968**	10,825	11,798	21,240	22,788
Recoveries of amounts previously written off	**(947)**	(1,235)	(875)	(756)	(721)
Total charge for impairment losses	**8,160**	11,505	13,548	24,942	24,131
Banks	**–**	(16)	12	70	54
Customers	**8,160**	11,521	13,536	24,872	24,077
At 31 December					
Impaired loans	**38,776**	41,739	47,064	30,845	25,422
Impairment allowances	**16,169**	17,636	20,241	25,649	23,972

Charge for impairment losses as a percentage of average gross loans and advances to customers by geographical region
(Unaudited)

	Europe %	Hong Kong %	Rest of Asia-Pacific %	MENA %	North America %	Latin America %	Total %
2012							
New allowances net of allowance releases	**0.58**	**0.07**	**0.37**	**1.16**	**2.31**	**4.36**	**1.00**
Recoveries	**(0.10)**	**(0.02)**	**(0.11)**	**(0.26)**	**(0.08)**	**(0.62)**	**(0.12)**
Total charge for impairment losses	**0.48**	**0.05**	**0.26**	**0.90**	**2.23**	**3.74**	**0.88**
Amount written off net of recoveries	**0.50**	**0.11**	**0.30**	**0.81**	**2.57**	**3.21**	**0.93**
2011							
New allowances net of allowance releases	0.59	0.11	0.38	1.46	4.01	3.54	1.34
Recoveries	(0.14)	(0.03)	(0.15)	(0.38)	(0.07)	(0.61)	(0.15)
Total charge for impairment losses	0.45	0.08	0.23	1.08	3.94	2.93	1.19
Amount written off net of recoveries	0.52	0.11	0.31	0.32	3.74	2.39	1.14

Charge for impairment losses as a percentage of average gross loans and advances to customers
(Unaudited)

	2012 %	2011 %	2010 %	2009 %	2008 %
New allowances net of allowance releases	**1.00**	1.34	1.65	2.92	2.54
Recoveries	**(0.12)**	(0.15)	(0.12)	(0.10)	(0.09)
Total charge for impairment losses	**0.88**	1.19	1.53	2.82	2.45
Amount written off net of recoveries	**0.93**	1.14	2.08	2.71	1.75

Loans and advances to customers are excluded from average balances when reclassified to 'Assets held for sale'. Including these loans and advances to customers, the total new allowances net of allowance releases would be 1.00%, recoveries 0.12%, and amounts written off net of recoveries 0.93%.

Reconciliation of reported and constant currency changes by geographical region
(Unaudited)

	31 Dec 11 as reported US$m	Currency translation adjustment[21] US$m	31 Dec 11 at 31 Dec 12 exchange rates US$m	Movement on a constant currency basis US$m	**31 Dec 12 as reported US$m**	**Reported change[22] %**	**Constant currency change[22] %**
Impaired loans							
Europe	11,819	451	12,270	(1,125)	**11,145**	**(6)**	**(9)**
Hong Kong	608	1	609	(132)	**477**	**(22)**	**(22)**
Rest of Asia-Pacific	1,070	27	1,097	50	**1,147**	**7**	**5**
Middle East and North Africa	2,445	(6)	2,439	35	**2,474**	**1**	**1**
North America	22,758	17	22,775	(2,430)	**20,345**	**(11)**	**(11)**
Latin America	3,039	(108)	2,931	257	**3,188**	**5**	**9**
	41,739	382	42,121	(3,345)	**38,776**	**(7)**	**(8)**
Impairment allowances							
Europe	5,292	203	5,495	(134)	**5,361**	**1**	**(2)**
Hong Kong	581	2	583	(110)	**473**	**(19)**	**(19)**
Rest of Asia-Pacific	782	17	799	(53)	**746**	**(5)**	**(7)**
Middle East and North Africa	1,731	(5)	1,726	85	**1,811**	**5**	**5**
North America	7,239	14	7,253	(1,637)	**5,616**	**(22)**	**(23)**
Latin America	2,011	(114)	1,897	265	**2,162**	**8**	**13**
	17,636	117	17,753	(1,584)	**16,169**	**(8)**	**(9)**

For footnotes, see page 249.

Reconciliation of reported and constant currency impairment charge to the income statement

(Unaudited)

	31 Dec 11 as reported US$m	Currency translation adjustment[21] US$m	31 Dec 11 at 31 Dec 12 exchange rates US$m	Movement on a constant currency basis US$m	**31 Dec 12 as reported US$m**	**Reported change[22] %**	**Constant currency change[22] %**
Europe							
Charge for impairment losses	1,902	(47)	1,855	19	**1,874**	**(1)**	**1**
New allowances	3,033	(82)	2,951	92	**3,043**	**0**	**3**
Releases	(560)	29	(531)	(229)	**(760)**	**36**	**43**
Recoveries	(571)	6	(565)	156	**(409)**	**(28)**	**(28)**
Hong Kong							
Charge for impairment losses	117	–	117	(33)	**84**	**(28)**	**(28)**
New allowances	268	–	268	(44)	**224**	**(16)**	**(16)**
Releases	(104)	–	(104)	(5)	**(109)**	**5**	**5**
Recoveries	(47)	–	(47)	16	**(31)**	**(34)**	**(34)**
Rest of Asia-Pacific							
Charge for impairment losses	274	(1)	273	67	**340**	**24**	**25**
New allowances	681	(17)	664	13	**677**	**(1)**	**2**
Releases	(222)	10	(212)	25	**(187)**	**(16)**	**(12)**
Recoveries	(185)	6	(179)	29	**(150)**	**(19)**	**(16)**
MENA							
Charge for impairment losses	292	–	292	(37)	**255**	**(13)**	**(13)**
New allowances	630	–	630	(50)	**580**	**(8)**	**(8)**
Releases	(235)	–	(235)	(15)	**(250)**	**6**	**6**
Recoveries	(103)	–	(103)	28	**(75)**	**(27)**	**(27)**
North America							
Charge for impairment losses	7,050	–	7,050	(3,588)	**3,462**	**(51)**	**(51)**
New allowances	7,566	–	7,566	(3,677)	**3,889**	**(49)**	**(49)**
Releases	(385)	–	(385)	87	**(298)**	**(23)**	**(23)**
Recoveries	(131)	–	(131)	2	**(129)**	**(2)**	**(2)**
Latin America							
Charge for impairment losses	1,870	(217)	1,653	492	**2,145**	**15**	**30**
New allowances	2,421	(239)	2,182	399	**2,581**	**7**	**18**
Releases	(162)	(24)	(186)	102	**(84)**	**(48)**	**(55)**
Recoveries	(389)	46	(343)	(9)	**(352)**	**(10)**	**3**
Total							
Charge for impairment losses	11,505	(265)	11,240	(3,080)	**8,160**	**(29)**	**(27)**
New allowances	14,599	(338)	14,261	(3,267)	**10,994**	**(25)**	**(23)**
Releases	(1,668)	15	(1,653)	(35)	**(1,688)**	**1**	**2**
Recoveries	(1,426)	58	(1,368)	222	**(1,146)**	**(20)**	**(16)**

Concentration of exposure

(Unaudited)

Concentrations of credit risk are described in the Appendix to Risk on page 259.
An analysis of credit quality is provided on page 154.

The diversification of our lending portfolio across the regions, together with our broad range of global businesses and products, ensured that we were not overly dependent on a few countries or markets to generate income and growth in 2012. Our geographical diversification also supported our strategies for growth in faster-growing markets and those with international connectivity.

Trading assets

(Unaudited)

	2012 US$bn	2011 US$bn
Trading securities[23]	**213**	186
Loans and advances to banks	**78**	76
Loans and advances to customers	**118**	69
	409	331

For footnote, see page 249.

The largest concentration of securities held-for-trading within trading assets was in government and government agency debt securities. We had significant exposures to US Treasury and government agency securities (US$28bn) and

UK (US$12bn) and Hong Kong (US$6bn) government securities. For an analysis of securities held for trading, see Note 14 on the Financial Statements.

Financial investments

Our holdings of available-for-sale government and government agency debt securities, corporate debt securities, ABSs and other securities were spread across a wide range of issuers and geographical regions, with 14% invested in securities issued by banks and other financial institutions. We also hold assets backing insurance and investment contracts. For an analysis of financial investments, see Note 20 on the Financial Statements.

Derivatives

Derivative assets were US$357bn at 31 December 2012 (2011: US$346bn), of which the largest concentrations were interest rate and, to a lesser extent, foreign exchange derivatives. Our exposure to derivatives increased, mainly due to a rise in the fair value of interest rate contracts following the downward movements in yield curves in major currencies, largely in Europe. However, this was partly offset by a rise in netting from an increase in trading through clearing houses coupled with the rise in fair values. For an analysis of derivatives, see Note 19 on the Financial Statements.

Loans and advances

Gross loans and advances to customers (excluding the financial sector) of US$932bn increased by US$61bn or 7% at 31 December 2012 compared with 2011, or 5% on a constant currency basis.

The following tables analyse loans by industry sector and by the location of the principal operations of the lending subsidiary or, in the case of the operations of The Hongkong and Shanghai Banking Corporation, HSBC Bank, HSBC Bank Middle East and HSBC Bank USA, by the location of the lending branch.

Gross loans and advances by industry sector
(Unaudited)

	2012 US$m	**Currency effect US$m**	**Movement US$m**	2011 US$m	2010 US$m	2009 US$m	2008 US$m
Personal	**415,093**	**7,741**	**13,727**	393,625	425,320	434,206	440,227
First lien residential mortgages[24]	**301,862**	**6,776**	**16,123**	278,963	268,681	260,669	243,337
Other personal[1]	**113,231**	**965**	**(2,396)**	114,662	156,639	173,537	196,890
Corporate and commercial	**513,493**	**8,376**	**32,301**	472,816	445,512	383,090	407,474
Manufacturing	**112,149**	**1,392**	**14,703**	96,054	91,121	80,487	81,103
International trade and services	**169,389**	**2,727**	**13,953**	152,709	146,573	115,641	128,737
Commercial real estate	**76,760**	**1,544**	**1,275**	73,941	71,880	69,389	70,969
Other property-related	**40,532**	**406**	**587**	39,539	34,838	30,520	30,739
Government	**10,785**	**184**	**(478)**	11,079	8,594	6,689	6,544
Other commercial[9]	**103,878**	**2,123**	**2,261**	99,494	92,506	80,364	89,382
Financial	**81,258**	**1,963**	**(6,924)**	86,219	101,725	96,650	101,085
Non-bank financial institutions	**79,817**	**1,966**	**(7,424)**	85,275	100,163	95,237	99,536
Settlement accounts	**1,441**	**(3)**	**500**	944	1,562	1,413	1,549
Asset-backed securities reclassified	**3,891**	**208**	**(1,597)**	5,280	5,892	7,827	7,991
Total gross loans and advances to customers	**1,013,735**	**18,288**	**37,507**	957,940	978,449	921,773	956,777
Gross loans and advances to banks	**152,603**	**1,439**	**(29,948)**	181,112	208,429	179,888	153,829
Total gross loans and advances (A)	**1,166,338**	**19,727**	**7,559**	1,139,052	1,186,878	1,101,661	1,110,606
Impaired loans and advances	**38,671**	**379**	**(3,292)**	41,584	46,871	30,606	25,352
– as a percentage of A	**3.3%**			4.3%	4.8%	3.3%	2.6%
Impairment allowances on loans and advances	**16,112**	**114**	**(1,513)**	17,511	20,083	25,542	23,909
– as a percentage of A	**1.4%**			1.8%	2.1%	2.8%	2.5%

Gross loans and advances by industry sector (continued)

	2012 US$m	Currency effect US$m	Movement US$m	2011 US$m	2010 US$m	2009 US$m	2008 US$m
	Year ended 31 December						
Charge for impairment losses	**8,160**	**1,558**	**(4,903)**	11,505	13,548	24,942	24,131
New allowances net of allowance releases	**9,306**	**1,500**	**(5,125)**	12,931	14,568	25,832	24,965
Recoveries	**(1,146)**	**58**	**222**	(1,426)	(1,020)	(890)	(834)

For footnotes, see page 249.

The following commentary is on a constant currency basis (see page 179):

Personal lending was 41% of gross lending to customers at 31 December 2012. Personal lending balances of US$415bn were 3% higher than at 31 December 2011 for reasons explained under 'Personal lending' (see page 24). First lien residential mortgage lending continued to represent the Group's largest concentration in a single exposure type, the most significant balances being in the UK (42%), Hong Kong (17%) and the US (16%).

Corporate and commercial lending was 51% of gross lending to customers at 31 December 2012, representing our largest lending category. International trade and services was the biggest portion of the corporate and commercial lending category, which increased by 9% compared with 31 December 2011, mainly in Hong Kong and Rest of Asia-Pacific as we focused on corporate and commercial customers that trade internationally as well as in the UK, despite muted demand for credit. The most significant concentrations of international trade and services lending were in the UK, Hong Kong and Rest of Asia-Pacific. Our concentration in respect of the manufacturing sector increased, mainly driven by higher lending balances in Europe, due to growth in the UK of overdraft balances and corresponding customer accounts which did not meet netting criteria under accounting rules.

Commercial real estate lending represented 8% of total gross lending to customers. Lending increased marginally, as the demand for funds in property investment and development remained strong in Hong Kong. The main concentrations of commercial real estate lending were in the UK and Hong Kong.

Lending to non-bank financial institutions was US$81bn, a decrease of 8% compared with 31 December 2011 due to a decline in reverse repo balances, mainly in Europe. Our exposure was spread across a range of institutions, with the most significant concentration in the UK, France and the US.

Loans and advances to banks were widely distributed across many countries and decreased by 16% in 2012 as reverse repo balances declined, reflecting redeployment of liquidity to central banks, mainly in Europe.

The tables that follow provide information on loans and advances by geographical region and by country. The commentary on these loans and advances can be found in the 'Personal lending' and 'Wholesale lending' sections on pages 147 to 152.

Gross loans and advances to customers by industry sector and by geographical region

(Audited)

	Gross loans and advances to customers							
	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	MENA US$m	North America US$m	Latin America US$m	Total US$m	As a % of total gross loans
At 31 December 2012								
Personal	**186,274**	**70,341**	**49,305**	**6,232**	**84,354**	**18,587**	**415,093**	**41.0**
First lien residential mortgages[24]	**135,172**	**52,296**	**36,906**	**2,144**	**70,133**	**5,211**	**301,862**	**29.8**
Other personal[1]	**51,102**	**18,045**	**12,399**	**4,088**	**14,221**	**13,376**	**113,231**	**11.2**
Corporate and commercial	**223,061**	**99,199**	**85,305**	**22,452**	**47,886**	**35,590**	**513,493**	**50.6**
Manufacturing	**56,690**	**10,354**	**19,213**	**3,373**	**9,731**	**12,788**	**112,149**	**11.1**
International trade and services	**70,954**	**33,832**	**32,317**	**9,115**	**13,419**	**9,752**	**169,389**	**16.6**
Commercial real estate	**33,279**	**23,384**	**9,286**	**865**	**6,572**	**3,374**	**76,760**	**7.6**
Other property-related	**7,402**	**16,399**	**6,641**	**2,103**	**7,607**	**380**	**40,532**	**4.0**
Government	**2,393**	**2,838**	**1,136**	**1,662**	**774**	**1,982**	**10,785**	**1.1**
Other commercial[9]	**52,343**	**12,392**	**16,712**	**5,334**	**9,783**	**7,314**	**103,878**	**10.2**
Financial	**55,732**	**4,546**	**4,255**	**1,196**	**13,935**	**1,594**	**81,258**	**8.0**
Non-bank financial institutions	**55,262**	**4,070**	**3,843**	**1,194**	**13,935**	**1,513**	**79,817**	**7.9**
Settlement accounts	**470**	**476**	**412**	**2**	**–**	**81**	**1,441**	**0.1**
Asset-backed securities reclassified	**3,694**	**–**	**–**	**–**	**197**	**–**	**3,891**	**0.4**
Total gross loans and advances to customers (A)	**468,761**	**174,086**	**138,865**	**29,880**	**146,372**	**55,771**	**1,013,735**	**100.0**
Percentage of A by geographical region	**46.3%**	**17.2%**	**13.7%**	**2.9%**	**14.4%**	**5.5%**	**100.0%**	
Impaired loans	**11,080**	**477**	**1,147**	**2,448**	**20,331**	**3,188**	**38,671**	
– as a percentage of A	**2.4%**	**0.3%**	**0.8%**	**8.2%**	**13.9%**	**5.7%**	**3.8%**	
Total impairment allowances	**5,321**	**473**	**746**	**1,794**	**5,616**	**2,162**	**16,112**	
– as a percentage of A	**1.1%**	**0.3%**	**0.5%**	**6.0%**	**3.8%**	**3.9%**	**1.6%**	
At 31 December 2011								
Personal	166,147	63,181	43,580	5,269	95,336	20,112	393,625	41.1
First lien residential mortgages[24]	119,902	46,817	32,136	1,837	73,278	4,993	278,963	29.1
Other personal[1]	46,245	16,364	11,444	3,432	22,058	15,119	114,662	12.0
Corporate and commercial	204,984	91,592	77,887	21,152	41,271	35,930	472,816	49.3
Manufacturing	45,632	9,004	16,909	3,517	7,888	13,104	96,054	10.0
International trade and services	64,604	29,066	29,605	8,664	10,710	10,060	152,709	15.9
Commercial real estate	32,099	20,828	9,537	1,002	7,069	3,406	73,941	7.7
Other property-related	7,595	17,367	6,396	1,770	5,729	682	39,539	4.1
Government	3,143	2,918	962	1,563	656	1,837	11,079	1.2
Other commercial[9]	51,911	12,409	14,478	4,636	9,219	6,841	99,494	10.4
Financial	63,671	3,473	3,183	1,168	12,817	1,907	86,219	9.0
Non-bank financial institutions	63,313	3,192	2,937	1,162	12,817	1,854	85,275	8.9
Settlement accounts	358	281	246	6	–	53	944	0.1
Asset-backed securities reclassified	4,776	–	–	–	504	–	5,280	0.6
Total gross loans and advances to customers (B)	439,578	158,246	124,650	27,589	149,928	57,949	957,940	100.0
Percentage of B by geographical region	45.9%	16.5%	13.0%	2.9%	15.7%	6.0%	100.0%	
Impaired loans	11,751	604	1,069	2,425	22,696	3,039	41,584	
– as a percentage of B	2.7%	0.4%	0.9%	8.8%	15.1%	5.2%	4.3%	
Total impairment allowances	5,242	581	782	1,714	7,181	2,011	17,511	
– as a percentage of B	1.2%	0.4%	0.6%	6.2%	4.8%	3.5%	1.8%	

For footnotes, see page 249.

Report of the Directors: Operating and Financial Review (continued)

Loans and advances to banks by geographical region

(Unaudited)

	Europe US\$m	Hong Kong US\$m	Rest of Asia-Pacific US\$m	MENA US\$m	North America US\$m	Latin America US\$m	Loans and advances to banks US\$m	Impairment allowances[25] US\$m
At 31 December 2012	**45,320**	**23,500**	**44,592**	**9,198**	**13,465**	**16,528**	**152,603**	**(57)**
At 31 December 2011	54,406	35,159	47,309	8,571	14,831	20,836	181,112	(125)
At 31 December 2010	78,239	33,585	40,437	9,335	19,479	27,354	208,429	(158)
At 31 December 2009	65,614	36,197	35,648	8,435	15,386	18,608	179,888	(107)
At 31 December 2008	62,012	29,646	28,665	7,476	11,458	14,572	153,829	(63)

For footnote, see page 249.

Gross loans and advances to customers by country

(Unaudited)

	First lien residential mortgages US\$m	Other personal US\$m	Property-related US\$m	Commercial, international trade and other US\$m	Total US\$m
At 31 December 2012					
Europe	135,172	51,102	40,681	241,806	468,761
UK	127,024	23,446	30,342	179,799	360,611
France	2,643	10,960	8,465	42,891	64,959
Germany	9	284	126	5,212	5,631
Malta	1,821	563	454	1,631	4,469
Switzerland	298	9,403	66	191	9,958
Turkey	1,062	4,084	317	3,356	8,819
Other	2,315	2,362	911	8,726	14,314
Hong Kong	52,296	18,045	39,783	63,962	174,086
Rest of Asia-Pacific	36,906	12,399	15,927	73,633	138,865
Australia	10,037	1,490	2,311	7,208	21,046
India	1,000	394	521	5,389	7,304
Indonesia	83	508	95	5,349	6,035
Mainland China	3,539	302	5,078	19,083	28,002
Malaysia	5,025	2,175	1,813	5,880	14,893
Singapore	10,123	4,812	3,938	9,854	28,727
Taiwan	3,323	597	120	5,180	9,220
Vietnam	50	252	60	1,710	2,072
Other	3,726	1,869	1,991	13,980	21,566
Middle East and North Africa (excluding Saudi Arabia)	2,144	4,088	2,968	20,680	29,880
Egypt	2	479	124	2,600	3,205
Qatar	11	385	484	1,082	1,962
UAE	1,743	1,822	1,533	12,264	17,362
Other	388	1,402	827	4,734	7,351
North America	70,133	14,221	14,179	47,839	146,372
US	49,417	7,382	9,449	29,315	95,563
Canada	19,040	6,444	4,136	17,369	46,989
Bermuda	1,676	395	594	1,155	3,820
Latin America	5,211	13,376	3,754	33,430	55,771
Argentina	28	1,532	85	2,465	4,110
Brazil	1,745	8,042	1,287	18,022	29,096
Mexico	1,989	2,756	1,280	9,447	15,472
Panama	1,402	1,023	1,049	2,405	5,879
Other	47	23	53	1,091	1,214
	301,862	113,231	117,292	481,350	1,013,735

	First lien residential mortgages US$m	Other personal US$m	Property-related US$m	Commercial, international trade and other US$m	Total US$m
At 31 December 2011					
Europe	119,902	46,245	39,694	233,737	439,578
UK	111,224	22,218	29,191	160,236	322,869
France	3,353	9,305	8,160	49,572	70,390
Germany	10	343	112	4,518	4,983
Malta	1,708	567	520	1,591	4,386
Switzerland	1,803	10,684	156	1,918	14,561
Turkey	767	2,797	255	3,652	7,471
Other	1,037	331	1,300	12,250	14,918
Hong Kong	46,817	16,364	38,195	56,870	158,246
Rest of Asia-Pacific	32,136	11,444	15,933	65,137	124,650
Australia	9,251	1,327	2,357	6,073	19,008
India	830	461	809	3,914	6,014
Indonesia	81	463	97	4,577	5,218
Mainland China	2,769	317	5,078	15,665	23,829
Malaysia	4,329	2,166	1,351	5,898	13,744
Singapore	7,919	4,108	3,690	9,433	25,150
Taiwan	3,062	550	139	4,555	8,306
Vietnam	42	184	42	1,397	1,665
Other	3,853	1,868	2,370	13,625	21,716
Middle East and North Africa (excluding Saudi Arabia)	1,837	3,432	2,772	19,548	27,589
Egypt	2	441	100	2,775	3,318
Qatar	9	445	354	1,098	1,906
UAE	1,520	1,882	1,464	12,070	16,936
Other	306	664	854	3,605	5,429
North America	73,278	22,058	12,798	41,794	149,928
US	52,484	14,087	7,850	27,307	101,728
Canada	19,045	7,518	4,391	13,600	44,554
Bermuda	1,749	453	557	887	3,646
Latin America	4,993	15,119	4,088	33,749	57,949
Argentina	32	1,379	114	2,331	3,856
Brazil	1,657	9,802	1,660	18,638	31,757
Mexico	1,847	2,261	1,284	8,210	13,602
Panama	1,240	1,014	923	2,537	5,714
Other	217	663	107	2,033	3,020
	278,963	114,662	113,480	450,835	957,940

HSBC Holdings

(Audited)

Risk in HSBC Holdings is overseen by the HSBC Holdings Asset and Liability Management Committee ('ALCO'). The major risks faced by HSBC Holdings are credit risk and market risk (in the form of interest rate risk and foreign exchange risk), of which the most significant is credit risk.

Credit risk in HSBC Holdings primarily arises from transactions with Group subsidiaries and from guarantees issued in support of obligations assumed by certain Group operations in the normal conduct of their business.

These risks are reviewed and managed within regulatory and internal limits for exposures by our Global Risk function, which provides high-level centralised oversight and management of our credit risks worldwide.

HSBC Holdings' maximum exposure to credit risk at 31 December 2012 is shown below. Its financial assets principally represent claims on Group subsidiaries in Europe and North America.

All of the derivative transactions are with HSBC undertakings which are banking counterparties (2011: 100%) and for which HSBC Holdings has in place master netting arrangements. From 2012, the credit risk exposure has been managed on a net basis and the remaining net exposure specifically collateralised in the form of cash.

HSBC Holdings – maximum exposure to credit risk

(Audited)

	At 31 December 2012			At 31 December 2011		
	Maximum exposure US\$m	**Offset US\$m**	**Exposure to credit risk (net) US\$m**	Maximum exposure US\$m	Offset US\$m	Exposure to credit risk (net) US\$m
Cash at bank and in hand:						
– balances with HSBC undertakings	**353**	**–**	**353**	316	–	316
Derivatives	**3,768**	**(3,768)**	**–**	3,568	–	3,568
Loans and advances to HSBC undertakings	**41,675**	**–**	**41,675**	28,048	–	28,048
Financial investments	**1,208**	**–**	**1,208**	1,078	–	1,078
Financial guarantees and similar contracts	**49,402**	**–**	**49,402**	49,402	–	49,402
Loan and other credit-related commitments	**1,200**	**–**	**1,200**	1,810	–	1,810
	97,606	**(3,768)**	**93,838**	84,222	–	84,222

The credit quality of the loans and advances to HSBC undertakings is assessed as 'strong' or 'good', with 100% of the exposure being neither past due nor impaired (2011: 100%). The financial investments held by HSBC Holdings were rated by Standard and Poor's ('S&P') at A– (2011: within the range of A to A–).

Securitisation exposures and other structured products

(Audited)

This section contains information about our exposure to the following:

- asset-backed securities ('ABS's), including mortgage-backed securities ('MBS's) and related collateralised debt obligations ('CDO's);
- direct lending at fair value through profit or loss;
- monoline insurance companies ('monolines');
- leveraged finance transactions; and
- representations and warranties related to mortgage sales and securitisation activities.

Within the above is included information on the GB&M legacy credit activities in respect of Solitaire, the securities investment conduits ('SIC's), the ABSs trading portfolios and derivative transactions with monolines. Further information in respect of Solitaire and the SICs is provided in Note 42 on the Financial Statements.

Accounting policies

Our accounting policies for the classification and measurement of financial instruments are in accordance with the requirements of IAS 32 'Financial Instruments: Presentation' and IAS 39 'Financial Instruments: Recognition and Measurement', as described in Note 2 on the Financial Statements, and the use of assumptions and estimates in respect of the valuation of financial instruments is described in Note 15 on the Financial Statements.

Business model
(Unaudited)

Balance Sheet Management (see page 222) holds ABSs primarily issued by government agency and sponsored enterprises as part of our investment portfolios.

Our investment portfolios include SICs and money market funds. We also originate leveraged finance loans for the purpose of syndicating or selling them down to generate trading profit or holding them to earn interest margin over their lives.

Exposure in 2012
(Audited)

2012 saw an improvement in the US housing market with home prices rising during the year. This improvement coincided with decreasing concerns around sovereign credit, particularly in the second half of the year, and gave rise to price appreciation across this range of ABS asset classes. Unrealised losses in our available-for-sale portfolios reduced in the year from US$5.1bn to US$2.2bn, mainly as a result of price appreciation.

Within the following table are assets held in the GB&M legacy credit portfolio with a carrying value of US$31.6bn (2011: US$35.4bn).

A summary of the nature of HSBC's exposures is provided in the Appendix to Risk on page 259.

Overall exposure of HSBC
(Audited)

	At 31 December 2012		At 31 December 2011	
	Carrying amount[26] US$bn	Including sub-prime and Alt-A US$bn	Carrying amount[26] US$bn	Including sub-prime and Alt-A US$bn
Asset-backed securities	59.0	7.0	65.6	6.9
– fair value through profit or loss	3.4	0.2	3.0	0.2
– available for sale[27]	49.6	6.1	54.6	5.7
– held to maturity[27]	1.6	0.1	2.0	0.2
– loans and receivables	4.4	0.6	6.0	0.8
Direct lending at fair value through profit or loss	1.0	0.6	1.2	0.8
Total asset-backed securities and direct lending at fair value through profit or loss	60.0	7.6	66.8	7.7
Less securities subject to risk mitigation from credit derivatives with monolines and other financial institutions	(1.9)	(0.2)	(1.9)	(0.2)
	58.1	7.4	64.9	7.5
Leveraged finance loans	2.8	–	3.6	–
– fair value through profit or loss	–	–	0.2	–
– loans and receivables	2.8	–	3.4	–
	60.9	7.4	68.5	7.5
Exposure including securities subject to risk mitigation from credit derivatives with monolines and other financial institutions	62.8	7.6	70.4	7.7

For footnotes, see page 249.

ABSs classified as available for sale

Our principal holdings of available-for-sale ABSs are in GB&M through special purpose entities ('SPE's), which were established from the outset with the benefit of external investor first loss protection support, together with positions held directly and by Solitaire, where we provide first loss protection of US$1.2bn through credit enhancement and a liquidity facility.

Movement in the available-for-sale reserve
(Audited)

	2012			2011		
	Directly held/ Solitaire[28]	**SPEs**	**Total**	Directly held/ Solitaire[28]	SPEs	Total
	US$m	**US$m**	**US$m**	US$m	US$m	US$m
Available-for-sale reserve at 1 January	**(3,085)**	**(2,061)**	**(5,146)**	(4,102)	(2,306)	(6,408)
Increase/(decrease) in fair value of securities	**1,195**	**914**	**2,109**	622	(137)	485
Effect of impairments[29]	**339**	**394**	**733**	383	339	722
Repayment of capital	**164**	**174**	**338**	162	183	345
Other movements	**(86)**	**(141)**	**(227)**	(150)	(140)	(290)
Available-for-sale reserve at 31 December	**(1,473)**	**(720)**	**(2,193)**	(3,085)	(2,061)	(5,146)

For footnotes, see page 249.

Securities investment conduits

(Unaudited)

The total carrying amount of ABSs held through SPEs in the above table represents holdings in which significant first loss protection is provided through capital notes issued by SICs, excluding Solitaire.

At each reporting date, we assess whether there is any objective evidence of impairment in the value of the ABSs held by SPEs. Impairment charges incurred on these assets are offset by a credit to the impairment line for the amount of the loss allocated to capital note holders, subject to the carrying amount of the capital notes being sufficient to offset the loss. During the year impairment charges in one SPE, Mazarin Funding Ltd ('Mazarin'), exceeded the carrying value of the capital notes liability and a charge of US$119m (2011: US$26m) was borne by HSBC as shown in the table below. In respect of the SICs, the capital notes held by third parties are expected to absorb the cash losses in the vehicles.

Available-for-sale reserve and economic first loss protection in SICs, excluding Solitaire
(Unaudited)

	SICs excluding Solitaire at 31 December	
	2012	2011
	US$m	US$m
Available-for-sale reserve	**(787)**	(2,701)
– related to asset-backed securities	**(720)**	(2,061)
Economic first loss protection	**2,286**	2,286
Carrying amount of capital notes liability	**249**	154
Impairment charge for the year:		
– borne by HSBC	**119**	26
– allocated to capital note holders	**–**	313

Impairment methodologies

(Audited)

The accounting policy for impairment and indicators of impairment is set out in Note 2 on the Financial Statements.

A summary of our impairment methodologies is provided in the Appendix to Risk on page 260.

Analysis of exposures and significant movements

(Audited)

Sub-prime residential mortgage-related assets

The assets in the table below included US$2.2bn (2011: US$2.4bn) relating to US-originated assets and US$1.3bn (2011: US$1.0bn) relating to UK non-conforming residential mortgage-related assets.

At 31 December 2012, 13% (US$0.5bn) of our sub-prime residential mortgage-related assets were rated AA or AAA (2011: 25% (US$0.9bn)).

Carrying amount of HSBC's consolidated holdings of ABSs, and direct lending held at fair value through profit or loss[26]
(Audited)

	Trading US$m	Available for sale US$m	Held to maturity US$m	Designated at fair value through profit or loss US$m	Loans and receivables US$m	Total US$m	Of which held through consolidated SPEs US$m	Gross principal exposure[30] US$m	Credit default swap protection[31] US$m	Net principal exposure[32] US$m
At 31 December 2012										
Mortgage-related assets:										
Sub-prime residential	698	2,455	–	–	435	3,588	2,723	5,483	130	5,353
Direct lending	566	–	–	–	–	566	482	1,221	–	1,221
MBSs and MBS CDOs	132	2,455	–	–	435	3,022	2,241	4,262	130	4,132
US Alt-A residential	157	3,658	118	–	157	4,090	2,994	6,992	100	6,892
Direct lending	71	–	–	–	–	71	–	77	–	77
MBSs	86	3,658	118	–	157	4,019	2,994	6,915	100	6,815
US Government agency and sponsored enterprises:										
MBSs	369	23,341	1,455	–	–	25,165	–	23,438	–	23,438
Other residential	695	2,084	–	–	499	3,278	1,459	3,888	87	3,801
Direct lending	322	–	–	–	–	322	–	322	–	322
MBSs	373	2,084	–	–	499	2,956	1,459	3,566	87	3,479
Commercial property										
MBSs and MBS CDOs	164	6,995	–	109	1,319	8,587	5,959	9,489	–	9,489
	2,083	38,533	1,573	109	2,410	44,708	13,135	49,290	317	48,973
Leveraged finance-related assets:										
ABSs and ABS CDOs	450	5,330	–	–	284	6,064	4,303	6,726	717	6,009
Student loan-related assets:										
ABSs and ABS CDOs	179	4,219	–	–	156	4,554	3,722	5,826	199	5,627
Other assets:										
ABSs and ABS CDOs	1,511	1,553	–	49	1,537	4,650	1,140	5,769	1,318	4,451
	4,223	49,635	1,573	158	4,387	59,976	22,300	67,611	2,551	65,060

Carrying amount of HSBC's consolidated holdings of ABSs, and direct lending held at fair value through profit or loss[26] (continued)

	Trading US$m	Available for sale US$m	Held to maturity US$m	Designated at fair value through profit or loss US$m	Loans and receivables US$m	Total US$m	Of which held through consolidated SPEs US$m	Gross principal exposure[30] US$m	Credit default swap protection[31] US$m	Net principal exposure[32] US$m
At 31 December 2011										
Mortgage-related assets:										
Sub-prime residential	896	2,134	–	–	598	3,628	2,367	6,222	275	5,947
Direct lending	733	–	–	–	–	733	487	1,684	–	1,684
MBSs and MBS CDOs	163	2,134	–	–	598	2,895	1,880	4,538	275	4,263
US Alt-A residential	190	3,516	166	–	243	4,115	2,827	8,610	100	8,510
Direct lending	114	–	–	–	–	114	–	119	–	119
MBSs	76	3,516	166	–	243	4,001	2,827	8,491	100	8,391
US Government agency and sponsored enterprises:										
MBSs	38	26,152	1,813	–	–	28,003	–	26,498	–	26,498
Other residential	670	3,286	–	–	978	4,934	2,098	5,702	–	5,702
Direct lending	314	–	–	–	–	314	–	309	–	309
MBSs	356	3,286	–	–	978	4,620	2,098	5,393	–	5,393
Commercial property										
MBSs and MBS CDOs	300	7,240	–	107	1,816	9,463	5,795	11,222	–	11,222
	2,094	42,328	1,979	107	3,635	50,143	13,087	58,254	375	57,879
Leveraged finance-related assets:										
ABSs and ABS CDOs	362	5,566	–	–	347	6,275	4,324	7,112	782	6,330
Student loan-related assets:										
ABSs and ABS CDOs	179	4,665	–	–	153	4,997	4,114	6,681	199	6,482
Other assets:										
ABSs and ABS CDOs	1,477	2,044	–	94	1,818	5,433	1,473	7,539	1,391	6,148
	4,112	54,603	1,979	201	5,953	66,848	22,998	79,586	2,747	76,839

For footnotes, see page 249.
The above table excludes leveraged finance transactions, which are shown separately on page 190.

Of the non-high grade assets held of US$3.1bn (2011: US$2.7bn), US$1.4bn (2011: US$1.2bn) related to US-originated assets.

There was an increase in market prices for sub-prime assets during the course of 2012. Write-backs of US$44m on assets were recognised in 2012 (2011: impairments of US$42m). Of the above write-backs, there were US$67m of write-backs (2011: US$5m of write-backs) in the SICs, of which US$27m (2011: US$5m) were attributed to capital noteholders.

US Alt-A residential mortgage-related assets

In respect of US Alt-A securities, there were write-backs of US$19m (2011: impairments of US$687m). Despite the overall write-backs, impairments of US$190m (2011: US$344m) occurred in the SICs, of which US$32m (2011: US$318m) was borne by the capital noteholders.

At 31 December 2012, 5% (US$0.2bn) of these assets were rated AA or AAA (2011: 9% (US$0.4bn)).

Commercial property mortgage-related assets

Of our total of US$8.6bn (2011: US$9.5bn) of commercial property mortgage-related assets, US$4.1bn related to US-originated assets (2011: US$4.9bn). Spreads tightened on both US and non-US commercial property mortgage-related assets during 2012. Impairments of US$125m were recognised in 2012 (2011: US$36m).

Transactions with monoline insurers

(Audited)

HSBC's exposure to derivative transactions entered into directly with monolines

Our principal exposure to monolines is through a number of OTC derivative transactions, mainly CDSs. We entered into these CDSs primarily to purchase credit protection against securities held at the time within the trading portfolio.

During 2012, our overall credit exposure to monolines decreased, primarily as a result of the tightening of credit spreads which reduced the fair value of the derivatives. The table below sets out the fair value, essentially the replacement cost, of the remaining derivative transactions at 31 December 2012, and hence the amount at risk if the CDS protection purchased were to be wholly ineffective because, for example, the monoline insurer was unable to meet its obligations. In order to further analyse that risk, the value of protection purchased is shown subdivided between those monolines that were rated by S&P at 'BBB- or above' at 31 December 2012, and those that were 'below BBB–' (BBB– is the S&P cut-off for an investment grade classification). The 'Credit valuation adjustment' column indicates the valuation adjustment taken against the net exposures, and reflects our best estimate of the likely loss of value on purchased protection arising from the deterioration in creditworthiness of the monolines. These valuation adjustments, which reflect a measure of the irrecoverability of the protection purchased, have been charged to the income statement.

HSBC's exposure to derivative transactions entered into directly with monoline insurers
(Audited)

	Notional amount US$m	Net exposure before credit valuation adjustment[33] US$m	Credit valuation adjustment[34] US$m	Net exposure after credit valuation adjustment US$m
At 31 December 2012				
Derivative transactions with monoline counterparties				
Monoline – investment grade (BBB– or above)	**4,191**	**606**	**(121)**	**485**
Monoline – sub-investment grade (below BBB–)	**957**	**303**	**(158)**	**145**
	5,148	**909**	**(279)**	**630**
At 31 December 2011				
Derivative transactions with monoline counterparties				
Monoline – investment grade (BBB– or above)	4,936	873	(87)	786
Monoline – sub-investment grade (below BBB–)	1,552	370	(217)	153
	6,488	1,243	(304)	939

For footnotes, see page 249.

Report of the Directors: Operating and Financial Review (continued)

Market prices are generally not readily available for CDSs, so they are valued on the basis of market prices of the referenced securities.

As described on page 56, during 2012 we amended our methodology for the calculation of credit valuation adjustments and debit valuation adjustments to reflect evolving market practice. As a result, our monoline credit and debit valuation adjustment calculations utilise a methodology based on CDS spreads with no adjustments being made based on the credit rating of the monoline.

Credit valuation adjustments for monolines

For monolines, the standard credit valuation adjustment methodology (as described on page 56) applies, with the exception that the future exposure profile is deemed to be constant (equal to the current market value) over the weighted average life of the referenced security.

HSBC's exposure to debt securities which benefit from guarantees provided by monolines

Within both the trading and available-for-sale portfolios, we hold bonds that are 'wrapped' with a credit enhancement from a monoline. As the bonds are traded explicitly with the benefit of this enhancement, any deterioration in the credit profile of the monoline is reflected in market prices and, therefore, in the carrying amount of these securities at 31 December 2012. For wrapped bonds held in our trading portfolio, the mark-to-market movement is reflected through the income statement. For wrapped bonds held in the available-for-sale portfolio, the mark-to-market movement is reflected in equity unless there is objective evidence of impairment, in which case the impairment loss is reflected in the income statement. No wrapped bonds were included in the reclassification of financial assets described in Note 17 on the Financial Statements.

Leveraged finance transactions

(Audited)

Leveraged finance transactions include sub-investment grade acquisition or event-driven financing. The following table shows our exposure to leveraged finance transactions arising from primary transactions. Our additional exposure to leveraged finance loans through holdings of ABSs from our trading and investment activities is shown in the table on page 187.

We held leveraged finance commitments of US$2.8bn at 31 December 2012 (2011: US$3.7bn), of which US$2.6bn (2011: US$3.3bn) was funded.

At 31 December 2012, our principal exposures were to companies in two sectors: US$0.7bn to data processing (2011: US$1.3bn) and US$1.8bn to communications and infrastructure (2011: US$1.9bn).

HSBC's exposure to leveraged finance transactions
(Audited)

	Exposures at 31 December 2012			Exposures at 31 December 2011		
	Funded[35]	**Unfunded[36]**	**Total**	Funded[35]	Unfunded[36]	Total
	US$m	**US$m**	**US$m**	US$m	US$m	US$m
Europe	**2,108**	**162**	**2,270**	2,795	253	3,048
North America	**414**	**92**	**506**	445	126	571
	2,522	**254**	**2,776**	3,240	379	3,619
Held within:						
– loans and receivables	**2,522**	**252**	**2,774**	3,120	328	3,448
– fair value through profit or loss	**–**	**2**	**2**	120	51	171

For footnotes, see page 249.

Representations and warranties related to mortgage sales and securitisation activities

(Unaudited)

We have been involved in various activities related to the sale and securitisation of residential mortgages which are not recognised on our balance sheet. These activities include:

- the purchase of US$24bn of third-party originated mortgages by HSBC Bank USA and the securitisation of these by HSBC Securities (USA) Inc. ('HSI') between 2005 and 2007;
- HSI acting as underwriter for third-party issuance of private label MBSs with an original issuance value of US$37bn, most of which were sub-prime; and
- the origination and sale by HSBC Bank USA of mortgage loans, primarily to government sponsored entities.

In sales and securitisations of mortgage loans, various representations and warranties regarding the loans may be made to purchasers of the mortgage loans and MBSs. In respect of the purchase and securitisation of third party originated mortgages and the underwriting of third party MBSs, the obligation to repurchase loans in the event of a breach of loan level representations and warranties resides predominantly with the organisation that originated the loan.

Participants in the US mortgage securitisation market that purchased and repackaged whole loans have been the subject of lawsuits and governmental and regulatory investigations and inquiries which have been directed at groups within the US mortgage market such as servicers, originators, underwriters, trustees or sponsors of securitisations. Further information is provided in Note 43 on the Financial Statements.

At 31 December 2012, a liability of US$219m was recognised in respect of various representations and warranties relating to the origination and sale by HSBC Bank USA of mortgage loans, primarily to government sponsored entities (2011: US$237m). These relate to, among other things, the ownership of the loans, the validity of the liens, the loan selection and origination process and compliance with the origination criteria established by the agencies. In the event of a breach of our representations and warranties, HSBC Bank USA may be obliged to repurchase the loans with identified defects or to indemnify the buyers. The liability is estimated based on the level of outstanding repurchase demands, the level of outstanding requests for loan files and estimated future demands in respect of mortgages sold to date which are either two or more payments delinquent or expected to become delinquent at an estimated conversion rate. Repurchase demands of US$89m were outstanding at 2012 (2011: US$113m).

Eurozone exposures

(Unaudited)

Exposures to countries in the eurozone

(Audited)

The tables in this section summarise our exposures to selected eurozone countries, including:

- governments and central banks along with quasi government agencies;
- banks;
- other financial institutions and corporates; and
- personal lending.

Exposures to banks, other financial institutions, other corporates and personal lending are based upon the counterparty's country of domicile.

Basis of preparation

The gross exposure represents the on-balance sheet carrying amounts recorded in accordance with IFRSs and off-balance sheet exposures.

The net exposure is stated after taking into account mitigating offsets that are incorporated into the risk management view of the exposure but do not meet accounting offset requirements. These risk mitigating offsets include:

- short positions managed together with trading assets;
- derivative liabilities for which a legally enforceable right of offset with derivative assets exists; and
- collateral received on derivative assets.

Short positions managed together with trading assets mitigate risk to which HSBC is exposed at the balance sheet date when, in the event of default, the trading asset and related short position crystallise gains and losses simultaneously. When such relationships exist, an element of the risk will remain where the short and long positions do not match exactly, for example, the maturity of the short position is less than the trading asset or the short position does not represent an identical security. The remaining risk is reflected in the gross balance sheet exposure shown before risk mitigation. However, as the net position best reflects the effects of a credit event should it occur at the balance sheet date, we consider that this measure is a key view of risk at that date.

Credit risk mitigation includes derivative liabilities with the same counterparty when a master netting arrangement is in place and the credit risk exposure is managed on a net basis or the position is specifically collateralised, normally in the form of cash. These amounts do not qualify for net presentation for accounting purposes as settlement may not actually be made on a net basis, though we consider the net presentation more accurately reflects the risk exposure.

The effect of the transfer of risk to policyholders under unit-linked insurance contracts, as well as trading assets which represent collateral to support associated liabilities, are separately disclosed in the detailed peripheral country exposures, but are not deducted from the total net exposure.

CDSs reported in the detailed peripheral eurozone country tables are not included in the derivative exposure line as they are typically transacted with counterparties incorporated or domiciled outside the country whose exposure they reference.

Credit default swaps and off-balance sheet exposures

The CDSs were transacted with banks with investment grade credit ratings, and would pay out in the event of the default of the referenced security and certain other credit events. CDS contracts disclosed in the tables below were principally entered into for customer facilitation with banks and financial institutions where their terms are typically drawn up in accordance with the guidance set out in the 2003 ISDA Credit Derivatives Definitions and the 2009 Supplement. The credit events that trigger the payout of CDSs may differ as they are based on the terms of each agreement between the counterparties. Such credit events normally include bankruptcy, payment default on a reference asset or assets, restructuring and repudiation or moratoria.

Off-balance sheet exposures mainly relate to commitments to lend and the amounts shown in the tables represent the amounts that could be drawn down by the counterparties. In some instances, limitations are imposed on a counterparty's ability to draw down on a facility. These limitations are governed by the documentation, which differs from counterparty to counterparty. In the majority of cases, we are bound to fulfil commitments made to third parties.

Summary of exposures to eurozone countries
(Unaudited)

	On-balance sheet exposures US$bn	Off-balance sheet exposures US$bn	Total gross exposures US$bn	Risk mitigation US$bn	Total net exposure US$bn
At 31 December 2012					
Spain	**15.3**	**3.2**	**18.5**	**(6.4)**	**12.1**
Ireland	**20.7**	**1.3**	**22.0**	**(12.1)**	**9.9**
Italy	**12.6**	**3.0**	**15.6**	**(6.0)**	**9.6**
Greece	**5.9**	**0.7**	**6.6**	**(0.8)**	**5.8**
Portugal	**1.1**	**0.3**	**1.4**	**(0.4)**	**1.0**
Cyprus	**0.3**	**0.1**	**0.4**	**–**	**0.4**
France	**158.3**	**28.0**	**186.3**	**(40.8)**	**145.5**
Germany	**112.4**	**11.6**	**124.0**	**(56.6)**	**67.4**
The Netherlands	**39.7**	**4.1**	**43.8**	**(14.4)**	**29.4**
Others	**38.0**	**4.9**	**42.9**	**(14.3)**	**28.6**
	404.3	**57.2**	**461.5**	**(151.8)**	**309.7**
At 31 December 2011					
Spain	15.7	2.0	17.7	(5.4)	12.3
Ireland	14.1	0.3	14.4	(8.6)	5.8
Italy	16.4	1.4	17.8	(9.4)	8.4
Greece	6.6	1.6	8.2	(0.6)	7.6
Portugal	1.7	–	1.7	(0.6)	1.1
Cyprus	0.2	0.2	0.4	–	0.4
France	154.8	26.5	181.3	(31.3)	150.0
Germany	86.3	10.1	96.4	(38.0)	58.4
The Netherlands	70.1	1.8	71.9	(6.2)	65.7
Others	36.1	4.0	40.1	(14.0)	26.1
	402.0	47.9	449.9	(114.1)	335.8

Exposures to peripheral eurozone countries

Exposures to Spain

(Audited)

	At 31 December 2012					At 31 December 2011				
	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
Cash and balances at central banks	–	–	–	–	–	0.1	–	–	–	0.1
Loans and advances	–	0.1	5.0	–	5.1	–	0.2	5.6	–	5.8
– gross	–	0.1	5.1	–	5.2	–	0.2	5.7	–	5.9
– impairment allowances	–	–	(0.1)	–	(0.1)	–	–	(0.1)	–	(0.1)
Financial investments available for sale[37]	0.4	0.3	0.1	–	0.8	0.9	0.4	0.1	–	1.4
– amortised cost	0.2	0.4	0.1	–	0.7	0.9	0.4	0.1	–	1.4
Trading assets	1.4	1.9	0.1	–	3.4	1.8	2.4	0.2	–	4.4
Derivative assets	0.1	4.8	1.1	–	6.0	0.2	3.6	0.2	–	4.0
Gross balance sheet exposure before risk mitigation	1.9	7.1	6.3	–	15.3	3.0	6.6	6.1	–	15.7
Risk mitigation	(0.9)	(4.6)	(0.9)	–	(6.4)	(1.8)	(3.5)	(0.1)	–	(5.4)
– short trading positions	(0.9)	(0.1)	(0.1)	–	(1.1)	(1.7)	(0.4)	(0.1)	–	(2.2)
– collateral and derivative liabilities	–	(4.5)	(0.8)	–	(5.3)	(0.1)	(3.1)	–	–	(3.2)
Net on-balance sheet exposure	1.0	2.5	5.4	–	8.9	1.2	3.1	6.0	–	10.3
Off-balance sheet exposures	–	0.3	2.9	–	3.2	1.0	0.4	0.6	–	2.0
– commitments	–	–	2.3	–	2.3	1.0	–	0.1	–	1.1
– guarantees and other	–	0.3	0.6	–	0.9	–	0.4	0.5	–	0.9
Total net exposure	1.0	2.8	8.3	–	12.1	2.2	3.5	6.6	–	12.3
Of which:										
– net trading assets representing cash collateral posted	–	1.5	–	–	1.5	0.1	1.3	–	–	1.4
– on-balance sheet exposures held to meet DPF insurance liabilities	0.2	0.3	0.1	–	0.6	0.4	0.4	0.1	–	0.9
Total credit default swaps										
– CDS bought positions	0.4	–	–	–	0.4	0.4	0.1	0.1	–	0.6
– CDS sold positions	(0.3)	–	–	–	(0.3)	(0.4)	(0.1)	(0.1)	–	(0.6)
– CDS bought notionals	6.8	2.8	1.2	–	10.8	3.3	1.5	1.4	–	6.2
– CDS sold notionals	6.4	2.7	1.2	–	10.3	3.5	1.4	1.3	–	6.2

For footnote, see page 249.
For commentary, see page 199.

Exposures to Ireland

(Audited)

	At 31 December 2012					At 31 December 2011				
	Sovereign and agencies US$bn	**Banks US$bn**	**Other financial institutions and corporates US$bn**	**Personal US$bn**	**Total US$bn**	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
Loans and advances	–	0.1	2.5	0.1	2.7	–	0.1	2.1	0.1	2.3
– gross	–	0.1	2.5	0.2	2.8	–	0.1	2.1	0.2	2.4
– impairment allowances	–	–	–	(0.1)	(0.1)	–	–	–	(0.1)	(0.1)
Financial investments held to maturity	–	0.2	–	–	0.2	–	0.2	–	–	0.2
– fair value	–	0.2	–	–	0.2	–	0.2	–	–	0.2
Financial investments available for sale	0.1	–	2.3	–	2.4	0.1	0.4	0.3	–	0.8
– amortised cost	0.1	–	2.5	–	2.6	0.1	0.4	0.4	–	0.9
– available-for-sale reserve	–	–	(0.2)	–	(0.2)	–	–	(0.1)	–	(0.1)
Trading assets	0.3	1.5	0.8	–	2.6	0.3	0.9	0.3	–	1.5
Derivative assets	0.7	11.1	1.0	–	12.8	0.3	8.3	0.7	–	9.3
Gross balance sheet exposure before risk mitigation	1.1	12.9	6.6	0.1	20.7	0.7	9.9	3.4	0.1	14.1
Risk mitigation	(0.7)	(11.1)	(0.3)	–	(12.1)	(0.4)	(8.0)	(0.2)	–	(8.6)
– short trading positions	(0.1)	–	–	–	(0.1)	(0.1)	–	–	–	(0.1)
– collateral and derivative liabilities	(0.6)	(11.1)	(0.3)	–	(12.0)	(0.3)	(8.0)	(0.2)	–	(8.5)
Net on-balance sheet exposure	0.4	1.8	6.3	0.1	8.6	0.3	1.9	3.2	0.1	5.5
Off-balance sheet exposures	–	–	1.3	–	1.3	–	–	0.3	–	0.3
– commitments	–	–	1.1	–	1.1	–	–	0.1	–	0.1
– guarantees and others	–	–	0.2	–	0.2	–	–	0.2	–	0.2
Total net exposure	0.4	1.8	7.6	0.1	9.9	0.3	1.9	3.5	0.1	5.8
Of which:										
– net trading assets representing cash collateral posted	0.1	1.5	–	–	1.6	0.1	0.6	–	–	0.7
– on-balance sheet exposures held to meet DPF insurance liabilities	0.1	0.2	–	–	0.3	0.1	0.2	–	–	0.3
Total credit default swaps										
– CDS bought positions	–	–	–	–	–	0.2	–	–	–	0.2
– CDS sold positions	–	–	–	–	–	(0.2)	–	–	–	(0.2)
– CDS bought notionals	1.5	–	0.5	–	2.0	0.9	–	0.3	–	1.2
– CDS sold notionals	1.5	–	0.2	–	1.7	0.9	–	0.3	–	1.2

For commentary, see page 199.

Exposures to Italy
(Audited)

	At 31 December 2012					At 31 December 2011				
	Sovereign and agencies US$bn	**Banks US$bn**	**Other financial institutions and corporates US$bn**	**Personal US$bn**	**Total US$bn**	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
Loans and advances	**–**	**0.1**	**1.2**	**0.1**	**1.4**	–	0.5	1.4	0.1	2.0
– gross	**–**	**0.1**	**1.2**	**0.1**	**1.4**	–	0.5	1.4	0.1	2.0
Financial investments held to maturity	**0.1**	**0.2**	**–**	**–**	**0.3**	0.1	0.2	–	–	0.3
– fair value	**0.1**	**0.2**	**–**	**–**	**0.3**	0.1	0.2	–	–	0.3
Financial investments available for sale[37]	**0.8**	**0.3**	**0.3**	**–**	**1.4**	0.8	0.3	0.3	–	1.4
– amortised cost	**0.8**	**0.3**	**0.3**	**–**	**1.4**	0.8	0.3	0.2	–	1.3
Financial assets designated at fair value	**–**	**–**	**0.1**	**–**	**0.1**	–	–	–	–	–
Trading assets	**5.2**	**0.7**	**0.1**	**–**	**6.0**	8.3	0.6	0.2	–	9.1
Derivative assets	**0.5**	**1.7**	**1.2**	**–**	**3.4**	0.7	1.9	1.0	–	3.6
Gross balance sheet exposure before risk mitigation	**6.6**	**3.0**	**2.9**	**0.1**	**12.6**	9.9	3.5	2.9	0.1	16.4
Risk mitigation	**(3.9)**	**(1.6)**	**(0.5)**	**–**	**(6.0)**	(7.6)	(1.5)	(0.3)	–	(9.4)
– short trading positions	**(3.9)**	**–**	**–**	**–**	**(3.9)**	(6.9)	–	–	–	(6.9)
– collateral and derivative liabilities	**–**	**(1.6)**	**(0.5)**	**–**	**(2.1)**	(0.7)	(1.5)	(0.3)	–	(2.5)
Net on-balance sheet exposure	**2.7**	**1.4**	**2.4**	**0.1**	**6.6**	2.3	2.0	2.6	0.1	7.0
Off-balance sheet exposures	**–**	**0.2**	**2.8**	**–**	**3.0**	–	0.1	1.3	–	1.4
– commitments	**–**	**–**	**1.8**	**–**	**1.8**	–	–	0.9	–	0.9
– guarantees and others	**–**	**0.2**	**1.0**	**–**	**1.2**	–	0.1	0.4	–	0.5
Total net exposure	**2.7**	**1.6**	**5.2**	**0.1**	**9.6**	2.3	2.1	3.9	0.1	8.4
Of which:										
– net trading assets representing cash collateral posted	**–**	**0.6**	**–**	**–**	**0.6**	–	0.5	–	–	0.5
– on-balance sheet exposures held to meet DPF insurance liabilities	**0.3**	**0.4**	**0.2**	**–**	**0.9**	0.3	0.4	0.2	–	0.9
Total credit default swaps										
– CDS bought positions	**0.6**	**0.1**	**0.1**	**–**	**0.8**	0.6	0.5	0.3	–	1.4
– CDS sold positions	**(0.5)**	**(0.1)**	**–**	**–**	**(0.6)**	(0.6)	(0.5)	(0.2)	–	(1.3)
– CDS bought notionals	**9.9**	**6.1**	**3.6**	**–**	**19.6**	3.9	3.5	3.7	–	11.1
– CDS sold notionals	**10.3**	**6.1**	**3.6**	**–**	**20.0**	3.8	3.5	3.5	–	10.8

For footnote, see page 249.
For commentary, see page 199.

Exposures to Greece

(Audited)

	At 31 December 2012					At 31 December 2011				
	Sovereign and agencies US$bn	**Banks US$bn**	**Other financial institutions and corporates US$bn**	**Personal US$bn**	**Total US$bn**	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
Loans and advances	**0.1**	**–**	**3.4**	**1.0**	**4.5**	–	0.1	3.8	1.0	4.9
– gross	**0.1**	**–**	**3.4**	**1.0**	**4.5**	–	0.1	4.0	1.0	5.1
– impairment allowances	**–**	**–**	**–**	**–**	**–**	–	–	(0.2)	–	(0.2)
Financial investments available for sale	**–**	**–**	**–**	**–**	**–**	0.1	–	–	–	0.1
– cumulative impairment	**–**	**–**	**–**	**–**	**–**	0.2	–	–	–	0.2
Trading assets	**–**	**0.6**	**–**	**–**	**0.6**	0.4	0.4	–	–	0.8
Derivative assets	**–**	**0.8**	**–**	**–**	**0.8**	–	0.7	0.1	–	0.8
Gross balance sheet exposure before risk mitigation	**0.1**	**1.4**	**3.4**	**1.0**	**5.9**	0.5	1.2	3.9	1.0	6.6
Risk mitigation	**–**	**(0.8)**	**–**	**–**	**(0.8)**	(0.1)	(0.5)	–	–	(0.6)
– short trading positions	**–**	**–**	**–**	**–**	**–**	(0.1)	–	–	–	(0.1)
– collateral and derivative liabilities	**–**	**(0.8)**	**–**	**–**	**(0.8)**	–	(0.5)	–	–	(0.5)
Net on-balance sheet exposure	**0.1**	**0.6**	**3.4**	**1.0**	**5.1**	0.4	0.7	3.9	1.0	6.0
Off-balance sheet exposures	**–**	**–**	**0.7**	**–**	**0.7**		0.2	1.4	–	1.6
– commitments	**–**	**–**	**0.2**	**–**	**0.2**	–	–	0.8	–	0.8
– guarantees and others	**–**	**–**	**0.5**	**–**	**0.5**	–	0.2	0.6	–	0.8
Total net exposure	**0.1**	**0.6**	**4.1**	**1.0**	**5.8**	0.4	0.9	5.3	1.0	7.6
Total credit default swaps										
– CDS bought positions	**–**	**–**	**–**	**–**	**–**	1.2	–	0.1	–	1.3
– CDS sold positions	**–**	**–**	**–**	**–**	**–**	(0.7)	–	(0.1)	–	(0.8)
– CDS bought notionals	**–**	**–**	**0.4**	**–**	**0.4**	1.8	–	0.2	–	2.0
– CDS sold notionals	**–**	**–**	**0.4**	**–**	**0.4**	1.0	–	0.3	–	1.3

For commentary, see page 199.

Exposures to Portugal

(Audited)

	At 31 December 2012					At 31 December 2011				
	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
Loans and advances	–	0.3	0.2	–	0.5	–	0.3	–	–	0.3
– gross	–	0.3	0.2	–	0.5	–	0.3	–	–	0.3
Financial investments available for sale	0.1	–	–	–	0.1	0.1	–	0.1	–	0.2
– cumulative impairment	–	–	–	–	–	–	–	–	–	–
– amortised cost	0.1	–	–	–	0.1	0.1	–	0.1	–	0.2
– available-for-sale reserve	–	–	–	–	–	–	–	–	–	–
Trading assets	0.3	–	–	–	0.3	0.6	0.1	–	–	0.7
Derivative assets	–	0.2	–	–	0.2	0.3	0.2	–	–	0.5
Gross balance sheet exposure before risk mitigation	0.4	0.5	0.2	–	1.1	1.0	0.6	0.1	–	1.7
Risk mitigation	(0.2)	(0.2)	–	–	(0.4)	(0.5)	(0.1)	–	–	(0.6)
– short trading positions	(0.2)	–	–	–	(0.2)	(0.2)	–	–	–	(0.2)
– collateral and derivative liabilities	–	(0.2)	–	–	(0.2)	(0.3)	(0.1)	–	–	(0.4)
Net on-balance sheet exposure	0.2	0.3	0.2	–	0.7	0.5	0.5	0.1	–	1.1
Off-balance sheet exposures	–	0.1	0.2	–	0.3	–	–	–	–	–
– commitments	–	–	0.2	–	0.2	–	–	–	–	–
– guarantees and others	–	0.1	–	–	0.1	–	–	–	–	–
Total net exposure	0.2	0.4	0.4	–	1.0	0.5	0.5	0.1	–	1.1
Of which:										
– net trading assets representing cash collateral posted	–	–	–	–	–	–	0.1	–	–	0.1
– on-balance sheet exposures held to meet DPF insurance liabilities	0.1	–	–	–	0.1	0.1	–	0.1	–	0.2
Total credit default swaps										
– CDS bought positions	0.1	–	–	–	0.1	0.4	0.1	0.1	–	0.6
– CDS sold positions	(0.1)	–	–	–	(0.1)	(0.3)	(0.1)	(0.1)	–	(0.5)
– CDS bought notionals	1.6	0.9	0.8	–	3.3	1.2	0.6	0.6	–	2.4
– CDS sold notionals	1.5	0.9	0.8	–	3.2	1.2	0.5	0.7	–	2.4

For commentary, see page 199.

Commentary on exposures

Spain

At 31 December 2012, our total net exposure to Spain was US$12.1bn, US$0.2bn lower than at the end of 2011.

Our total net exposure to Spanish sovereign and agencies was US$1.0bn, US$1.2bn lower than at the end of 2011. The reduction was primarily due to lower off-balance sheet positions.

Our total net exposure to Spanish banks was US$2.8bn, US$0.7bn lower than at the end of 2011. The reduced exposure was due to increased risk mitigation. Our total net exposure to Spanish other financial institutions and corporates was US$8.3bn, an increase of US$1.7bn primarily due to higher off-balance sheet commitments. Our exposure to Spanish other financial institutions and corporates mainly comprised large multinational companies and other financial institutions with significant operations outside Spain, which mitigated the risk. Exposure to the commercial real estate sector in Spain remained insignificant.

Ireland

At 31 December 2012, our total net exposure to Ireland was US$9.9bn, US$4.1bn higher than at the end of 2011. This increase was in respect of exposures to other financial institutions and corporates.

Our total net exposure to Irish other financial institutions and corporates was US$7.6bn, US$4.1bn higher than at the end of 2011. The increase was primarily in financial investments available for sale for which the underlying risk is not predominantly Irish. A significant portion of our exposure related to foreign-owned entities incorporated in Ireland.

Italy

At 31 December 2012, our total net exposure to Italy was US$9.6bn, US$1.2bn higher than at the end of 2011.

Our total net exposure to Italian sovereign agencies was US$2.7bn, US$0.4bn higher than at the end of 2011. This was due to a decrease in risk mitigation.

Our total net exposure to Italian banks was US$1.6bn, US$0.5bn lower than at the end of 2011. The reduced exposure was primarily due to lower amounts of loans and advances.

Our total net exposure to other financial institutions and corporates at 31 December 2012 was US$5.2bn, an increase of US$1.3bn. Our exposure to Italian other financial institutions and corporates mainly comprised large multinational companies and other financial institutions with significant operations outside Italy, which mitigated the risk.

Greece

At 31 December 2012, our total net exposure to Greece was US$5.8bn, US$1.8bn lower than at the end of 2011. Although there was a reduction in exposure levels to all Greek counterparties in the first half of 2012, the majority of the reduction was in respect of exposures to other financial institutions and corporates.

Our total net exposure to Greek sovereign and agencies was US$0.1bn, US$0.3bn lower than at the end of 2011. Our Greek sovereign exposure decreased as a result of the debt restructuring in March 2012 and the associated settlement of CDS contracts.

Our total net exposure to Greek banks was US$0.6bn, US$0.3bn lower than at the end of 2011. The decrease was primarily due to lower off-balance sheet positions.

Our total net exposure to Greek other financial institutions and corporates was US$4.1bn, US$1.2bn lower than at the end of 2011. The reduction was primarily due to lower level of off-balance sheet positions. At 31 December 2012, our exposure to Greek shipping companies amounted to US$2.2bn. We believe the industry is less sensitive to the Greek economy as it is mainly dependent on international trade.

Portugal

At 31 December 2012, our total net exposure to Portugal was US$1.0bn, similar to the end of 2011.

Our total net exposure to Portuguese other financial institutions and corporates was US$0.4bn, US$0.3bn higher than at the end of 2011. The increase was primarily due to higher off-balance sheet commitments, which were in support of internationally active corporates with significant operations outside Portugal, which reduced the risk.

Cyprus

Our gross on-balance sheet exposure to Cyprus of US$0.3bn (2011: US$0.2bn) consisted primarily of loans and advances to other financial institutions and corporates of US$0.3bn (2011: US$0.2bn). We have also provided off-balance sheet commitments and guarantees to other financial institutions and corporates of US$0.1bn (2011: US$0.1bn).

Exposures to other eurozone countries

Summary of exposures to other eurozone countries
(Unaudited)

	Sovereign and agencies US$bn	Banks US$bn	Other financial institutions and corporates US$bn	Personal US$bn	Total US$bn
At 31 December 2012					
France					
On-balance sheet exposure	**44.1**	**55.0**	**43.7**	**15.5**	**158.3**
Off-balance sheet exposure	**0.2**	**1.7**	**25.3**	**0.8**	**28.0**
Total gross exposure	**44.3**	**56.7**	**69.0**	**16.3**	**186.3**
Risk mitigation	**(11.3)**	**(26.2)**	**(3.3)**	**–**	**(40.8)**
Total net exposure	**33.0**	**30.5**	**65.7**	**16.3**	**145.5**
Germany					
On-balance sheet exposure	**40.8**	**56.5**	**14.8**	**0.3**	**112.4**
Off-balance sheet exposure	**–**	**0.2**	**11.1**	**0.3**	**11.6**
Total gross exposure	**40.8**	**56.7**	**25.9**	**0.6**	**124.0**
Risk mitigation	**(13.4)**	**(42.4)**	**(0.8)**	**–**	**(56.6)**
Total net exposure	**27.4**	**14.3**	**25.1**	**0.6**	**67.4**
The Netherlands					
On-balance sheet exposure	**14.4**	**10.4**	**14.8**	**0.1**	**39.7**
Off-balance sheet exposure	**–**	**0.1**	**4.0**	**–**	**4.1**
Total gross exposure	**14.4**	**10.5**	**18.8**	**0.1**	**43.8**
Risk mitigation	**(4.4)**	**(5.2)**	**(4.8)**	**–**	**(14.4)**
Total net exposure	**10.0**	**5.3**	**14.0**	**0.1**	**29.4**
Others					
On-balance sheet exposure	**13.0**	**14.0**	**8.4**	**2.6**	**38.0**
Off-balance sheet exposure	**–**	**0.3**	**4.0**	**0.6**	**4.9**
Total gross exposure	**13.0**	**14.3**	**12.4**	**3.2**	**42.9**
Risk mitigation	**(3.2)**	**(10.7)**	**(0.4)**	**–**	**(14.3)**
Total net exposure	**9.8**	**3.6**	**12.0**	**3.2**	**28.6**
At 31 December 2011					
France					
On-balance sheet exposure	36.7	67.0	37.1	14.0	154.8
Off-balance sheet exposure	1.9	1.8	21.7	1.1	26.5
Total gross exposure	38.6	68.8	58.8	15.1	181.3
Risk mitigation	(9.5)	(19.9)	(1.7)	(0.2)	(31.3)
Total net exposure	29.1	48.9	57.1	14.9	150.0
Germany					
On-balance sheet exposure	31.0	47.6	7.4	0.3	86.3
Off-balance sheet exposure	–	1.5	8.2	0.4	10.1
Total gross exposure	31.0	49.1	15.6	0.7	96.4
Risk mitigation	(11.0)	(26.4)	(0.6)	–	(38.0)
Total net exposure	20.0	22.7	15.0	0.7	58.4
The Netherlands					
On-balance sheet exposure	43.3	16.3	10.4	0.1	70.1
Off-balance sheet exposure	–	0.2	1.6	–	1.8
Total gross exposure	43.3	16.5	12.0	0.1	71.9
Risk mitigation	(3.3)	(1.3)	(1.6)	–	(6.2)
Total net exposure	40.0	15.2	10.4	0.1	65.7
Others					
On-balance sheet exposure	10.3	14.3	9.2	2.3	36.1
Off-balance sheet exposure	–	0.3	2.9	0.8	4.0
Total gross exposure	10.3	14.6	12.1	3.1	40.1
Risk mitigation	(3.0)	(10.7)	(0.3)	–	(14.0)
Total net exposure	7.3	3.9	11.8	3.1	26.1

At 31 December 2012, our net on-balance sheet exposure to France, Germany and the Netherlands was US$199bn, US$37bn lower than at the end of 2011.

Our net on-balance sheet exposure to the sovereign and agency debt of France, Germany and the Netherlands was US$70bn, US$17bn lower than at the end of 2011. Our exposure to France and Germany was commensurate with the size of our operations in these countries. In 2012, cash balances held with the Dutch Central Bank were reduced and redirected to the French Central Bank to align more closely with our underlying operations. The cash placements continued to be put into the euro clearing system managed by the ECB.

At 31 December 2012, our net on-balance sheet exposure to the bank debt of France, Germany, and the Netherlands was US$48bn, US$35bn lower than at the end of 2011. The decrease reflected our ongoing efforts to reduce exposure to counterparties domiciled in these countries with exposures to sovereigns and/or banks in peripheral eurozone countries of sufficient size to threaten the counterparties' on-going viability in the event of an unfavourable conclusion to the current crisis.

At 31 December 2012, our net on-balance sheet exposure to the corporate and other financial institution debt of France, Germany and the Netherlands was US$64bn, US$13bn higher than at the end of 2011. Off-balance sheet exposures increased by US$3.6bn in France. Our exposure in Germany and France was commensurate with the size of our operations and was well diversified across portfolios, sectors and products.

Our relationships in these countries are mostly with large global entities that have significant operations outside their respective domestic markets. This mitigates our risk as these corporates have diversified the sources of their revenue and, more importantly, their ability to raise finance internationally should their domestic markets become strained.

In France, our net exposure to personal lending at 31 December 2012 was US$16bn, US$1bn higher than at the end of 2011. The exposure was mainly in residential mortgages, loans secured by a national guarantee scheme and unsecured personal loans, and both delinquency and impairment charges remained low.

Exposure to other eurozone countries

In addition to the countries disclosed above, HSBC had net on-balance sheet exposures of US$24bn , US$1.6bn higher than in 2011 to eurozone countries that were not significant to the Group. Of these, the largest exposure was represented by our retail and corporate banking operations in Malta, which had a net on-balance sheet exposure of US$5.8bn, US$0.2bn lower than in 2011. Our second largest exposure was in Finland with US$4.3bn of net on-balance sheet exposure to sovereign, agencies and banks (of which US$2.6bn was cash collateral held in respect of derivative liabilities). We also had US$3.3bn of net on-balance sheet exposure to sovereigns, agencies and banks in Belgium (of which US$1.4bn was fully collateralised) and US$1.2bn to other financial institutions and corporates. Our remaining net on-balance sheet exposure to the eurozone was less than 5% of the Group's total equity.

Redenomination risk

(Unaudited)

As the peripheral eurozone countries continue to exhibit distress, there is continuing possibility of a member state exiting from the eurozone. There remains no established legal framework within the European treaties to facilitate such an event; consequently, it is not possible to accurately predict the course of events and legal consequences that would ensue.

Our current view is that there would be a greater impact on HSBC from a euro exit of Greece, Italy or Spain than from Ireland, Portugal or Cyprus.

Key risks associated with an exit by a eurozone member include:

Foreign exchange losses: an exit would probably be accompanied by the passing of laws in the country concerned establishing a new local currency and providing for a redenomination of euro-denominated assets into the new local currency. The value of assets and liabilities in the country would immediately fall assuming the value of the redenominated currency is less than the original euros when translated into the carrying amounts. It is not possible to predict what the total consequential loss might be as it is uncertain which assets and liabilities would be legally re-denominated or what the extent of the devaluation would be. However, in order to provide an indication of one part of the possible exposure, the table below identifies assets and liabilities booked in our banking operations in Greece, Italy and Spain (described as 'in-country'). These assets and liabilities predominantly comprise loans and deposits arising from our commercial banking operations in these countries. The net assets represent our net funding exposure to those countries which we consider most likely to be affected by a redenomination event. The table also identifies in-country off-balance sheet exposures as these are at risk of redenomination should they be called, giving rise to a balance sheet exposure. It is to be noted that this analysis can only be an indication as it does not include euro-denominated exposures booked by HSBC outside the countries at risk which are connected with those countries (see 'external contracts' below).

External contracts redenomination risk: contracts entered into between HSBC businesses based outside a country exiting the euro with in-country counterparties or those otherwise closely connected with the relevant country, may be affected by redenomination. The effect remains subject to a high level of uncertainty. Factors such as the country law under which the contract is documented, the HSBC entity involved and the payment mechanism may all be relevant to this assessment, as will the precise exit scenario as the consequences for external contracts of a disorderly exit or one sanctioned under EU law may be different. In addition, capital controls could be introduced which may affect the ability to repatriate funds including currencies not affected by the redenomination event.

We continue to identify and monitor potential redenomination risks and, where possible, take steps to mitigate them and/or reduce our overall exposure to losses that might arise in the event of a redenomination. We continue to emphasise, however, that a euro exit could take different forms in a number of different scenarios. These give rise to distinct legal consequences which could significantly alter the potential effectiveness of any steps taken, and it is accordingly not possible to predict how effective particular measures may be until they are tested against the precise circumstances of a redenomination event.

In-country funding exposure

(Unaudited)

		Denominated in: euros US$bn	US dollars US$bn	other currencies US$bn	Total US$bn
At 31 December 2012					
Greece	In-country assets	**2.1**	**0.1**	**–**	**2.2**
	In-country liabilities	**(1.5)**	**(0.8)**	**(0.1)**	**(2.4)**
	Net in-country funding exposure	**0.6**	**(0.7)**	**(0.1)**	**(0.2)**
	Off-balance sheet exposure	**(0.3)**	**0.2**	**0.2**	**0.1**
Italy	In-country assets	**1.0**	**–**	**–**	**1.0**
	In-country liabilities[38]	**(2.0)**	**–**	**–**	**(2.0)**
	Net in-country funding exposure	**(1.0)**	**–**	**–**	**(1.0)**
	Off-balance sheet exposure	**0.8**	**–**	**–**	**0.8**
Spain	In-country assets	**2.4**	**0.8**	**–**	**3.2**
	In-country liabilities	**(1.7)**	**(0.1)**	**–**	**(1.8)**
	Net in-country funding exposure	**0.7**	**0.7**	**–**	**1.4**
	Off-balance sheet exposure	**0.7**	**0.2**	**–**	**0.9**
At 31 December 2011					
Greece	In-country assets	2.9	2.2	0.1	5.2
	In-country liabilities	(2.1)	(1.6)	(0.1)	(3.8)
	Net in-country funding exposure	0.8	0.6	–	1.4
	Off-balance sheet exposure	0.2	–	–	0.2
Italy	In-country assets	2.1	–	–	2.1
	In-country liabilities[38]	(2.6)	–	–	(2.6)
	Net in-country funding exposure	(0.5)	–	–	(0.5)
	Off-balance sheet exposure	0.8	–	–	0.8
Spain	In-country assets	4.4	0.6	0.1	5.1
	In-country liabilities	(1.7)	(0.1)	–	(1.8)
	Net in-country funding exposure	2.7	0.5	0.1	3.3
	Off-balance sheet exposure	2.4	0.5	–	2.9

For footnote, see page 249.

Liquidity and funding

1 *Appendix to Risk – risk policies and practices*

Liquidity risk is the risk that the Group does not have sufficient financial resources to meet its obligations as they fall due, or will have to do so at an excessive cost. The risk arises from mismatches in the timing of cash flows.

There were no material changes to our policies and practices for the management of liquidity and funding risks in 2012.

A summary of our current policies and practices regarding liquidity and funding is provided in the Appendix to Risk on page 261.

Our liquidity and funding risk management framework

The objective of our liquidity framework is to allow us to withstand very severe liquidity stresses. It is designed to be adaptable to changing business models, markets and regulations.

Our liquidity and funding risk management framework requires:

- liquidity to be managed by operating entities on a stand-alone basis with no implicit reliance on the Group or central banks;
- all operating entities to comply with their limits for the advances to core funding ratio; and
- all operating entities to maintain a positive stressed cash flow position out to three months under prescribed Group stress scenarios.

Further details of the metrics are provided in the Appendix to Risk on page 261.

Liquidity and funding in 2012

(Unaudited)

The liquidity position of the Group strengthened in 2012, and we continued to enjoy strong inflows of customer deposits and maintained good access to wholesale markets. During 2012, customer accounts grew by 7% (US$86bn) while loans and advances to customers increased by 6% (US$57bn), leading to a small decrease in our advances to deposits ratio to 74% (2011: 75%).

HSBC UK (see footnote 40 on page 249) recorded an increase in its advances to core funding ratio to 106% at 31 December 2012 (2011: 100%). During 2012, HSBC UK continued to fund the majority of its growth in advances with growth in core deposits and remained within its advances to core funding limit.

The Hongkong and Shanghai Banking Corporation (see footnote 41 on page 249) recorded a decrease in its advances to core funding ratio to 73% at 31 December 2012 (2011: 75%), mainly as a result of its core deposits increasing more than advances.

The completion of the sale of the US cards business and branch network during 2012 improved the liquidity and funding position of both HSBC Finance and HSBC USA (see footnote 42 on page 249), the latter recording a decrease in its advances to core funding ratio to 78% as at 31 December 2012 (2011: 86%).

Customer deposit markets

Customer accounts increased by 7% year on year. After excluding repo balances, the year-on-year increase was 7%.

Retail Banking and Wealth Management

We continued to grow our RBWM customer accounts, which increased by 6%, by providing differentiated products and services to different segments. The growth in retail deposits benefited from the wider macroeconomic trend of expanded money supply, customer deleveraging and weak loan growth, which partially offset the competitive pressure in some of our key markets for retail deposits and savers' reluctance to place funds into low-rate deposits.

Global Private Banking

As economic conditions remained subdued and interest rates continued to fall, part of the GPB customer base realigned its risk appetite and made use of the wide range of products available, with some asset reallocation to higher yielding off-balance sheet products including equities, funds and bonds. As a result, customer accounts decreased by 5% year on year.

Commercial Banking

Customer accounts increased by 11% year on year, with the majority of this increase resulting from increases in Payments and Cash Management accounts. The growth in these customer accounts and the strong growth in payment volumes demonstrated a funding source that is correlated to the operational services that HSBC provides to the CMB customer base.

Global Banking and Markets

Customer accounts increased by 8% year on year. After excluding repo balances with customers, GB&M deposits increased by 10% year on year, with the majority of this rise resulting from increases in Payments and Cash Management accounts. The growth in these customer accounts and the strong growth in payment volumes demonstrated a funding source that is strongly linked to the operational services that HSBC provides to the GB&M customer base.

Wholesale funding markets

Wholesale funding markets gradually improved during 2012, although the volume of term debt issued by banks was low by recent standards, influenced to a significant extent by reduced bank funding requirements. Globally, market conditions across public wholesale funding markets were predominantly driven by sovereign-related and more general events in the eurozone.

HSBC continued to have good access to debt capital markets throughout 2012 with Group entities issuing US$10.5bn of public transactions of which US$9.8bn was senior unsecured debt.

In January 2013 the Group repaid €5bn (US$6.6bn) of funding raised through the ECB's Long Term Repo Operations ('LTRO'), leaving only €473m (US$624m) outstanding.

Management of liquidity and funding risk

(Audited)

Our liquidity and funding risk management framework ('LFRF') employs two key measures to define, monitor and control the liquidity and funding risk of each of our operating entities. The advances to core funding ratio is used to monitor the structural long-term funding position, and the stressed coverage ratio, incorporating Group-defined stress scenarios, is used to monitor the resilience to severe liquidity stresses.

The three principal entities listed in the tables below represented 62% (2011: 61%) of the Group's customer accounts (excluding repos). Including other principal entities, the percentage was 94% (2011: 96%).

Advances to core funding ratio

The table below shows the extent to which loans and advances to customers in our principal banking entities were financed by reliable and stable sources of funding.

Advances to core funding limits set for operating entities at 31 December 2012 ranged between 70% and 115%, except for one operating entity reported within the total of HSBC's other principal entities which operated with a limit of 125% during 2012. This limit has been reduced to 115% for 2013.

Advances to core funding ratios[39]
(Audited)

	At 31 December	
	2012	2011
	%	%
HSBC UK[40]		
Year-end	**106**	100
Maximum	**106**	103
Minimum	**100**	98
Average	**103**	101
The Hongkong and Shanghai Banking Corporation[41]		
Year-end	**73**	75
Maximum	**75**	79
Minimum	**71**	70
Average	**73**	76
HSBC USA[42]		
Year-end	**78**	86
Maximum	**86**	90
Minimum	**68**	80
Average	**78**	85
Total of HSBC's other principal entities[43]		
Year-end	**91**	86
Maximum	**92**	90
Minimum	**85**	86
Average	**88**	89

For footnotes, see page 249.

Stressed coverage ratios

The stressed coverage ratios tabulated below express stressed cash inflows as a percentage of stressed cash outflows over both one-month and three-month time horizons. Operating entities are required to maintain a ratio of 100% or greater out to three months.

Inflows included in the numerator of the stressed coverage ratio are those that are assumed to be generated from liquid assets net of assumed haircuts, and cash inflows related to assets contractually maturing within the time period.

In general, customer advances are assumed to be renewed and as a result do not generate a cash inflow.

Stressed one-month and three-month coverage ratios[39]
(Audited)

	Stressed one-month coverage ratios at 31 December		Stressed three-month coverage Ratios at 31 December	
	2012	2011	**2012**	2011
HSBC UK[40]	**%**	%	**%**	%
Year-end	**114**	116	**103**	102
Maximum	**117**	118	**103**	102
Minimum	**108**	109	**101**	99
Average	**112**	113	**102**	100
The Hongkong and Shanghai Banking Corporation[41]				
Year-end	**129**	123	**126**	118
Maximum	**134**	145	**126**	126
Minimum	**123**	116	**118**	110
Average	**129**	124	**123**	116
HSBC USA[42]				
Year-end	**126**	118	**119**	113
Maximum	**137**	128	**130**	122
Minimum	**115**	109	**113**	105
Average	**127**	119	**123**	116
Total of HSBC's other principal entities[43]				
Year-end	**127**	118	**117**	108
Maximum	**127**	120	**117**	113
Minimum	**117**	116	**108**	107
Average	**121**	118	**111**	109

For footnotes, see page 249.

The stressed coverage ratios for HSBC UK remained broadly unchanged.

The stressed coverage ratios for The Hongkong and Shanghai Banking Corporation improved as the increase in core deposits exceeded the increase in loans and advances to customers. The resulting surplus was deployed in liquid assets, thereby improving the stressed coverage ratios.

The stressed coverage ratios for HSBC USA improved as a result of the net effect of selling the US Card and Retail Services business and non-strategic branches during 2012, which resulted in a reduction in core deposits that was lower than the reduction in loans and advances to customers. The resulting surplus was deployed in liquid assets, thereby improving the stressed coverage ratios.

The three-month stressed coverage ratio for the total of HSBC's other principal entities remained broadly unchanged. The one-month stressed coverage ratio improved as a result of an increase in contractual maturities between one month and three months.

Liquid assets of HSBC's principal operating entities

The table below shows the estimated liquidity value (before assumed haircuts) of assets categorised as liquid used for the purposes of calculating the three-month stressed coverage ratios, as defined under the LFRF.

Any unencumbered asset held as a consequence of a reverse repo transaction with a residual contractual maturity within the stressed coverage ratio time period and unsecured interbank loans maturing within three months are not included in liquid assets, as these assets are reflected as contractual cash inflows.

Liquid assets are held and managed on a standalone operating entity basis. Most of the liquid assets shown are held directly by each operating entity's Balance Sheet Management function, primarily for the purpose of managing liquidity risk, in line with the LFRF.

Liquid assets also include any unencumbered liquid assets held outside Balance Sheet Management for any other purpose. The LFRF gives ultimate control of all unencumbered assets and sources of liquidity to Balance Sheet Management.

Liquid assets of HSBC's principal entities

	Estimated liquidity value[44]		
	31 Dec 2012	30 Jun 2012	31 Dec 2011
	Audited	*Unaudited*	*Audited*
	US$m	US$m	US$m
HSBC UK[40]			
Level 1	**138,812**	120,690	114,596
Level 2	**374**	475	344
Level 3	**27,656**	9,320	–
Non-government assets	**–**	–	23,007
	166,842	130,485	137,947
The Hongkong and Shanghai Banking Corporation[41]			
Level 1	**112,167**	104,943	107,056
Level 2	**5,740**	5,929	
Level 3	**3,968**	4,889	–
Non-government assets	**–**	–	2,151
	121,875	115,761	109,207
HSBC USA[42]			
Level 1	**60,981**	62,966	86,060
Level 2	**15,609**	16,511	1,369
Level 3	**5,350**	8,405	–
Other	**6,521**	6,238	–
Non-government assets	**–**	–	19,093
	88,461	94,120	106,522
Total of HSBC's other principal entities[43]			
Level 1	**154,445**	118,616	138,085
Level 2	**18,048**	36,713	2,827
Level 3	**6,468**	11,205	–
Other	**2,447**	–	–
Non-government assets	**–**	–	23,584
	181,408	166,534	164,496

For footnotes, see page 249.

Our liquid asset policy was refined at 1 January 2012 to apply a more granular classification of liquid assets, as described in the Appendix to Risk on page 261. Under the previous framework, liquid assets were classified into two categories: central government, central bank and US agency MBS exposures; and all other non-government exposures. Central government, central bank and US agency MBS exposures qualify as Level 1 or Level 2 under the new policy and are shown as such in the comparatives.

All assets held within the liquid asset portfolio are unencumbered.

Liquid assets held by HSBC UK increased as a result of a rise in customer accounts, which led to an increase in the level of non-core deposits and, consequently, liquid assets.

Liquid assets held by The Hongkong and Shanghai Banking Corporation also rose as a result of an increase in customer accounts. As the growth in core deposits exceeded the increases in loans and advances to customers, the difference was deployed into liquid assets and the level of liquid assets held grew accordingly.

Liquid assets held by HSBC USA decreased as a result of the sale of the US Card and Retail Services business and non-strategic branches during 2012.

Net contractual cash flows

The following table quantifies the contractual cash flows from interbank and intergroup loans and deposits, and reverse repo, repo (including intergroup transactions) and short positions for the principal entities shown. These contractual cash inflows and outflows are reflected gross in the numerator and denominator, respectively, of the one and three-month stressed coverage ratios and should be considered alongside the level of liquid assets.

Outflows included in the denominator of the stressed coverage ratios include the principal outflows associated with the contractual maturity of wholesale debt securities reported in the table headed 'Wholesale funding cash flows payable by HSBC under financial liabilities by remaining contractual maturities' on page 210.

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Net cash inflows/(outflows) for interbank and intra-group loans and deposits and reverse repo, repo and short positions
(Audited)

	At 31 December 2012		At 31 December 2011	
	Cash flows within one month US$m	**Cash flows from one to three months US$m**	Cash flows within one month US$m	Cash flows from one to three months US$m
Interbank and intra-group loans and deposits				
HSBC UK[40]	**(16,464)**	**(1,429)**	(12,832)	446
The Hongkong and Shanghai Banking Corporation[41]	**4,402**	**9,685**	8,715	9,246
HSBC USA[42]	**(30,269)**	**(473)**	(32,154)	213
Total of HSBC's other principal entities[43]	**5,419**	**10,511**	14,053	2,589
Reverse repo, repo, stock borrowing, stock lending and outright short positions (including intra-group)				
HSBC UK[40]	**(4,184)**	**(13,776)**	(558)	(171)
The Hongkong and Shanghai Banking Corporation[41]	**13,672**	**2,501**	7,393	(487)
HSBC USA[42]	**(4,003)**	**62**	(3,872)	(377)
Total of HSBC's other principal entities[43]	**(31,951)**	**(231)**	(6,597)	10,162

For footnotes, see page 249.

Net cash flow arising from interbank and intra-group loans and deposits

Under the LFRF, a net cash inflow within three months arising from interbank and intra-group loans and deposits will give rise to a lower liquid asset requirement. Conversely, a net cash outflow within three months arising from interbank and intra-group loans and deposits will give rise to a higher liquid assets requirement.

Net cash flow arising from reverse repo, repo, stock borrowing, stock lending and outright short positions (including intra-group)

A net cash inflow represents additional liquid resources, in addition to liquid assets, because any unencumbered asset held as a consequence of a reverse repo transaction with a residual contractual maturity within the stressed coverage ratio time period is not reflected as a liquid asset.

The impact of net cash outflow depends on whether the underlying collateral encumbered as a result will qualify as a liquid asset when released at the maturity of the repo. The majority of the Group's repo transactions are collateralised by liquid assets and, as such, any net cash outflow shown is offset by the return of liquid assets, which are excluded from the liquid asset table above.

Contingent liquidity risk arising from committed lending facilities

(Audited)

The Group's operating entities provide commitments to various counterparts. In terms of liquidity risk, the most significant risk relates to committed lending facilities which, whilst undrawn, give rise to contingent liquidity risk, as these could be drawn during a period of liquidity stress. Commitments are given to customers and committed lending facilities are provided to consolidated multi-seller conduits, established to enable clients to access a flexible market-based source of finance (see page 209), consolidated securities investment conduits and third-party sponsored conduits.

The consolidated securities investment conduits primarily represent Solitaire and Mazarin (see pages 186). These conduits issue asset-backed commercial paper secured against the portfolio of securities held by these conduits. At 31 December 2012, HSBC UK had undrawn committed lending facilities to these conduits of US$18bn (2011: US$22bn), of which Solitaire represented US$13bn (2011: US$16bn) and the remaining US$5.1bn (2011: US$6.2bn) pertained to Mazarin. At 31 December 2012, the commercial paper issued by Solitaire and Mazarin was entirely held by HSBC

UK. Since HSBC controls the size of the portfolio of securities held by these conduits, no contingent liquidity risk exposure arises as a result of these undrawn committed lending facilities.

The table below shows the level of undrawn commitments to customers outstanding for the five largest single facilities and the largest market sector, and the extent to which they are undrawn.

The Group's contractual undrawn exposures at 31 December monitored under the contingent liquidity risk limit structure
(Audited)

	HSBC UK		HSBC USA		HSBC Canada		The Hongkong and Shanghai Banking Corporation	
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011
	US$bn	US$bn	**US$bn**	US$bn	**US$bn**	US$bn	**US$bn**	US$bn
Commitments to conduits								
Consolidated multi-seller conduits								
– total lines	**7.8**	11.4	**2.3**	0.9	**1.0**	0.7	**–**	–
– largest individual lines	**0.7**	0.7	**0.5**	0.3	**0.8**	0.5	**–**	–
Consolidated securities investment conduits								
– total lines	**18.1**	22.1	**–**	–	**–**	–	**–**	–
Third party conduits								
– total lines	**–**	–	**0.8**	1.4	**–**	–	**–**	–
Commitments to customers								
– five largest[45]	**6.0**	3.4	**6.0**	5.7	**1.7**	1.8	**2.1**	1.9
– largest market sector[46]	**11.0**	7.5	**7.5**	6.5	**4.5**	3.8	**2.4**	2.5

For footnotes, see page 249.

Sources of funding

(Audited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We issue wholesale securities (secured and unsecured) to supplement our customer deposits and change the currency mix, maturity profile or location of our liabilities.

The funding sources and uses table, which provides a consolidated view of how our balance sheet is funded, should be read in the light of the LFRF, which requires operating entities to manage liquidity and funding risk on a stand-alone basis.

The table analyses our consolidated balance sheet according to the assets that primarily arise from operating activities and the sources of funding primarily supporting these activities. The assets and liabilities that do not arise from operating activities are presented as a net balancing source or deployment of funds.

The level of customer accounts continued to exceed the level of loans and advances to customers. Excluding the effect of repos from customer accounts and reverse repos from loans and advances to customers, the adjusted advances to deposits ratio at 31 December 2012 was 73.4% (2011: 73.5%). The positive funding gap was predominantly deployed into liquid assets; cash and balances with central banks and financial investments, as required by the LFRF.

Loans and other receivables due from banks continued to exceed deposits taken from banks. The Group remained a net unsecured lender to the banking sector.

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Funding sources and uses

(Audited)

	2012 US$m	2011 US$m
Sources		
Customer accounts	**1,340,014**	1,253,925
– repos	**28,618**	30,785
– cash deposits	**1,311,396**	1,223,140
Deposits by banks	**107,429**	112,822
– repos	**11,949**	17,617
– cash deposits	**95,480**	95,205
Debt securities issued	**119,461**	131,013
Liabilities of disposal groups held for sale	**5,018**	22,200
Subordinated liabilities	**29,479**	30,606
Financial liabilities designated at fair value	**87,720**	85,724
Liabilities under insurance contracts	**68,195**	61,259
Trading liabilities	**304,563**	265,192
– repos	**130,223**	86,838
– stock lending	**6,818**	4,595
– other trading liabilities	**167,522**	173,759
Total equity	**183,129**	166,093
	2,245,008	2,128,834

	2012 US$m	2011 US$m
Uses		
Loans and advances to customers	**997,623**	940,429
– reverse repos	**34,651**	41,419
– loans or other receivables	**962,972**	899,010
Loans and advances to banks	**152,546**	180,987
– reverse repos	**35,461**	41,909
– loans or other receivables	**117,085**	139,078
Assets held for sale	**19,269**	39,558
Trading assets	**408,811**	330,451
– reverse repos	**118,681**	79,848
– stock borrowing	**16,071**	9,459
– other trading assets	**274,059**	241,144
Financial investments	**421,101**	400,044
Cash and balances with central banks	**141,532**	129,902
Net deployment in other balance sheet assets and liabilities	**104,126**	107,463
	2,245,008	2,128,834

Wholesale funding cash flows payable by HSBC under financial liabilities by remaining contractual maturities

(Unaudited)

	On demand US$m	Due within 3 months US$m	Due within 3 to 12 months US$m	Total due within 1 year US$m	Due between 1 and 5 years US$m	Due after 5 years US$m	Total US$m
At 31 December 2012							
Debt securities issued	**2,419**	**41,139**	**50,697**	**94,255**	**97,198**	**31,217**	**222,670**
Unsecured CDs and CP	**–**	**22,158**	**10,125**	**32,283**	**5,344**	**–**	**37,627**
Unsecured senior MTNs	**1**	**6,306**	**33,363**	**39,670**	**68,949**	**23,478**	**132,097**
Unsecured senior structured notes	**2,234**	**1,329**	**3,978**	**7,541**	**6,942**	**5,325**	**19,808**
Secured covered bonds	**–**	**51**	**2,467**	**2,518**	**8,840**	**542**	**11,900**
Secured ABCP	**–**	**10,358**	**–**	**10,358**	**–**	**–**	**10,358**
Secured ABS	**16**	**782**	**646**	**1,444**	**4,557**	**707**	**6,708**
Others	**168**	**155**	**118**	**441**	**2,566**	**1,165**	**4,172**
Subordinated liabilities	**7**	**838**	**1,864**	**2,709**	**14,641**	**77,930**	**95,280**
Subordinated debt securities	**7**	**573**	**1,509**	**2,089**	**12,625**	**57,503**	**72,217**
Preferred securities	**–**	**265**	**355**	**620**	**2,016**	**20,427**	**23,063**
	2,426	**41,977**	**52,561**	**96,964**	**111,839**	**109,147**	**317,950**

	On demand US$m	Due within 3 months US$m	Due within 3 to 12 months US$m	Total due within 1 year US$m	Due between 1 and 5 years US$m	Due after 5 years US$m	Total US$m
At 31 December 2011							
Debt securities issued	1,907	49,923	39,011	90,841	104,689	37,028	232,558
Unsecured CDs and CP	280	28,918	8,143	37,341	9,713	26	47,080
Unsecured senior MTNs	122	3,704	26,541	30,367	80,884	29,081	140,332
Unsecured senior structured notes	1,505	575	1,858	3,938	1,878	1,156	6,972
Secured covered bonds	–	607	1,549	2,156	7,649	3,694	13,499
Secured ABCP	–	10,446	–	10,446	–	–	10,446
Secured ABS	–	326	546	872	3,071	1,779	5,722
Others	–	5,347	374	5,721	1,494	1,292	8,507
Subordinated liabilities	6	913	6,004	6,923	15,134	78,569	100,626
Subordinated debt securities	6	694	5,552	6,252	12,908	58,051	77,211
Preferred securities	–	219	452	671	2,226	20,518	23,415
	1,913	50,836	45,015	97,764	119,823	115,597	333,184

The balances in the table above will not agree directly with those in our consolidated balance sheet as the table incorporates, on an undiscounted basis, all cash flows relating to principal and future coupon payments.

Funding of HSBC Finance

We do not expect the professional markets to be a source of funding for HSBC Finance in the future in view of the sale of the Card and Retail Services business and the run-off of its remaining portfolio. HSBC Finance expects to meet future funding needs by asset sales and affiliate funding. As a consequence, no new external third-party funding, including commercial paper, is being originated by HSBC Finance.

Encumbered and unencumbered assets

(Unaudited)

The objective of this disclosure is to facilitate an understanding of available and unrestricted assets that could be used to support potential future funding and collateral needs.

An asset is defined as encumbered if it has been pledged as collateral against an existing liability, and as a result is no longer available to the bank to secure funding, satisfy collateral needs or be sold to reduce the funding requirement. An asset is therefore categorised as unencumbered if it has not been pledged against an existing liability. Unencumbered assets are then further analysed into four separate sub-categories; 'readily realisable assets', 'other realisable assets', 'reverse repo/stock borrowing receivables and derivative assets' and 'cannot be pledged as collateral'.

The disclosure is not designed to identify assets which would be available to meet the claims of creditors or to predict assets that would be available to creditors in the event of a resolution or bankruptcy.

The table below summarises the total on and off-balance sheet assets that are capable of supporting future funding and collateral needs and shows the extent to which these assets are currently pledged for this purpose.

Summary of assets available to support potential future funding and collateral needs (on and off-balance sheet)

(Unaudited)

	2012 US$bn
Total on-balance sheet assets	**2,693**
Less:	
Reverse repo/stock borrowing receivables and derivative assets	**562**
Other assets that cannot be pledged as collateral	**247**
Total on-balance sheet assets that can support funding and collateral needs	**1,884**
Add off-balance sheet assets:	
Fair value of collateral received from reverse repo/stock borrowing that is available to sell or repledge	**296**
Fair value of collateral received from derivatives that is available to sell or repledge	**6**
Total assets that can support funding and collateral needs (on and off-balance sheet)	**2,186**
Less:	
On-balance sheet assets pledged	**233**
Off-balance sheet collateral received from reverse repo/stock borrowing which has been repledged or sold	**203**
Off-balance sheet collateral received from derivative transactions which has been repledged or sold	**1**
Assets available to support funding and collateral needs	**1,749**

At 31 December 2012, the Group held US$1,749bn of unencumbered assets that could be used to support potential future funding and collateral needs, representing 80% of the total assets that can support funding and collateral needs (on and off-balance sheet). Of this amount, US$764bn (US$666bn on-balance sheet) were assessed to be readily realisable.

The effect of active collateral management

Collateral is managed on an operating entity basis, consistent with the operating entity management of liquidity and funding. The available collateral held by each operating entity is managed as a single collateral pool. In managing this collateral and deciding which collateral to pledge, each operating entity will seek to optimise the use of the available collateral pool, within the confines of the LFRF, irrespective of whether the collateral pledged is recognised on-balance sheet or was received in respect of reverse repo, stock borrowing or derivative transactions.

As a result of managing collateral in this manner, in terms of asset encumbrance presentation, we may encumber on-balance sheet holdings while maintaining available unencumbered off-balance sheet holdings, even though we are not seeking to directly finance the on-balance sheet holdings pledged.

In quantifying the level of encumbrance of negotiable securities, the encumbrance has been analysed on an individual security basis. In doing so where a particular security has been encumbered and HSBC has holdings of the security both on-balance sheet and off-balance sheet with the right to repledge, it is assumed for the purpose of this disclosure that the off-balance sheet holding is encumbered ahead of the on-balance sheet holding.

An on balance-sheet encumbered and off-balance sheet unencumbered asset will occur, for example, if we receive a specific security as a result of a reverse repo/stock borrow transaction, but finance the cash lent by pledging a generic collateral basket, even if the security received is eligible for the collateral basket pledged. This will also occur if we receive a generic collateral basket as a result of a reverse repo transaction but finance the cash lent by pledging specific securities, even if the securities pledged are eligible for the collateral basket.

Off-balance sheet collateral received and pledged for reverse repo and stock borrowing transactions

The fair value of assets accepted as collateral that HSBC is permitted to sell or repledge in the absence of default was US$296bn at 31 December 2012 (2011: US$302bn). The fair value of any such collateral that has been sold or repledged was US$203bn (2011: US$189bn). HSBC is obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to standard reverse repo and stock borrowing transactions.

The fair value of collateral received and repledged in relation to reverse repo and stock borrowing are reported on a gross basis. The related balance sheet receivables and payables are reported on a net basis where required under IFRS netting criteria.

As a result of reverse repo and stock borrowing transactions where the collateral received can be sold or re-pledged, but has not been sold or re-pledged, we held US$93bn of unencumbered collateral available to support potential future funding and collateral needs at 31 December 2012.

Off-balance sheet non-cash collateral received and pledged for derivative transactions

The fair value of assets accepted as collateral related to derivative transactions that we are permitted to sell or repledge in the absence of default was US$6.0bn. The fair value of any such collateral that has been sold or repledged was US$0.8bn. We are obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to derivative transactions.

Analysis of on-balance sheet encumbered and unencumbered assets

The table on page 213 presents an analysis of on-balance sheet holdings only, and shows the amounts of balance sheet assets that are encumbered. The table therefore excludes any available off-balance sheet holdings received in respect of reverse repo, stock borrowing or derivatives.

Analysis of on-balance sheet encumbered and unencumbered assets
(Unaudited)

	Encumbered	Unencumbered		Unencumbered – cannot be pledged as collateral		
	Assets pledged as collateral US$m	Readily realisable assets US$m	Other realisable assets US$m	Reverse repo/stock borrowing receivables & derivative assets US$m	Cannot be pledged as collateral US$m	Total US$m
At 31 December 2012						
Cash and balances at central banks	–	139,963	220	–	1,349	141,532
Items in the course of collection from other banks	–	–	–	–	7,303	7,303
Hong Kong Government certificates of indebtedness	–	–	–	–	22,743	22,743
Trading assets	143,019	116,395	10,330	134,752	4,315	408,811
– Treasury and other eligible bills	2,309	23,973	–	–	–	26,282
– debt securities	97,157	47,311	205	–	4	144,677
– equity securities	5,592	35,420	622	–	–	41,634
– loans and advances to banks	20,588	1,909	2,582	50,376	2,816	78,271
– loans and advances to customers	17,373	7,782	6,921	84,376	1,495	117,947
Financial assets designated at fair value	–	447	610	–	32,525	33,582
– Treasury and other eligible bills	–	14	–	–	40	54
– debt securities	–	431	128	–	11,992	12,551
– equity securities	–	2	482	–	20,384	20,868
– loans and advances to banks	–	–	–	–	55	55
– loans and advances to customers	–	–	–	–	54	54
Derivatives	–	–	–	357,450	–	357,450
Loans and advances to banks	1,191	4,722	81,802	35,461	29,370	152,546
Loans and advances to customers	40,792	85,626	827,903	34,664	8,638	997,623
Financial investments	46,678	300,255	7,990	–	66,178	421,101
– Treasury and other eligible bills	2,024	84,991	156	–	379	87,550
– debt securities	44,654	214,545	4,112	–	64,451	327,762
– equity securities	–	719	3,722	–	1,348	5,789
Assets held for sale	–	–	19,269	–	–	19,269
Other assets	1,600	18,601	11,621	–	22,894	54,716
Current tax assets	–	–	–	–	515	515
Prepayments and accrued income	–	–	–	–	9,502	9,502
Interest in associates and joint ventures	–	–	17,480	–	354	17,834
Goodwill and intangible assets	–	–	–	–	29,853	29,853
Property, plant and equipment	–	–	6,772	–	3,816	10,588
Deferred tax	–	–	–	–	7,570	7,570
	233,280	666,009	983,997	562,327	246,925	2,692,538

Cash collateral posted to satisfy margin requirements on derivatives, is reported as encumbered under trading assets within loans or advances to banks and loans and advances to customers.

The US$41bn of loans and advances to customers reported in the table above as encumbered have been pledged predominantly to support the issuance of secured debt instruments, such as covered bonds and ABSs including asset-backed commercial paper issued by consolidated multi-seller conduits. It also includes those pledged in relation to any other form of secured borrowing.

In total, the Group has pledged US$152bn of negotiable securities, predominantly as a result of market-making in securities financing to our clients.

Additional contractual obligations

Under the terms of our current collateral obligations under derivative contracts, we estimate based on the positions as at 31 December 2012 that HSBC could be required to post additional collateral of up to US$1.5bn (2011: US$3bn) in the event of a one notch downgrade in credit ratings, which would increase to US$2.5bn (2011: US$3.8bn) in the event of a two notch downgrade.

Definitions of the categories included in the table 'Analysis of encumbered and unencumbered assets':

- *Encumbered assets* are assets on our balance sheet which have been pledged as collateral against an existing liability, and as a result are assets which are unavailable to the bank to secure funding, satisfy collateral needs or be sold to reduce potential future funding requirements.
- *Unencumbered – readily realisable assets* are assets regarded by the bank to be readily realisable in the normal course of business, to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, and are not subject to any restrictions on their use for these purposes.
- *Unencumbered – other realisable assets* are assets where there are no restrictions on their use to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, but are not readily realisable in the normal course of business in their current form.
- *Unencumbered – reverse repo/stock borrow receivables and derivative assets* are assets related specifically to reverse repo, stock borrowing and derivative transactions. These are shown separately as these on-balance sheet assets cannot be pledged, but often give rise to the receipt of non-cash assets which are not recognised on the balance sheet, and can additionally be used to raise secured funding, meet additional collateral requirements or be sold.
- *Unencumbered – cannot be pledged as collateral* are assets that have not been pledged but which we have assessed could not be pledged and therefore could not be used to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, for example assets held by the Group's insurance subsidiaries that back liabilities to policyholders and support the solvency of these entities.

Historically, the Group has not recognised any contingent liquidity value for assets other than those assets defined under the LFRF as being liquid assets, and any other negotiable instruments that under stress are assumed to be realisable after three months, even though they may currently be realisable. This approach has generally been driven by our risk appetite not to place any reliance on central banks. In a few cases, we have recognised the contingent value of discrete pools of assets, but the amounts involved are insignificant. As a result, we have reported the majority of our loans and advances to customers and banks in the category 'Other realisable assets' as management would need to perform additional actions in order to make the assets transferable and readily realisable.

Additional information

The amount of such assets reported in Note 36 on the Financial Statements may be greater than the book value of assets reported as being encumbered in the table on page 213. Examples of where such differences will occur are:

- ABSs and covered bonds where the amount of liabilities issued plus the required mandatory over-collateralisation is lower than the book value of assets pledged to the pool. Any difference is categorised in the table above as 'Unencumbered – readily realisable assets;'
- negotiable securities held by custodians or settlement agents, where a floating charge has been given over the entire holding to secure intra-day settlement liabilities, are only reported as encumbered to the extent that we have a liability to the custodian or settlement agent at the reporting date, with the balance reported as 'Unencumbered – readily realisable assets;' and
- assets pre-positioned with central banks or government agencies are only reported as encumbered to the extent that we have secured funding with the collateral. The unutilised pre-positioned collateral is reported as 'Unencumbered – readily realisable assets.'

Contractual maturity of financial liabilities

(Audited)

The balances in the table below will not agree directly with those in our consolidated balance sheet as the table incorporates, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for trading liabilities and derivatives not treated as hedging derivatives). Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Trading liabilities and derivatives not treated as hedging derivatives are included in the 'On demand' time bucket and not by contractual maturity. A maturity analysis of repos and debt securities in issue included in trading liabilities is presented on page 485.

In addition, loan and other credit-related commitments and financial guarantees and similar contracts are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under financial guarantees and similar contracts are classified on the basis of the earliest date they can be called.

Cash flows payable by HSBC under financial liabilities by remaining contractual maturities
(Audited)

	On demand US$m	Due within 3 months US$m	Due between 3 and 12 months US$m	Due between 1 and 5 years US$m	Due after 5 years US$m
At 31 December 2012					
Deposits by banks	**45,290**	**51,321**	**4,495**	**11,718**	**789**
Customer accounts	**1,035,636**	**229,642**	**62,650**	**17,508**	**720**
Trading liabilities	**304,564**	**–**	**–**	**–**	**–**
Financial liabilities designated at fair value	**7,778**	**1,211**	**7,825**	**42,683**	**62,279**
Derivatives	**351,367**	**355**	**995**	**4,785**	**1,855**
Debt securities in issue	**64**	**37,938**	**37,167**	**45,433**	**6,034**
Subordinated liabilities	**7**	**386**	**1,149**	**9,058**	**46,322**
Liabilities of disposal groups held for sale[47]	**1,416**	**993**	**707**	**201**	**24**
Other financial liabilities	**26,963**	**31,557**	**5,381**	**3,467**	**829**
	1,773,085	**353,403**	**120,369**	**134,853**	**118,852**
Loan and other credit-related commitments	**375,818**	**76,394**	**51,330**	**57,506**	**18,421**
Financial guarantees and similar contracts	**14,321**	**5,506**	**12,104**	**9,266**	**3,796**
	2,163,224	**435,303**	**183,803**	**201,625**	**141,069**
At 31 December 2011					
Deposits by banks	47,659	59,096	3,578	11,048	997
Customer accounts	914,762	252,226	72,993	20,508	1,094
Trading liabilities	265,192	–	–	–	–
Financial liabilities designated at fair value	7,066	930	9,789	39,915	57,295
Derivatives	340,394	394	497	2,858	1,007
Debt securities in issue	117	48,465	27,520	57,507	7,019
Subordinated liabilities	6	528	1,834	9,616	47,715
Liabilities of disposal groups held for sale[47]	3,108	1,721	1,045	211	150
Other financial liabilities	25,452	28,137	5,845	2,023	1,377
	1,603,756	391,497	123,101	143,686	116,654
Loan and other credit-related commitments	355,366	65,245	94,120	111,061	29,113
Financial guarantees and similar contracts	12,460	7,585	12,107	5,899	1,273
	1,971,582	464,327	229,328	260,646	147,040

For footnote, see page 249.

HSBC Holdings

(Audited)

During 2012, HSBC Holdings issued US$2.0bn of senior debt (2011: US$5.3bn). The eligibility requirements for non-equity instruments under Basel III rules have not been clearly defined in the UK, so HSBC Holdings issued no debt instruments which qualified as capital in 2012 (2011: nil).

The balances in the table below will not agree directly with those on the balance sheet of HSBC Holdings as the table incorporates, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for derivatives not treated as hedging derivatives). Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Derivatives not treated as hedging derivatives are included in the 'On demand' time bucket.

In addition, loan commitments and financial guarantees and similar contracts are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under financial guarantees and similar contracts are classified on the basis of the earliest date they can be called.

Cash flows payable by HSBC Holdings under financial liabilities by remaining contractual maturities
(Audited)

	On demand US$m	Due within 3 months US$m	Due between 3 and 12 months US$m	Due between 1 and 5 years US$m	Due after 5 years US$m
At 31 December 2012					
Amounts owed to HSBC undertakings	**3,032**	**604**	**1,096**	**1,918**	**7,570**
Financial liabilities designated at fair value	**–**	**269**	**807**	**5,345**	**31,970**
Derivatives	**760**	**–**	**–**	**–**	**–**
Debt securities in issue	**–**	**36**	**107**	**1,946**	**1,487**
Subordinated liabilities	**–**	**205**	**614**	**3,273**	**25,049**
Other financial liabilities	**–**	**394**	**211**	**–**	**–**
	3,792	**1,508**	**2,835**	**12,482**	**66,076**
Loan commitments	**1,200**	**–**	**–**	**–**	**–**
Financial guarantees and similar contracts	**49,402**	**–**	**–**	**–**	**–**
	54,394	**1,508**	**2,835**	**12,482**	**66,076**
At 31 December 2011					
Amounts owed to HSBC undertakings	–	1,110	81	1,428	–
Financial liabilities designated at fair value	–	281	3,530	4,987	28,988
Derivatives	1,067	–	–	–	–
Debt securities in issue	–	35	104	1,975	1,490
Subordinated liabilities	–	216	649	3,461	27,558
Other financial liabilities	–	1,252	208	–	–
	1,067	2,894	4,572	11,851	58,036
Loan commitments	1,810	–	–	–	–
Financial guarantees and similar contracts	49,402	–	–	–	–
	52,279	2,894	4,572	11,851	58,036

Liquidity regulation

(Unaudited)

In December 2010, the Basel Committee published the 'International framework for liquidity risk measurement, standards and monitoring'. The framework comprises two liquidity metrics: the liquidity coverage ratio ('LCR') and the net stable funding ratio ('NSFR'). The ratios are subject to an observation period that began in 2011, and are expected to become established standards by 2015 and 2018, respectively. During the observation period, the standards are under review by the Basel Committee. In January 2013, the Basel Committee announced several changes to the calibration of the LCR which included reducing the outflow applied to non-operational non-financial corporate deposits from 75% to 40% and reducing the outflow applied to committed liquidity facilities from 100% to 30%.

A significant level of interpretation is required applying the definitions as currently drafted, in particular, the definition of operational deposits. Uncertainty around LCR also arises from the fact that the implementation of the Basel LCR framework still requires EU endorsement. In addition, the final calibration of the NSFR is highly uncertain and is expected to remain so, with no announcement on this expected from the Basel Committee until 2014.

Market risk

1 *Appendix to Risk – risk policies and practices.*

Market risk is the risk that movements in market factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices, will reduce our income or the value of our portfolios.

There were no material changes to our policies and practices for the management of market risk in 2012.

A summary of our current policies and practices regarding market risk is provided in the Appendix to Risk on page 265.

Exposure to market risk

Exposure to market risk is separated into two portfolios:

- *Trading portfolios* comprise positions arising from market-making and warehousing of customer-derived positions.
- *Non-trading portfolios* comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments designated as available for sale and held to maturity, and exposures arising from our insurance operations (see page 239).

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.

We use a range of tools to monitor and limit market risk exposures, including:

- *sensitivity measures* include sensitivity of net interest income and sensitivity for structural foreign exchange, which are used to monitor the market risk positions within each risk type;
- *value at risk* ('VAR') is a technique that estimates the potential losses that could occur on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence; and
- in recognition of VAR's limitations we augment VAR with *stress testing* to evaluate the potential impact on portfolio values of more extreme, though plausible, events or movements in a set of financial variables. Examples of scenarios reflecting current market concerns are the slowdown of mainland China and the potential effects of a sovereign debt default, including its wider contagion effects.

Market risk in 2012

(Audited)

Some credit spread and interest rate exposures to sovereign borrowers were managed down during 2012 against the backdrop of continued concerns around eurozone sovereigns and financial institutions, the global economic slowdown and uncertainty about fiscal policy in the US. The second half of the year was characterised by improved market sentiment, primarily because the ECB pledged to support the euro. This led to a more benign market environment and generally subdued volatilities of credit spreads and other market risk factors.

Trading and non-trading portfolios

(Audited)

The following tables provide an overview of the types of risks within the different global businesses.

Types of risk by global business

Risk types	Global businesses
Trading risk – Foreign exchange and commodities – Interest rate – Equities – Credit spread	GB&M including Balance Sheet Management ('BSM')
Non-trading risk – Foreign exchange (structural) – Interest rate – Credit spread	GB&M including BSM, RBWM, CMB and GPB

The market risk for insurance operations is reported separately on page 239.

Market risk reporting measures

The following table provides an overview of the reporting of risks within this section:

Overview of risk reporting

	Portfolio	
Risk type	**Trading**	**Non-trading**
Foreign exchange and commodity	**VAR**	**VAR**
Interest rate	**VAR**	**VAR/ Sensitivity**
Equity	**VAR**	**Sensitivity**
Credit spread	**VAR**	**VAR**
Structural foreign exchange	**n/a**	**Sensitivity**

Structural foreign exchange risk is monitored using sensitivity analysis (see page 268). The reporting of commodity risk is consolidated with foreign exchange risk. There is no commodity risk in the non-trading portfolios. The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included in the Group VAR. The management of this risk is described on page 270.

Market risk linkages to the accounting balance sheet

Trading assets and liabilities

The Group's trading assets and liabilities are in substantially all cases originated by GB&M. As described on page 393, the assets and liabilities are classified as held for trading if they have been acquired or incurred principally for the purpose of selling or repurchasing in the near term, or form part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent pattern of short-term profit-taking. These assets and liabilities are treated as traded risk for the purposes of market risk management, other than a limited number of exceptions, primarily in Global Banking where the short-term acquisition and disposal of the assets are linked to other non-trading related activities such as loan origination.

Financial assets designated at fair value

Financial assets designated at fair value within HSBC are predominantly held within the Insurance entities. The majority of these assets are linked to policyholder liabilities for either unit-linked or insurance and investment contracts with DPF. Further information in respect of these assets is given on page 393. The risks of these assets largely offset the market risk on the liabilities under the policyholder contracts, and are risk managed on a non-trading basis. Market risk for insurance operations is covered on page 239.

Financial liabilities designated at fair value

Financial liabilities designated at fair value within HSBC are primarily fixed-rate securities issued by HSBC entities for funding purposes. As described on page 393, an accounting mismatch would arise if the debt securities were accounted for at amortised cost because the derivatives which economically hedge market risks on the securities would be accounted for at fair value with changes recognised in the income statement. The market risks of these liabilities are treated as non-traded risk, the principal risks being interest rate and/or foreign exchange risks. We also incur liabilities to customers under investment contracts, where the liabilities on unit-linked contracts are based on the fair value of assets within the unit-linked funds. The exposures on these funds are treated as non-traded risk and the principal risks are those of the underlying assets in the funds.

Derivative assets and liabilities

As described in Note 19 on the Financial Statements HSBC undertakes derivative activity for three primary purposes; to create risk management solutions for clients, to manage the portfolio risks arising from client business and to manage and hedge HSBC's own risks. Most of HSBC's derivative exposures arise from sales and trading activities within GB&M and are treated as traded risk for market risk management purposes.

Within derivative assets and liabilities there are portfolios of derivatives which are not risk managed on a trading intent basis and are treated as non-traded risk for VAR measurement purposes. These arise when the derivative was entered into in order to manage risk arising from non-traded exposures. These include non-qualifying hedging derivatives, and derivatives qualifying for fair value and cash flow hedge accounting. The use of non-qualifying hedges whose primary risks relate to interest rate and foreign exchange exposure is described on page 397. Details of derivatives in fair value and cash flow hedge accounting relationships are given in Note 19 on the Financial Statements. HSBC's primary risks in respect of these instruments relate to interest rate and foreign exchange risks.

Loans and advances to customers

The primary risk on assets within loans and advances to customers is the credit risk of the borrower. The risk of these assets is treated as non-trading risk for market risk management purposes.

Financial investments

Financial investments include assets held on an available-for-sale and held-to-maturity basis. An analysis of the Group's holdings of these securities by accounting classification and issuer type is shown on page 457 and by business activity on page 20. The majority of these securities are mainly held within Balance Sheet Management in GB&M. The positions which are originated in order to manage structural interest rate and liquidity risk are treated as non-trading risk for the purposes of market risk management. Available-for-sale security holdings within insurance entities are treated as non-trading risk and are largely held to back non-linked insurance policyholder liabilities. Market risk for insurance operations is covered on page 239.

The other main holdings of available-for-sale assets are the ABSs within GB&M's legacy credit business, which are treated as non-trading risk for market risk management purposes, the principal risk being the credit risk of the obligor.

The Group's held-to-maturity securities are principally held within the Insurance business. Risks of held-to-maturity assets are treated as non-trading for risk management purposes.

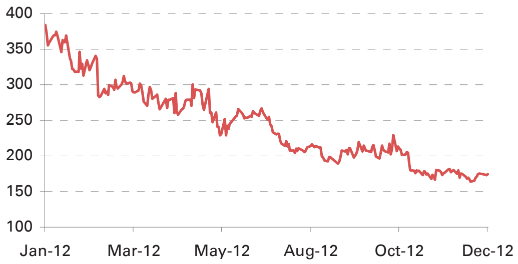
Value at risk of the trading and non-trading portfolios

Our Group VAR, both trading and non-trading, was as tabulated below. For a description of HSBC's fair value and price verification controls, see page 438.

Trading and non-trading value at risk
(Audited)

	2012 US$m	2011 US$m
At 31 December	**181.3**	367.0
Average	**244.4**	301.6
Minimum	**163.8**	231.5
Maximum	**383.9**	404.3

Daily trading and non-trading VAR (US$m)
(Unaudited)



The decrease of Group trading and non-trading VAR during 2012 was driven primarily by the reduced effect of credit spreads, as a result of subdued volatilities and lower credit spread baselines utilised in the VAR calculations.

For a description of the parameters used in calculating VAR, see the 'Appendix to Risk' on page 266.

Trading portfolios

(Audited)

Value at risk of the trading portfolios

Our Group trading VAR was as shown below:

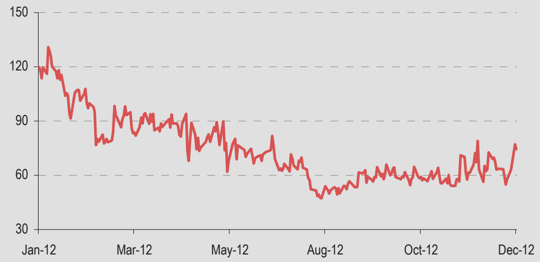
Trading value at risk

	2012 US$m	2011 US$m
At 31 December	**78.8**	118.3
Average	**74.2**	101.8
Minimum	**47.3**	62.2
Maximum	**130.9**	143.9

Almost all trading VAR resides within Global Markets. The VAR for trading activity at 31 December 2012 was lower than at 31 December 2011 due primarily to the reduced contribution of credit spread exposures to sovereigns. This reduction was driven by positions being managed down, together with the lower credit spread volatilities and baselines in the VAR calculations.

We routinely validate the accuracy of our VAR models by back-testing the actual daily profit and loss results, adjusted to remove non-modelled items such as fees and commissions, against the corresponding VAR numbers. We expect on average to see losses in excess of VAR 1% of the time over a one-year period. The actual number of losses in excess of VAR over this period can therefore be used to gauge how well the models are performing. In 2012, there were no exceptions at the Group level.

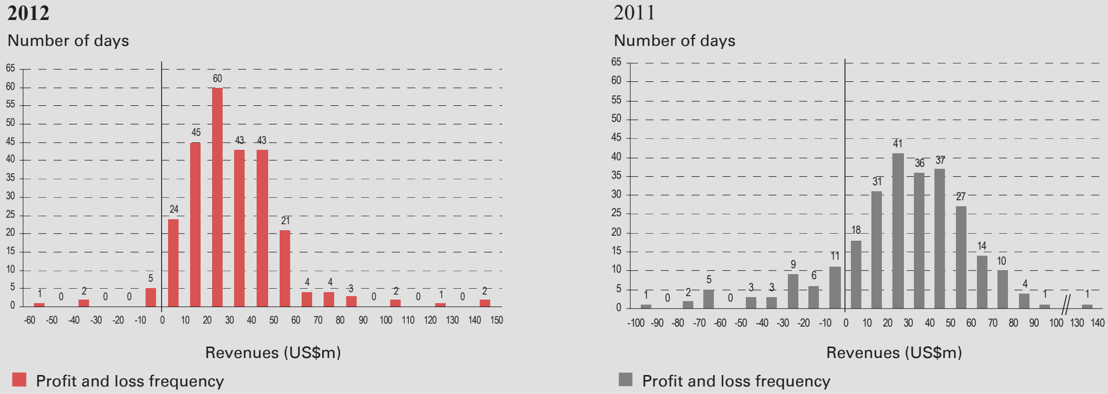
Daily VAR (trading portfolios) (US$m)
(Unaudited)



Daily revenue
(Unaudited)

	2012 US$m	2011 US$m
Average daily revenue	**31.8**	27.3
Standard deviation[48]	**22.8**	32.3
Ranges of most frequent		
– daily revenues	**20 to 30**	20 to 30
	days	days
– daily occurrences	**60**	41
Days of negative revenue	**8**	40

Daily distribution of Global Markets' trading and other trading revenues[49]
(Unaudited)



For footnotes, see page 249.

VAR by risk type for trading activities[50]
(Audited)

	Foreign exchange and commodity US$m	Interest rate US$m	Equity US$m	Credit spread US$m	Portfolio diversification[51] US$m	Total[52] US$m
At 31 December 2012	**20.5**	**37.5**	**17.7**	**16.1**	**(12.9)**	**78.8**
Average	**23.5**	**42.7**	**9.3**	**26.8**	**(28.1)**	**74.2**
Minimum	**6.9**	**29.5**	**2.7**	**12.2**	**–**	**47.3**
Maximum	**46.0**	**60.0**	**24.9**	**77.9**	**–**	**130.9**

	Foreign exchange and commodity US$m	Interest rate US$m	Equity US$m	Credit spread US$m	Portfolio diversification[51] US$m	Total[52] US$m
At 31 December 2011	18.6	49.4	7.4	75.2	(32.3)	118.3
Average	16.8	54.2	8.0	57.3	(34.4)	101.8
Minimum	7.6	30.1	2.5	34.7	–	62.2
Maximum	31.9	80.2	17.2	103.2	–	143.9

For footnotes, see page 249.

Stressed value at risk of the trading portfolios

(Unaudited)

Stressed VAR is primarily used for regulatory capital purposes but is integrated into the risk management process to facilitate efficient capital management and to highlight potentially risky positions based on previous market volatility.

Our Group stressed VAR for trading portfolios was as follows:

Stressed value at risk (1-day equivalent)

(Unaudited)

	2012 US$m	2011 US$m
At 31 December	**172.4**	293.6

Stressed VAR for trading portfolios reduced primarily as a result of the de-risking of exposures to eurozone sovereigns and managing down of interest rate risks, together with the impact of lower credit spread levels on the VAR calculation.

Non-trading portfolios

(Audited)

Value at risk of the non-trading portfolios

Non-trading value at risk

	2012 US$m	2011 US$m
At 31 December	**119.2**	310.9
Average	**197.9**	244.2
Minimum	**118.1**	182.2
Maximum	**322.5**	354.8

The daily levels of non-trading VAR over the course of 2012 are set out in the graph below.

Daily VAR (non-trading portfolios) (US$m)

(Unaudited)

Most of the Group non-trading VAR relates to Balance Sheet Management ('BSM') or local treasury management functions. Contributions to Group non-trading VAR are driven by interest rates and credit spread risks arising from all global businesses as illustrated on page 265). The decrease of non-trading VAR during 2012 was due primarily to the reduced contribution of credit spread risks as a result of lower volatilities and credit spread baselines utilised in the VAR calculations. This movement includes the reduction in credit spread risks relating to the Group's holdings of available for sale debt securities (excluding those held in insurance operations), which is discussed further in the following section.

Non-trading VAR also includes the interest rate risk of non-trading financial instruments held by the global businesses and transferred into portfolios managed by Global Markets or local treasury functions. In measuring, monitoring and managing risk in our non-trading portfolios, VAR is just one of the tools used. The management of interest rate risk in the banking book is described further in 'Non-trading interest rate risk' below, including the role of Balance Sheet Management.

Non-trading VAR excludes equity risk on available for sale securities, structural foreign exchange risk, and interest rate risk on fixed rate securities issued by HSBC Holdings, the management of which is described in the relevant sections below. These sections together describe the scope of HSBC's management of market risks in non-trading books.

Credit spread risk for available-for-sale debt securities

Credit spread VAR for available-for-sale debt securities, excluding those held in insurance operations, is included in the Group non-trading VAR.

At 31 December 2012, the sensitivity of equity capital to the effect of movements in credit spreads on our available-for-sale debt securities, including the gross exposure for the SICs consolidated within our balance sheet, based on credit spread VAR, was US$150m (2011: US$389m). This sensitivity was calculated before taking into account losses which would have been absorbed by the capital note holders. Excluding the gross exposure for SICs consolidated in our balance sheet, this exposure reduced to US$119m (2011: US$325m).

The decrease in this sensitivity at 31 December 2012 compared with 31 December 2011 was due mainly to the effect of the lower volatility in credit spreads observed during 2012.

At 31 December 2012, the capital note holders would absorb the first US$2.3bn (2011: US$2.3bn) of any losses incurred by the SICs before we incur any equity losses.

Equity securities classified as available for sale

Fair value of equity securities
(Audited)

	2012 US$bn	2011 US$bn
Private equity holdings[53]	2.9	3.0
Funds invested for short-term cash management	0.2	0.2
Investment to facilitate ongoing business[54]	1.1	1.1
Other strategic investments	1.6	2.9
	5.8	7.2

For footnotes, see page 249.

The fair value of the constituents of equity securities classified as available for sale can fluctuate considerably. The table above sets out maximum possible loss on shareholder's equity from available-for-sale equity securities.

For details of the impairment incurred on available-for-sale equity securities, see 'Securitisation exposures and other structured products' on page 184.

Structural foreign exchange exposures

(Unaudited)

Our policies and procedures for managing structural foreign exchange exposures are described on page 268. For details of structural foreign exchange exposures see Note 35 on the Financial Statements.

Non-trading interest rate risk

(Unaudited)

Asset, Liability and Capital Management ('ALCM') is responsible for measuring and controlling non-trading interest rate risk under the supervision of the Risk Management Meeting ('RMM'). Its primary responsibilities are:

- to define the rules governing the transfer of interest rate risk from the global businesses to BSM;
- to ensure that all market interest rate risk that can be hedged is transferred from the global businesses to BSM; and
- to define the rules and metrics for monitoring the residual interest rate risk in the global businesses.

The different types of non-trading interest rate risk and the controls which we use to quantify and limit exposure to these risks can be categorised as follows:

- risk which is transferred to BSM and managed by BSM within a defined risk mandate (see below);
- risk which remains outside BSM because it cannot be hedged or which arises due to our behaviouralised transfer pricing assumptions. This risk is captured by our net interest income or Economic Value of Equity ('EVE') sensitivity and corresponding limits are part of our global and regional risk appetite statements for non-trading interest rate risk. A typical example would be margin compression created by unusually low rates in key currencies;
- basis risk which is transferred to BSM when it can be hedged. Any residual basis risk remaining in the global businesses is reported to ALCO. A typical example would be a managed rate savings product transfer-priced using a Libor-based interest rate curve; and
- model risks which cannot be captured by net interest income or EVE sensitivity, but are controlled by our stress testing framework. A typical example would be prepayment risk on residential mortgages or pipeline risk.

Balance Sheet Management

(Unaudited)

Effective governance across BSM is supported by the dual reporting lines it has to the CEO of GB&M and to the Group Treasurer. In each operating entity, BSM is responsible for managing liquidity and funding under the supervision of the local ALCO. It also manages the non-trading interest rate positions transferred to it within a Global Markets limit structure.

BSM reinvests excess liquidity into highly-rated liquid assets. The majority of the liquidity is invested in central bank deposits and government, supranational and agency securities with most of the remainder held in short-term interbank and central bank loans.

Analysis of third party assets in Balance Sheet Management
(Unaudited)

	At 31 December 2012 US$m
Cash and balances at central banks	**93,946**
Trading assets	**8,724**
Financial assets designated at fair value	**74**
Loans and advances:	
– to banks	**72,771**
– to customers	**22,052**
Financial investments	**293,421**
Other	**2,948**
	493,936

Central bank deposits are accounted for as cash balances. Interbank loans and loans to central banks are accounted for as loans and advances to banks. BSM's holdings of securities are accounted for as available-for-sale or to a lesser extent, held to maturity assets.

BSM is permitted to use derivatives as part of its mandate to manage interest rate risk. Derivative activity is predominantly through the use of vanilla interest rate swaps which are part of cash flow hedging and fair value hedging relationships.

Credit risk in BSM is predominantly limited to short-term bank exposure created by interbank lending and exposure to central banks as well as high quality sovereigns, supranationals or agencies which constitute the majority of BSM's liquidity portfolio.

BSM does not manage the structural credit risk of any Group entity balance sheets.

BSM is permitted to enter into single name and index credit derivatives activity, but it does so to manage credit risk on the exposure specific to its securities portfolio in limited circumstances only. The risk limits are extremely limited and closely monitored. At 31 December 2012 and 31 December 2011 BSM had no open credit derivative index risk.

VAR is calculated on both trading and non-trading positions held in BSM. It is calculated by applying the same methodology used for the Global Markets business and utilised as a tool for market risk control purposes.

BSM holds trading portfolio instruments in only very limited circumstances. Positions and the associated VAR were not significant during 2012 and 2011.

Sensitivity of net interest income

(Unaudited)

The table below sets out the effect on our future net interest income of an incremental 25 basis points parallel rise or fall in all yield curves worldwide at the beginning of each quarter during the 12 months from 1 January 2013. Assuming no management actions, a sequence of such rises would increase planned net interest income for 2013 by US$1,391m (2012: US$1,571m), while a sequence of such falls would decrease planned net interest income by US$1,471m (2012: US$1,909m). These figures incorporate the effect of any option features in the underlying exposures.

Sensitivity of projected net interest income[55]
(Unaudited)

	US dollar bloc US$m	Rest of Americas bloc US$m	Hong Kong dollar bloc US$m	Rest of Asia bloc US$m	Sterling bloc US$m	Euro bloc US$m	Total US$m
Change in 2013 projected net interest income arising from a shift in yield curves of:							
+25 basis points at the beginning of each quarter	**133**	**64**	**246**	**237**	**679**	**44**	**1,403**
–25 basis points at the beginning of each quarter	**(366)**	**(52)**	**(305)**	**(168)**	**(602)**	**(57)**	**(1,550)**
Change in 2012 projected net interest income arising from a shift in yield curves of:							
+25 basis points at the beginning of each quarter	209	62	263	232	729	76	1,571
–25 basis points at the beginning of each quarter	(465)	(59)	(443)	(166)	(708)	(68)	(1,909)

For footnote, see page 249.

Report of the Directors: Operating and Financial Review (continued)

The interest rate sensitivities set out above are illustrative only and are based on simplified scenarios. The limitations of this analysis are discussed in the Appendix to Risk on page 269.

The year-on-year change in the sensitivity of the Group's net interest income to the change in rates shown in the table above is largely driven by lower implied yield curves, reducing the capacity to shock interest rates down. Net interest income and its associated sensitivity as reflected in the table above include the expense of internally funding trading assets, while related revenue is reported in 'Net trading income'.

We monitor the sensitivity of reported reserves to interest rate movements on a monthly basis by assessing the expected reduction in valuation of available-for-sale portfolios and cash flow hedges due to parallel movements of plus or minus 100bps in all yield curves. The table below describes the sensitivity of our reported reserves to these movements and the maximum and minimum month-end figures during the year:

Sensitivity of reported reserves to interest rate movements
(Unaudited)

	US$m	Maximum impact US$m	Minimum impact US$m
At 31 December 2012			
+ 100 basis point parallel move in all yield curves	**(5,602)**	**(5,748)**	**(5,166)**
As a percentage of total shareholders' equity	**(3.2%)**	**(3.3%)**	**(2.9%)**
– 100 basis point parallel move in all yield curves	**4,996**	**5,418**	**4,734**
As a percentage of total shareholders' equity	**2.9%**	**3.1%**	**2.7%**
At 31 December 2011			
+ 100 basis point parallel move in all yield curves	(5,594)	(6,178)	(5,594)
As a percentage of total shareholders' equity	(3.5%)	(3.9%)	(3.5%)
– 100 basis point parallel move in all yield curves	5,397	6,411	5,397
As a percentage of total shareholders' equity	3.4%	4.0%	3.4%

The sensitivities above are illustrative only and are based on simplified scenarios. The table shows the potential sensitivity of reported reserves to valuation changes in available-for-sale portfolios and from cash flow hedges following the specified shifts in yield curves. These particular exposures form only a part of our overall interest rate exposures. The accounting treatment of our remaining interest rate exposures, while economically largely offsetting the exposures shown in the above table, does not require revaluation movements to go to reserves.

Defined benefit pension schemes

(Audited)

Market risk arises within our defined benefit pension schemes to the extent that the obligations of the schemes are not fully matched by assets with determinable cash flows.

HSBC's defined benefit pension schemes
(Audited)

	2012 US$bn	2011 US$bn
Liabilities (present value)	**38.1**	35.0
	%	%
Assets:		
Equities	**18**	15
Debt securities	**71**	73
Other (including property)	**11**	12
	100	100

For details of our defined benefit schemes, see Note 7 on the Financial Statements, and for pension risk management, see page 269.

Additional market risk measures applicable only to the parent company

(Audited)

The principal tools used in the management of market risk are VAR for foreign exchange rate risk, and the projected sensitivity of HSBC Holdings' net interest income to future changes in yield curves and interest rate gap re-pricing tables for interest rate risk.

Foreign exchange risk

Total foreign exchange VAR arising within HSBC Holdings in 2012 was as follows:

HSBC Holdings – foreign exchange VAR
(Audited)

	2012 US$m	2011 US$m
At 31 December	**69.9**	47.7
Average	**51.4**	43.3
Minimum	**39.2**	38.2
Maximum	**69.9**	48.3

The foreign exchange risk largely arises from loans to subsidiaries of a capital nature that are not denominated in the functional currency of either the provider or the recipient and which are accounted for as financial assets. Changes in the carrying amount of these loans due to foreign exchange rate differences are taken directly to HSBC Holdings' income statement. These loans, and most of the associated foreign exchange exposures, are eliminated on a Group consolidated basis.

Sensitivity of net interest income

(Audited)

HSBC Holdings monitors net interest income sensitivity over a 5-year time horizon reflecting the longer-term perspective on interest rate risk management appropriate to a financial services holding company. The table below sets out the effect on HSBC Holdings' future net interest income over a 5-year time horizon of incremental 25 basis point parallel falls or rises in all yield curves worldwide at the beginning of each quarter during the 12 months from 1 January 2013.

Assuming no management actions, a sequence of such rises would increase planned net interest income for the next five years by US$532m (2011: decrease of US$269m), while a sequence of such falls would decrease planned net interest income by US$329m (2011: increase of US$248m). These figures incorporate the effect of any option features in the underlying exposures.

Sensitivity of HSBC Holdings' net interest income to interest rate movements[55]
(Audited)

	US dollar bloc US$m	Sterling bloc US$m	Euro bloc US$m	Total US$m
Change in projected net interest income as at 31 December arising from a shift in yield curves				
2012				
of + 25 basis points at the beginning of each quarter				
0-1 year	**83**	**(23)**	**4**	**64**
2-3 years	**303**	**(108)**	**37**	**232**
4-5 years	**319**	**(120)**	**37**	**236**
of – 25 basis points at the beginning of each quarter				
0-1 year	**(34)**	**21**	**(2)**	**(15)**
2-3 years	**(139)**	**65**	**(17)**	**(91)**
4-5 years	**(306)**	**118**	**(35)**	**(223)**
Change in projected net interest income as at 31 December arising from a shift in yield curves				
2011				
of + 25 basis points at the beginning of each quarter				
0-1 year	(13)	11	4	2
2-3 years	(161)	33	33	(95)
4-5 years	(244)	21	47	(176)
of – 25 basis points at the beginning of each quarter				
0-1 year	14	(11)	(4)	(1)
2-3 years	127	(27)	(27)	73
4-5 years	244	(21)	(47)	176

For footnote, see page 249.

The interest rate sensitivities tabulated above are illustrative only and are based on simplified scenarios. The figures represent hypothetical movements in net interest income based on our projected yield curve scenarios, HSBC Holdings' current interest rate risk profile and assumed changes to that profile during the next five years. The main driver of the change in the US dollar projected net interest income sensitivity was a change in the assumptions for projected capital funding. The change to the GBP projected net interest income sensitivity was caused by changes in the composition of HSBC Holdings' investments. Changes to assumptions concerning the risk profile over the next five years can have a significant impact on the net interest income sensitivity for that period. However, the figures do not take into account the effect of actions that could be taken to mitigate this interest rate risk.

Interest rate repricing gap table

The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included within the Group VAR but is managed on a repricing gap basis. The interest rate repricing gap table below analyses the full-term structure of interest rate mismatches within HSBC Holdings' balance sheet.

Repricing gap analysis of HSBC Holdings
(Audited)

	Total US$m	Up to 1 year US$m	Between 1 and 5 years US$m	Between 5 and 10 years US$m	More than 10 years US$m	Non-interest bearing US$m
At 31 December 2012						
Cash at bank and in hand:						
– balances with HSBC undertakings	**353**	**312**	**–**	**–**	**–**	**41**
Derivatives	**3,768**	**–**	**–**	**–**	**–**	**3,768**
Loans and advances to HSBC undertakings	**41,675**	**38,473**	**–**	**1,477**	**630**	**1,095**
Financial investments	**1,208**	**–**	**300**	**731**	**–**	**177**
Investments in subsidiaries	**92,234**	**–**	**–**	**–**	**–**	**92,234**
Other assets	**246**	**–**	**–**	**–**	**–**	**246**
Total assets	**139,484**	**38,785**	**300**	**2,208**	**630**	**97,561**
Amounts owed to HSBC undertakings	**(12,856)**	**(12,259)**	**–**	**–**	**–**	**(597)**
Financial liabilities designated at fair values	**(23,195)**	**(1,654)**	**(6,334)**	**(7,708)**	**(4,301)**	**(3,198)**
Derivatives	**(760)**	**–**	**–**	**–**	**–**	**(760)**
Debt securities in issue	**(2,691)**	**–**	**(1,648)**	**–**	**(1,051)**	**8**
Other liabilities	**(1,048)**	**–**	**–**	**–**	**–**	**(1,048)**
Subordinated liabilities	**(11,907)**	**–**	**(808)**	**(2,110)**	**(8,828)**	**(161)**
Total equity	**(87,027)**	**–**	**–**	**–**	**–**	**(87,027)**
Total liabilities and equity	**(139,484)**	**(13,913)**	**(8,790)**	**(9,818)**	**(14,180)**	**(92,783)**
Off-balance sheet items attracting interest rate sensitivity	**–**	**(18,583)**	**6,348**	**7,341**	**4,325**	**569**
Net interest rate risk gap	**–**	**6,289**	**(2,142)**	**(269)**	**(9,225)**	**5,347**
Cumulative interest rate gap	**–**	**6,289**	**4,147**	**3,878**	**(5,347)**	**–**
At 31 December 2011						
Cash at bank and in hand:						
– balances with HSBC undertakings	316	280	–	–	–	36
Derivatives	3,568	–	–	–	–	3,568
Loans and advances to HSBC undertakings	28,048	25,373	1,175	279	603	618
Financial investments	1,078	–	300	731	–	47
Investments in subsidiaries	90,621	–	–	–	–	90,621
Other assets	231	–	–	–	–	231
Total assets	123,862	25,653	1,475	1,010	603	95,121
Amounts owed to HSBC undertakings	(2,479)	(2,260)	–	–	–	(219)
Financial liabilities designated at fair values	(21,151)	(2,694)	(6,423)	(6,157)	(5,156)	(721)
Derivatives	(1,067)	–	–	–	–	(1,067)
Debt securities in issue	(2,613)	–	(1,617)	–	(1,006)	10
Other liabilities	(1,919)	–	–	–	–	(1,919)
Subordinated liabilities	(12,450)	(776)	(774)	(2,070)	(8,671)	(159)
Total equity	(82,183)	–	–	–	–	(82,183)
Total liabilities and equity	(123,862)	(5,730)	(8,814)	(8,227)	(14,833)	(86,258)
Off-balance sheet items attracting interest rate sensitivity	–	(17,945)	6,405	5,749	5,048	743
Net interest rate risk gap	–	1,978	(934)	(1,468)	(9,182)	(9,606)
Cumulative interest rate gap	–	1,978	1,044	(424)	(9,606)	–

Operational risk

(Unaudited)

1 *Appendix to Risk - risk policies and practices.*

Operational risk is relevant to every aspect of our business, and covers a wide spectrum of issues, in particular legal, compliance, security and fraud. Losses arising from breaches of regulation and law, unauthorised activities, error, omission, inefficiency, fraud, systems failure or external events all fall within the definition of operational risk.

We continued to enhance our operational risk management framework ('ORMF') policies and procedures in 2012, including the implementation of a top risk analysis process to improve the quantification and management of material risks through scenario analysis. This provides a top down, forward-looking view of risks to help determine whether they are being effectively managed within our risk appetite or whether further management action is required.

Responsibility for minimising operational risk management lies with HSBC's management and staff. Each regional, global business, country, business unit and functional head is required to maintain oversight over operational risk and internal control covering all business and operational activities for which they are responsible.

A summary of our current policies and practices regarding operational risk is provided in the Appendix to Risk on page 270.

Operational risk management framework

The Group Operational Risk function and the ORMF assist business management in discharging their responsibilities.

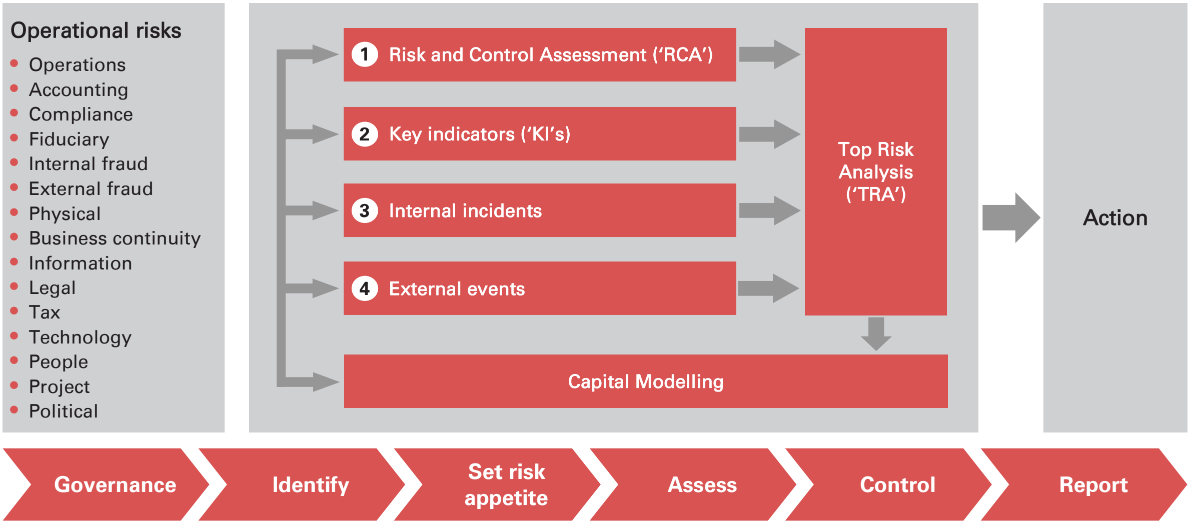
The ORMF defines minimum standards and processes, and the governance structure for operational risk and internal control across the Group. Inherent to the ORMF is a 'three lines of defence' model for the management of risk, as described below:

Three lines of defence

First line of defence	Every employee at HSBC is responsible for the risks that are a part of their day to day jobs. The first line of defence ensures all key risks within their operations are identified, mitigated and monitored by appropriate internal controls within an overall control environment.
Second line of defence	Consists of the Global Functions such as Global Risk, Finance and HR who are responsible for providing assurance, challenge and oversight of the activities conducted by the first line.
Third line of defence	Internal Audit provides independent assurance over the first and second lines of defence.

A diagrammatic representation of the ORMF is presented below:

Operational risk management framework



- *RCAs are used to inform the evaluation of the effectiveness of controls over top risks.*
- *KIs are linked to TRAs to help monitor the risks and controls in the operational risk system.*
- *Internal incidents are used to forecast typical losses.*
- *External sources (e.g. Fitch and ORX databases) are used to inform the assessment of extreme TRAs.*

Operational risk in 2012

During 2012, our top and emerging risk profile was dominated by compliance and legal risks as referred to in the 'Top and emerging risks' section and Note 43 on the Financial Statements. A number of other material losses were realised in 2012, which related largely to events that occurred in previous years. These events included the possible historical mis-selling of PPI and interest rate protection products in the UK (see Note 32 on the Financial Statements). A number of mitigating actions continue to be taken to prevent future mis-selling incidents including enhanced new product approval processes.

The incidence of regulatory proceedings and other adversarial proceedings against financial service firms is increasing. Proposed changes relating to capital and liquidity requirements, remuneration and/or taxes could increase our cost of doing business, reducing future profitability. Various regulators and competition authorities around the world are also investigating and reviewing certain past submissions made by panel banks and the process for making submissions in connection with the setting of Libor, Euribor and other benchmark interest and foreign exchange rates. In response, we have undertaken a number of initiatives which seek to address the issues identified, including creating a new global management structure, enhancing our governance and oversight, increasing our compliance function resource, emphasising HSBC Values and designing and implementing new global standards as described on page 6. For further information, see Note 43 on the Financial Statements.

Other significant operational risks included:

- *challenges to achieving our strategy in a downturn*: businesses and geographical regions have prioritised strategy and annual operating plans to reflect current economic conditions. Performance against plan is monitored through a number of means including the use of balanced scorecards and performance reporting at all relevant management committees;
- *internet crime and fraud*: the threat of external fraud, especially in retail and commercial banking, may increase during adverse economic conditions. We have increased our defences through enhanced monitoring and have implemented additional controls, such as two-factor authentication, to mitigate the possibility of losses from fraud risks. We continually assess these threats as they evolve and adapt our controls to mitigate these risks;
- *level of change creating operational complexity*: the Risk function is engaged with business management in business transformation initiatives to ensure robust internal controls are maintained, including through participation in all relevant management committees. For example, we undertake rigorous testing and review of all planned updates to our systems environment. All changes are risk assessed and

appropriate mitigating controls are required for any planned high risk changes;

- *information security*: the security of our information and technology infrastructure is crucial for maintaining our banking applications and processes while protecting our customers and the HSBC brand. In common with other banks and multinational organisations, we face a growing threat of cyber attacks. A failure of our defences against such attacks could result in financial loss, loss of customer data and other sensitive information which could undermine both our reputation and our ability to retain the trust of our customers. We experienced a number of cyber attacks in 2012, none of which resulted in financial loss or the loss of customer data. Significant investment has already been made in enhancing controls, including increased training to raise staff awareness of the requirements, improved controls around data access and heightened monitoring of information flows. The threat from cyber attacks is a concern for our organisation and failure to protect our operations from internet crime or cyber attacks may result in financial loss, loss of customer data or other sensitive information which could undermine our reputation and our ability to attract and keep customers. This area will continue to be a focus of ongoing initiatives to strengthen the control environment;

- *vendor risk management*: this continues to evolve, with a project underway to accelerate the review of existing contracts, including those that support key economic functions, and a global project to manage the performance of critical outsourced vendors; and

- *compliance with regulatory agreements and orders*: in relation to the Deferred Prosecution Agreements ('DPA's), the Group has committed to take or continue to adhere to a number of remedial measures. Breach of the DPAs at any time during its term may allow the DoJ or the New York County District Attorney's Office to prosecute HSBC in relation to the matters which are the subject of the DPAs. For further detail please see 'Top and emerging risks'.

Other operational risks are also monitored and managed through the use of the ORMF, including investments made to further improve the resilience of our payments infrastructure.

Further information on the nature of these risks is provided in 'Top and emerging risks' on page 130.

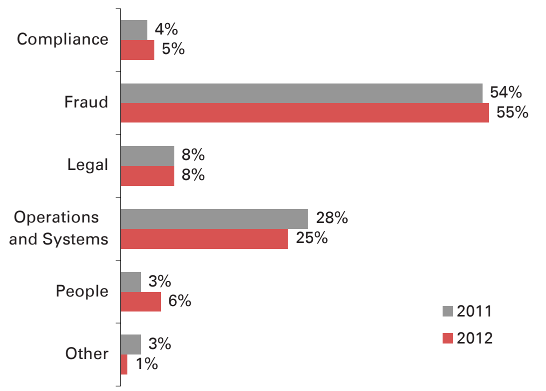
Frequency and amount of operational risk losses

The profile of operational risk incidents and associated losses is summarised below, showing the distribution of operational risk incidents in terms of their frequency of occurrence and total loss amount in US dollars.

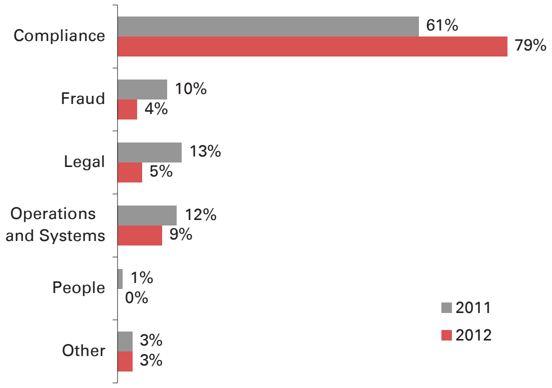
The operational risk incident profile in 2012 comprised both high frequency, low impact events and high impact events that occurred much less frequently. For example, losses due to external fraud incidents such a credit card fraud occurred more often than other types of event, but the amounts involved were often small in value. Fraud incidents continued to account for over 50% of the total number of incidents but only 4% of operational risk losses.

By contrast, operational risk incidents in the compliance category remained relatively low frequency events, but the total cost was significant. Compliance-related losses increased in 2012 to 79% of total operational risk losses due to significant historical events including the possible mis-selling of PPI and interest rate protection products in the UK and the incidence of regulatory matters described in Note 43 on the Financial Statements.

Frequency of operational risk incidents by risk category



Distribution of operational risk losses in US dollars by risk category



Compliance risk

(Unaudited)

Compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.

All Group companies are required to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice. In 2012, we experienced increasing levels of compliance risk as regulators and other agencies pursued investigations into historical activities and as we continued to work with them in relation to already identified issues. These included:

- an appearance before the US Senate Permanent Subcommittee on Investigations and the DPAs reached with US authorities in relation to investigations regarding inadequate compliance with anti-money laundering, the US Bank Secrecy Act and sanctions laws, plus a related undertaking with the FSA;
- investigations into the possible mis-selling of interest rate derivative products to SMEs in the UK; and
- investigations and reviews related to certain past submissions made by panel banks and the process for making submissions in connection with the setting of Libor, Euribor and other benchmark interest and foreign exchange rates. As some HSBC entities are members of such panels, HSBC Holdings and certain of its subsidiaries have been the subject of regulatory demands for information.

With a new senior leadership team and strategy in place since 2011, we have already taken steps to address these issues including making significant changes to strengthen compliance, risk management and culture. These steps, which will also enhance our compliance risk management capabilities, including the following:

- the creation of a new global structure, which will make HSBC easier to manage and control;
- simplifying our business through the ongoing implementation of our organisational effectiveness programme and our five economic filters strategy;
- introducing a sixth global risk filter which will standardise the way we do business in high risk countries;
- substantially increasing resources, doubling global expenditure and significantly strengthening Compliance as a control (rather than as an advisory) function;
- continuing to roll out an HSBC Values programme that defines the way everyone in the Group should act; and
- adopting and enforcing the most effective standards globally, including a globally consistent approach to knowing and retaining our customers.

Additionally, we have substantially revised our governance framework in this area, appointing a new Chief Legal Officer with particular expertise and experience in US law and regulation, and creating and appointing experienced individuals to the new roles of Head of Group Financial Crime Compliance and Global Head of Regulatory Compliance.

It is clear from both our own and wider industry experience that there is a significantly increased level of activity from regulators and law enforcement agencies in pursuing investigations in relation to possible breaches of regulation and that the direct and indirect costs of such breaches can be significant. Coupled with a substantial increase in the volume of new regulation, much of which has some level of extra-territorial effect, and the geographical spread of our businesses, we believe that the level of inherent compliance risk that we face will continue to remain high for the foreseeable future.

Fiduciary risk

(Unaudited)

Fiduciary risk is the risk to the Group of breaching our fiduciary duties when we act in a fiduciary capacity as trustee or investment manager or as mandated by law or regulation.

A fiduciary duty is one where HSBC holds, manages, oversees or has responsibility for assets for a third party that involves a legal and/or regulatory duty to act with the highest standard of care and with utmost good faith. A fiduciary must make decisions and act in the best interests of the third party and must place the wants and needs of the client first, above the needs of the Group.

We may be held liable for damages or other penalties caused by failure to act in accordance with those duties. Fiduciary duties may also arise in other circumstances, such as when we act as an agent for a principal, unless the fiduciary duties are specifically excluded (e.g. under the agency appointment contract).

During 2012, our principal fiduciary businesses (the 'designated businesses') developed fiduciary risk appetite statements for their various fiduciary roles and a joint review was commissioned by Global Operational Risk and RBWM to identify businesses other than designated businesses conducting fiduciary activities to ensure that they were subject to adequate review and oversight.

Risk management of insurance operations

(Audited)

1 *Appendix to Risk - policies and practices.*

The majority of the risk in our Insurance business derives from manufacturing activities and can be categorised as insurance risk and financial risk. Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to the issuer (HSBC). Financial risks include market risk, credit risk and liquidity risk.

There were no material changes to our policies and practices for the management of risks arising in the insurance operations, including the risks relating to different life and non-life products, during 2012.

A summary of our policies and practices regarding the risk management of insurance operations, and the main contracts we manufacture, are provided in the Appendix to Risk on page 273.

HSBC's bancassurance model

We operate an integrated bancassurance model which provides wealth and protection insurance products principally for customers with whom we have a banking relationship. Insurance products are sold through all global businesses, predominantly by RBWM and CMB, through our branches and direct channels worldwide.

The insurance contracts we sell largely relate to the underlying needs of our banking customers, which we can identify from our point-of-sale contacts and customer knowledge. The majority of sales are of savings and investment products and term and credit life contracts. By focusing largely on personal and SME lines of business we are able to optimise volumes and diversify individual insurance risks.

Where we have operational scale and risk appetite, mostly in life insurance, these insurance products are manufactured by HSBC subsidiaries. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts as part of the underwriting profit, investment income and distribution commission are kept within the Group.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage through a handful of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. These arrangements are generally structured with our exclusive strategic partners and earn the Group a combination of commissions, fees and profit-share.

We distribute insurance products in all of our geographical regions. We have core life insurance manufacturing entities, the majority of which are direct subsidiaries of legal banking entities, in seven countries (Argentina, Brazil, Mexico, France, UK, Hong Kong and Singapore). Our life insurance manufacturing entities in the US are held-for-sale at 31 December 2012.

Risk management of insurance operations in 2012

This section provides disclosures on the risks arising from insurance manufacturing operations, including insurance risk and financial risks such as market risk, credit risk and liquidity risk.

Risks in these operations are managed within the insurance entities using methodologies and processes appropriate to the insurance activities, but remain subject to oversight at Group level.

The consolidated Group liquidity and market risk management disclosures exclude insurance operations. The assets of the insurance manufacturing subsidiaries are included within the consolidated Group credit risk disclosures.

Operational and sustainability risks are covered by the Group's overall respective risk management processes and are not included in this section.

Insurance risk

Insurance risk is principally measured in two ways:

- liabilities to policyholders on life insurance contracts; and
- net written insurance premiums for non-life contracts.

The insurance risk profile of our life insurance manufacturing businesses did not change materially during 2012 despite the increase in liabilities to policyholders on these contracts to US$68bn (2011: US$60bn). This growth in liabilities largely resulted from market value gains on underlying financial assets in addition to new business generated during 2012.

The insurance risk profile of our non-life insurance manufacturing businesses changed during the year as net written insurance premiums declined to US$656m (2011: US$993m). This was in line with our strategy to focus on the manufacturing of life insurance products, with non-life manufacturing entities or portfolios in Argentina, Hong Kong, Ireland and Singapore sold during 2012.

A principal risk we continue to face is that, over time, the cost of acquiring and administering a contract, claims and benefits may exceed the aggregate amount of premiums received and investment income. The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, lapse and surrender rates and, if the policy has a savings element, the performance of the assets held to support the liabilities.

In respect of financial risks, subsidiaries manufacturing products with guarantees are usually exposed to falls in market interest rates and equity prices to the extent that the market exposure cannot be managed by utilising any discretionary participation (or bonus) features ('DPF') within the policy contracts they issue.

The following tables analyse our insurance risk exposures by geographical region and by type of business. The insurance risk profile and related exposures remained largely consistent with those observed at 31 December 2011.

Analysis of life insurance risk – liabilities to policyholders[56]
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	North America[57] US$m	Latin America US$m	Total US$m
At 31 December 2012						
Life (non-linked)	**1,319**	**25,615**	**1,587**	**–**	**2,163**	**30,684**
Insurance contracts with DPF[58]	**353**	**23,685**	**439**	**–**	**–**	**24,477**
Credit life	**160**	**–**	**61**	**–**	**–**	**221**
Annuities	**586**	**–**	**122**	**–**	**1,579**	**2,287**
Term assurance and other long-term contracts	**220**	**1,930**	**965**	**–**	**584**	**3,699**
Life (linked)	**3,249**	**3,786**	**594**	**–**	**5,427**	**13,056**
Investment contracts with DPF[58,59]	**24,370**	**–**	**4**	**–**	**–**	**24,374**
Insurance liabilities to policyholders	**28,938**	**29,401**	**2,185**	**–**	**7,590**	**68,114**
At 31 December 2011						
Life (non-linked)	1,163	21,460	1,227	982	2,094	26,926
Insurance contracts with DPF[58]	335	20,109	338	–	–	20,782
Credit life	219	–	58	34	–	311
Annuities	517	–	78	741	1,546	2,882
Term assurance and other long-term contracts	92	1,351	753	207	548	2,951
Life (linked)	2,508	3,393	476	–	4,833	11,210
Investment contracts with DPF[58,59]	21,477	–	11	–	–	21,488
Insurance liabilities to policyholders	25,148	24,853	1,714	982	6,927	59,624

For footnotes, see page 249.

Our most significant life insurance products are investment contracts with DPF issued in France, insurance contracts with DPF issued in Hong Kong and unit-linked contracts issued in Latin America, Hong Kong and the UK. The decline in life insurance liabilities in North America reflects the classification of this business as held for sale at 31 December 2012.

Analysis of non-life insurance risk – net written insurance premiums[60]
(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	North America US$m	Latin America US$m	Total US$m
2012						
Accident and health	**7**	**181**	**7**	**–**	**34**	**229**
Motor	**–**	**14**	**20**	**–**	**161**	**195**
Fire and other damage	**–**	**20**	**15**	**24**	**20**	**79**
Liability	**–**	**15**	**4**	**–**	**1**	**20**
Credit (non-life)	**–**	**–**	**–**	**36**	**1**	**37**
Marine, aviation and transport	**–**	**7**	**4**	**–**	**13**	**24**
Other non-life insurance contracts	**5**	**33**	**1**	**3**	**30**	**72**
Total net written insurance premiums	**12**	**270**	**51**	**63**	**260**	**656**
Net insurance claims incurred and movement in liabilities to policyholders	**(5)**	**(117)**	**(22)**	**(24)**	**(116)**	**(284)**

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	North America US$m	Latin America US$m	Total US$m
2011						
Accident and health	23	186	8	–	39	256
Motor	–	17	25	–	328	370
Fire and other damage	5	29	13	30	29	106
Liability	1	16	5	–	1	23
Credit (non-life)	6	–	–	48	1	55
Marine, aviation and transport	–	10	3	–	25	38
Other non-life insurance contracts	7	39	1	7	91	145
Total net written insurance premiums	42	297	55	85	514	993
Net insurance claims incurred and movement in liabilities to policyholders	56	(127)	(26)	(22)	(231)	(350)
2010						
Accident and health	78	174	8	3	37	300
Motor	–	15	28	–	267	310
Fire and other damage	38	29	11	16	22	116
Liability	–	20	4	–	2	26
Credit (non-life)	25	–	–	53	2	80
Marine, aviation and transport	3	10	4	–	18	35
Other non-life insurance contracts	20	39	1	9	84	153
Total net written insurance premiums	164	287	56	81	432	1,020
Net insurance claims incurred and movement in liabilities to policyholders	(169)	(117)	(25)	(13)	(201)	(525)

For footnotes, see page 249.

Our motor business was written predominantly in Argentina; this business was sold in May 2012.

Our accident and health and fire and other damage to property contracts was written in all regions but mainly in Hong Kong; this business was sold in November 2012.

Credit non-life insurance, which was historically originated in conjunction with the provision of loans but now in run-off, was concentrated in the US.

Balance sheet of insurance manufacturing subsidiaries

(Audited)

A principal tool used to manage exposures to both financial and insurance risk, in particular for life insurance contracts, is asset and liability matching.

In many markets in which we operate it is neither possible nor appropriate to follow a perfect asset and liability matching strategy. For long-dated non-linked contracts in particular, this results in a duration mismatch between assets and liabilities. We therefore structure portfolios to support projected liabilities from non-linked contracts.

In the absence of insurable events occurring, unit-linked contracts match assets more directly with liabilities. This results in the policyholder bearing the majority of the financial risk exposure.

The tables below show the composition of assets and liabilities by contract and by geographical region and demonstrate that there were sufficient assets to cover the liabilities to policyholders in each case at the end of 2012.

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Balance sheet of insurance manufacturing subsidiaries by type of contract
(Audited)

	Insurance contracts					Investment contracts				
	With DPF US$m	Unit-linked US$m	Annuities US$m	Term assurance[61] US$m	Non-life US$m	With DPF[59] US$m	Unit-linked US$m	Other US$m	Other assets[62] US$m	Total US$m
At 31 December 2012										
Financial assets	**24,288**	**12,619**	**1,785**	**4,350**	**356**	**23,620**	**8,780**	**4,315**	**4,692**	**84,805**
– trading assets	**–**	**–**	**4**	**–**	**–**	**–**	**–**	**–**	**–**	**4**
– financial assets designated at fair value	**2,333**	**12,440**	**571**	**756**	**196**	**6,043**	**8,206**	**1,486**	**987**	**33,018**
– derivatives	**40**	**4**	**–**	**6**	**–**	**117**	**13**	**86**	**69**	**335**
– financial investments	**18,283**	**–**	**932**	**3,315**	**73**	**16,022**	**–**	**1,853**	**2,928**	**43,406**
– other financial assets	**3,632**	**175**	**278**	**273**	**87**	**1,438**	**561**	**890**	**708**	**8,042**
Reinsurance assets	**124**	**593**	**494**	**320**	**14**	**–**	**–**	**–**	**22**	**1,567**
PVIF[63]	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**4,847**	**4,847**
Other assets and investment properties	**448**	**7**	**34**	**110**	**11**	**754**	**24**	**28**	**2,420**	**3,836**
Total assets	**24,860**	**13,219**	**2,313**	**4,780**	**381**	**24,374**	**8,804**	**4,343**	**11,981**	**95,055**
Liabilities under investment contracts:										
– designated at fair value	**–**	**–**	**–**	**–**	**–**	**–**	**8,691**	**3,765**	**–**	**12,456**
– carried at amortised cost	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**455**	**–**	**455**
Liabilities under insurance contracts	**24,477**	**13,056**	**2,287**	**3,920**	**81**	**24,374**	**–**	**–**	**–**	**68,195**
Deferred tax	**13**	**–**	**13**	**12**	**1**	**–**	**–**	**–**	**1,161**	**1,200**
Other liabilities	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2,760**	**2,760**
Total liabilities	**24,490**	**13,056**	**2,300**	**3,932**	**82**	**24,374**	**8,691**	**4,220**	**3,921**	**85,066**
Total equity	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**9,989**	**9,989**
Total equity and liabilities[64]	**24,490**	**13,056**	**2,300**	**3,932**	**82**	**24,374**	**8,691**	**4,220**	**13,910**	**95,055**
At 31 December 2011										
Financial assets	20,520	10,355	2,531	3,398	1,656	20,745	7,843	4,103	7,219	78,370
– trading assets	–	–	3	–	24	–	–	–	–	27
– financial assets designated at fair value	1,730	10,101	426	594	206	5,491	7,191	1,515	1,616	28,870
– derivatives	23	1	–	–	–	231	7	89	7	358
– financial investments	15,523	1	1,778	2,540	791	13,732	–	1,913	4,008	40,286
– other financial assets	3,244	252	324	264	635	1,291	645	586	1,588	8,829
Reinsurance assets	12	903	441	196	250	–	–	–	42	1,844
PVIF[63]	–	–	–	–	–	–	–	–	4,092	4,092
Other assets and investment properties	384	6	14	188	169	744	28	34	753	2,320
Total assets	20,916	11,264	2,986	3,782	2,075	21,489	7,871	4,137	12,106	86,626
Liabilities under investment contracts:										
– designated at fair value	–	–	–	–	–	–	7,813	3,586	–	11,399
– carried at amortised cost	–	–	–	–	–	–	–	435	–	435
Liabilities under insurance contracts	20,782	11,210	2,882	3,262	1,635	21,488	–	–	–	61,259
Deferred tax	15	–	21	6	1	–	–	–	931	974
Other liabilities	–	–	–	–	–	–	–	–	1,930	1,930
Total liabilities	20,797	11,210	2,903	3,268	1,636	21,488	7,813	4,021	2,861	75,997
Total equity	–	–	–	–	–	–	–	–	10,629	10,629
Total equity and liabilities[64]	20,797	11,210	2,903	3,268	1,636	21,488	7,813	4,021	13,490	86,626

For footnotes, see page 249.

Balance sheet of insurance manufacturing subsidiaries by geographical region[56]

(Audited)

	Europe US$m	Hong Kong US$m	Rest of Asia-Pacific US$m	North America[57] US$m	Latin America US$m	Total US$m
At 31 December 2012						
Financial assets	**37,325**	**35,632**	**2,594**	**–**	**9,254**	**84,805**
– trading assets	**–**	**–**	**–**	**–**	**4**	**4**
– financial assets designated at fair value	**17,590**	**7,356**	**1,370**	**–**	**6,702**	**33,018**
– derivatives	**203**	**126**	**6**	**–**	**–**	**335**
– financial investments	**17,139**	**23,275**	**994**	**–**	**1,998**	**43,406**
– other financial assets	**2,393**	**4,875**	**224**	**–**	**550**	**8,042**
Reinsurance assets	**809**	**715**	**8**	**–**	**35**	**1,567**
PVIF[63]	**1,140**	**2,846**	**304**	**–**	**557**	**4,847**
Other assets and investment properties	**849**	**983**	**230**	**1,573**	**201**	**3,836**
Total assets	**40,123**	**40,176**	**3,136**	**1,573**	**10,047**	**95,055**
Liabilities under investment contracts:						
– designated at fair value	**7,783**	**4,673**	**–**	**–**	**–**	**12,456**
– carried at amortised cost	**–**	**–**	**–**	**–**	**455**	**455**
Liabilities under insurance contracts	**28,954**	**29,402**	**2,200**	**–**	**7,639**	**68,195**
Deferred tax	**403**	**532**	**88**	**–**	**177**	**1,200**
Other liabilities	**782**	**347**	**267**	**1,037**	**327**	**2,760**
Total liabilities	**37,922**	**34,954**	**2,555**	**1,037**	**8,598**	**85,066**
Total equity	**2,201**	**5,222**	**581**	**536**	**1,449**	**9,989**
Total equity and liabilities[64]	**40,123**	**40,176**	**3,136**	**1,573**	**10,047**	**95,055**
At 31 December 2011						
Financial assets	34,163	30,126	2,093	2,414	9,574	78,370
– trading assets	–	–	–	–	27	27
– financial assets designated at fair value	15,583	5,875	1,155	–	6,257	28,870
– derivatives	244	114	–	–	–	358
– financial investments	15,531	19,858	617	1,846	2,434	40,286
– other financial assets	2,805	4,279	321	568	856	8,829
Reinsurance assets	746	912	39	19	128	1,844
PVIF[63]	1,097	2,322	282	65	326	4,092
Other assets and investment properties	909	946	31	24	410	2,320
Total assets	36,915	34,306	2,445	2,522	10,438	86,626
Liabilities under investment contracts:						
– designated at fair value	6,961	4,405	33	–	–	11,399
– carried at amortised cost	–	–	–	–	435	435
Liabilities under insurance contracts	25,795	25,160	1,802	1,079	7,423	61,259
Deferred tax	352	408	60	28	126	974
Other liabilities	1,200	269	69	13	379	1,930
Total liabilities	34,308	30,242	1,964	1,120	8,363	75,997
Total equity	2,607	4,064	481	1,402	2,075	10,629
Total equity and liabilities[64]	36,915	34,306	2,445	2,522	10,438	86,626

For footnotes, see page 249.

Financial risks

(Audited)

Financial risk exposures can be categorised into:

- *Market risk* – risks arising from changes in the fair values of financial assets or their future cash flows from fluctuations in variables such as interest rates, foreign exchange rates and equity prices;
- *Credit risk* – the risk of financial loss following the default of third parties to meet their obligations; and
- *Liquidity risk* – the risk of not being able to make payments to policyholders as they fall due as there are insufficient assets that can be realised as cash.

Further details on the nature of these financial risks and how they are managed are provided in the Appendix to Risk on page 252.

The following table analyses the assets held in our insurance manufacturing subsidiaries at 31 December 2012 by type of contract, and provides a view of the exposure to financial risk. For linked contracts, which pay benefits to policyholders which are determined by reference to the value of the investments supporting the policies, we typically designate assets at fair value; for non-linked contracts, the classification of the assets is driven by the nature of the underlying contract.

Financial assets held by insurance manufacturing subsidiaries

(Audited)

	Life linked contracts[65] US$m	Life non-linked contracts[66] US$m	Non-life insurance[67] US$m	Other assets[62] US$m	Total US$m
At 31 December 2012					
Trading assets					
Debt securities	**–**	**4**	**–**	**–**	**4**
Financial assets designated at fair value	**20,646**	**11,189**	**196**	**987**	**33,018**
Treasury bills	**–**	**39**	**–**	**–**	**39**
Debt securities	**8,028**	**3,607**	**196**	**408**	**12,239**
Equity securities	**12,618**	**7,543**	**–**	**579**	**20,740**
Financial investments					
Held-to-maturity: debt securities	**–**	**20,245**	**–**	**1,548**	**21,793**
Available-for-sale:	**–**	**20,160**	**73**	**1,380**	**21,613**
– debt securities	**–**	**20,160**	**66**	**1,354**	**21,580**
– equity securities	**–**	**–**	**7**	**26**	**33**
Derivatives	**17**	**249**	**–**	**69**	**335**
Other financial assets[68]	**736**	**6,511**	**87**	**708**	**8,042**
Total financial assets[64]	**21,399**	**58,358**	**356**	**4,692**	**84,805**
At 31 December 2011					
Trading assets					
Debt securities	–	3	–	–	3
Equity securities	–	–	24	–	24
Financial assets designated at fair value	17,292	9,756	206	1,616	28,870
Treasury bills	4	107	–	–	111
Debt securities	6,823	3,198	206	795	11,022
Equity securities	10,465	6,451	–	821	17,737
Financial investments					
Held-to-maturity: debt securities	–	17,506	175	1,300	18,981
Available-for-sale:	1	17,980	616	2,708	21,305
– other eligible bills	–	–	–	50	50
– debt securities	–	17,963	599	2,520	21,082
– equity securities	1	17	17	138	173
Derivatives	8	343	–	7	358
Other financial assets[68]	897	5,709	635	1,588	8,829
Total financial assets[64]	18,198	51,297	1,656	7,219	78,370

For footnotes, see page 249.

Approximately 65.6% of financial assets were invested in debt securities at 31 December 2012 (2011: 65.2%) with 24.5% (2011: 22.9%) invested in equity securities.

In life linked insurance, premium income less charges levied is invested in a portfolio of assets. We manage the financial risks of this product on behalf of the policyholders by holding appropriate assets in segregated funds or portfolios to which the liabilities are linked. These assets represented 25.2% (2011: 23.2%) of the total financial assets of our insurance manufacturing subsidiaries at the end of 2012.

The remaining financial risks are managed either solely on behalf of the shareholder, or jointly on behalf of the shareholder and policyholders where DPF exist.

Market risk

(Audited)

Market risk arises when mismatches occur between product liabilities and the investment assets which back them. For example, mismatches between asset and liability yields and maturities give rise to interest rate risk.

Long-term insurance or investment products may incorporate benefits that are guaranteed. Where mismatches exist as a result of current yields falling below guaranteed levels for a prolonged period, the risk that shareholder capital is required to meet liabilities to policyholders increases. The table below shows, in respect of each category of guarantee, the total liabilities to policyholders established for guaranteed products manufactured by our insurance subsidiaries. The table also shows the range of investment returns on the assets supporting these products and the implied investment returns that would enable the business to meet the guarantees.

Immediate annuities, where current investment returns are below guarantees, relate to a closed portfolio in the US which is held for sale at 31 December 2012. Annual return guarantees between 4.5-6%, where current investment returns are below guarantees, is a closed portfolio in Hong Kong. The only other portfolio of contracts identified where current investment returns are below guarantees relate to a closed portfolio in France. This portfolio has reserves of US$495m for which current portfolio yields are 3.25% but investment returns implied by the guarantees are 4.5%.

Liabilities to policyholders[69]

(Audited)

	2012			2011		
	Amount of reserve US$m	**Investment returns implied by guarantee[64] %**	**Current yields %**	Amount of reserve US$m	Investment returns implied by guarantee[64] %	Current yields %
Annuities in payment	**1,379**	**0.0 – 11.7**	**4.6 – 20.8**	1,414	0.0 – 9.6	4.2 – 25.2
Deferred annuities	**179**	**0.0 – 6.0**	**3.3 – 20.4**	175	0.0 – 6.0	3.2 – 22.7
Immediate annuities[70]	**485**	**6.0 – 12.0**	**5.4 – 5.5**	538	6.0 – 12.0	5.3 – 5.4
Annual return	**23,878**	**0.0 – 2.5**	**1.4 – 4.7**	20,465	0.0 – 2.5	0.0 – 6.9
Annual return	**4,315**	**2.5 – 4.5**	**3.3 – 6.7**	3,849	2.5 – 4.5	3.3 – 10.0
Annual return	**155**	**4.5 – 6.0**	**4.1 – 4.2**	163	4.5 – 6.0	6.4 – 6.5
Capital	**18,779**	**–**	**0.0 – 7.2**	17,400	–	2.3 – 7.8

For footnotes, see page 249.

The following table illustrates the effects of selected interest rate, equity price, foreign exchange rate and credit spread scenarios on our profit for the year and total equity of our insurance manufacturing subsidiaries.

Where appropriate, we include the impact of the stress on the PVIF in the results of the sensitivity tests. The relationship between the profit and total equity and the risk factors is non-linear and, therefore, the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. The sensitivities are stated before allowance for management actions which may mitigate the effect of changes in market rates, and for any factors such as policyholder behaviour that may change in response to changes in market risk.

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Sensitivity of HSBC's insurance manufacturing subsidiaries to market risk factors
(Audited)

	2012		2011	
	Effect on profit for the year US$m	Effect on total equity US$m	Effect on profit for the year US$m	Effect on total equity US$m
+ 100 basis points parallel shift in yield curves	125	(263)	108	(178)
– 100 basis points parallel shift in yield curves	(208)	205	(115)	191
10% increase in equity prices	91	91	106	106
10% decrease in equity prices	(92)	(92)	(164)	(164)
10% increase in US dollar exchange rate compared to all currencies	40	40	31	31
10% decrease in US dollar exchange rate compared to all currencies	(40)	(40)	(31)	(31)
Sensitivity to credit spread increases	(18)	(50)	(30)	(75)

Credit risk

(Audited)

Credit risk can give rise to losses through default and can lead to volatility in our income statement and balance sheet figures through movements in credit spreads, principally on the US$48bn (2011: US$44bn) non-linked bond portfolio.

As tabulated above, the sensitivity of the net profit after tax of our insurance subsidiaries to the effects of increases in credit spreads has decreased since 2011 due to narrowing of credit spreads experienced in 2012. The balance and related movement are small because about 90% of the debt securities held by our insurance subsidiaries are classified as either held to maturity or available for sale, and consequently any changes in the fair value of these financial investments, absent impairment, would have no effect on the profit after tax. We calculate the sensitivity using simplified assumptions based on a one-day movement in credit spreads over a two-year period. A confidence level of 99%, consistent with our Group VAR, is applied.

Credit quality

(Audited)

The following table presents an analysis of treasury bills, other eligible bills and debt securities within our Insurance business by measures of credit quality. The five credit quality classifications are defined in the Appendix to Risk on page 253. Only assets supporting liabilities under non-linked insurance and investment contracts and shareholders' funds are included in the table as financial risk on assets supporting linked liabilities is predominantly borne by the policyholder. 83.5% (2011: 86.6%) of the assets included in the table are invested in investments rated as strong.

Treasury bills, other eligible bills and debt securities in HSBC's insurance manufacturing subsidiaries
(Audited)

	Neither past due nor impaired				
	Strong[62] US$m	Good US$m	Satisfactory US$m	Sub-standard US$m	Total US$m
At 31 December 2012					
Supporting liabilities under non-linked insurance and investment contracts					
Trading assets – debt securities	1	–	3	–	4
Financial assets designated at fair value	2,807	638	219	178	3,842
– treasury and other eligible bills	39	–	–	–	39
– debt securities	2,768	638	219	178	3,803
Financial investments	34,392	4,265	1,627	187	40,471
– debt securities	34,392	4,265	1,627	187	40,471
	37,200	4,903	1,849	365	44,317

	Neither past due nor impaired				
	Strong[62] US$m	**Good US$m**	**Satisfactory US$m**	**Sub-standard US$m**	**Total US$m**
Supporting shareholders' funds[71]					
Financial assets designated at fair value	**229**	**146**	**13**	**20**	**408**
– debt securities	**229**	**146**	**13**	**20**	**408**
Financial investments	**2,356**	**353**	**131**	**62**	**2,902**
– debt securities	**2,356**	**353**	**131**	**62**	**2,902**
	2,585	**499**	**144**	**82**	**3,310**
Total[64]					
Trading assets – debt securities	**1**	**–**	**3**	**–**	**4**
Financial assets designated at fair value	**3,036**	**784**	**232**	**198**	**4,250**
– treasury and other eligible bills	**39**	**–**	**–**	**–**	**39**
– debt securities	**2,997**	**784**	**232**	**198**	**4,211**
Financial investments	**36,748**	**4,618**	**1,758**	**249**	**43,373**
– debt securities	**36,748**	**4,618**	**1,758**	**249**	**43,373**
	39,785	**5,402**	**1,993**	**447**	**47,627**
At 31 December 2011					
Supporting liabilities under non-linked insurance and investment contracts					
Trading assets – debt securities	1	–	2	–	3
Financial assets designated at fair value	2,851	168	349	143	3,511
– treasury and other eligible bills	107	–	–	–	107
– debt securities	2,744	168	349	143	3,404
Financial investments	32,062	2,716	1,269	196	36,243
– debt securities	32,062	2,716	1,269	196	36,243
	34,914	2,884	1,620	339	39,757
Supporting shareholders' funds[71]					
Financial assets designated at fair value	341	348	61	45	795
– debt securities	341	348	61	45	795
Financial investments	3,198	560	83	29	3,870
– other eligible bills	50	–	–	–	50
– debt securities	3,148	560	83	29	3,820
	3,539	908	144	74	4,665
Total[64]					
Trading assets – debt securities	1	–	2	–	3
Financial assets designated at fair value	3,192	516	410	188	4,306
– treasury and other eligible bills	107	–	–	–	107
– debt securities	3,085	516	410	188	4,199
Financial investments	35,260	3,276	1,352	225	40,113
– other eligible bills	50	–	–	–	50
– debt securities	35,210	3,276	1,352	225	40,063
	38,453	3,792	1,764	413	44,422

For footnotes, see page 249.

Credit risk also arises when assumed insurance risk is ceded to reinsurers. The split of liabilities ceded to reinsurers and outstanding reinsurance recoveries, analysed by credit quality, is shown below. Our exposure to third parties under the reinsurance agreements described in the Appendix to Risk on page 274 is included in this table.

Reinsurers' share of liabilities under insurance contracts
(Audited)

	Neither past due nor impaired				Past due but not impaired	
	Strong US$m	Good US$m	Satisfactory US$m	Sub-standard US$m	US$m	Total US$m
At 31 December 2012						
Linked insurance contracts	**55**	**400**	**–**	**–**	**–**	**455**
Non-linked insurance contracts	**936**	**4**	**6**	**–**	**6**	**952**
Total[64]	**991**	**404**	**6**	**–**	**6**	**1,407**
Reinsurance debtors	**19**	**133**	**–**	**–**	**8**	**160**
At 31 December 2011						
Linked insurance contracts	45	858	–	–	–	903
Non-linked insurance contracts	782	10	104	3	–	899
Total[64]	827	868	104	3	–	1,802
Reinsurance debtors	18	2	9	1	12	42

For footnote, see page 249.

Liquidity risk

(Audited)

The following tables show the expected undiscounted cash flows for insurance contract liabilities and the remaining contractual maturity of investment contract liabilities at 31 December 2012. A significant proportion of our non-life insurance business is viewed as short-term, with the settlement of liabilities expected to occur within one year of the period of risk. There is a greater spread of expected maturities for the life business where, in a large proportion of cases, the liquidity risk is borne in conjunction with policyholders (wholly borne by the policyholder in the case of unit-linked business).

The profile of the expected maturity of the insurance contracts at 31 December 2012 remained comparable with 2011.

Expected maturity of insurance contract liabilities
(Audited)

	Expected cash flows (undiscounted)				
	Within 1 year US$m	1-5 years US$m	5-15 years US$m	Over 15 years US$m	Total US$m
At 31 December 2012					
Non-life insurance	**78**	**3**	**–**	**–**	**81**
Life insurance (non-linked)	**4,176**	**12,199**	**23,420**	**27,836**	**67,631**
Life insurance (linked)	**1,243**	**3,761**	**10,446**	**13,497**	**28,947**
Total[64]	**5,497**	**15,963**	**33,866**	**41,333**	**96,659**
At 31 December 2011					
Non-life insurance	742	704	176	13	1,635
Life insurance (non-linked)	2,006	12,243	21,332	25,990	61,571
Life insurance (linked)	920	3,262	9,070	15,546	28,798
Total[64]	3,668	16,209	30,578	41,549	92,004

For footnote, see page 249.

Remaining contractual maturity of investment contract liabilities
(Audited)

	Liabilities under investment contracts by insurance manufacturing subsidiaries			
	Linked investment contracts US$m	Other investment contracts US$m	Investment contracts with DPF US$m	Total US$m
At 31 December 2012				
Remaining contractual maturity:[64]				
– due within 1 year	**195**	**458**	**4**	**657**
– due between 1 and 5 years	**675**	**–**	**–**	**675**
– due between 5 and 10 years	**731**	**–**	**–**	**731**
– due after 10 years	**2,061**	**–**	**–**	**2,061**
– undated[72]	**5,029**	**3,762**	**24,370**	**33,161**
	8,691	**4,220**	**24,374**	**37,285**
At 31 December 2011				
Remaining contractual maturity:[64]				
– due within 1 year	191	438	8	637
– due between 1 and 5 years	595	–	3	598
– due between 5 and 10 years	548	–	–	548
– due after 10 years	2,063	–	–	2,063
– undated[72]	4,416	3,583	21,477	29,476
	7,813	4,021	21,488	33,322

For footnotes, see page 249.

Present value of in-force long-term insurance business

(Audited)

Our life insurance business is accounted for using the embedded value approach which, *inter alia*, provides a risk and valuation framework. The PVIF asset at 31 December 2012 was US$4.8bn (2011: US$4.1bn), representing the present value of the shareholders' interest in the profits expected to emerge from the book of in-force policies at that date.

The PVIF calculation projects expected cash flows, adjusted for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends. The main assumptions relate to economic and non-economic assumptions and policyholder behaviour. Assumptions are subject to uncertainty and can contribute to volatility in the results of the Insurance business.

The key drivers of the movement in the value of the PVIF asset are the expected cash flows from:

- new business adjusted for anticipated maturities and assumptions relating to policyholder behaviour ('Value of new business written during the year');
- unwind of the discount rate less the reversal of expected cash flows for the period ('Expected return');
- changes in non-economic operating assumptions such as mortality or lapse rates ('Change in operating assumptions');
- impacts arising from changes in projected future cash flows associated with operating assumption experience variances compared to those assumed at the start of the period ('Experience variances');
- changes related to future investment returns ('Changes in investment assumptions'); and
- the impact of actual investment experience on future cash flows compared to those assumed at the start of the period ('Investment return variances').

The valuation of the PVIF asset includes explicit risk margins for non-economic risks in the projection assumptions and explicit allowances for financial options and guarantees using stochastic methods. Risk discount rates are set on an active basis with reference to market risk free yields.

The following table shows the movements recorded during the year in respect of total equity and PVIF of insurance operations.

Report of the Directors: Operating and Financial Review (continued)

Movements in PVIF and total equity of insurance operations
(Audited)

	2012		2011	
	PVIF US$m	**Total equity US$m**	PVIF US$m	Total equity US$m
At 1 January	**4,092**	**10,629**	3,440	9,778
Change in PVIF of long-term insurance business	**737**	**737**	726	726
Value of new business written during the year[73]	**1,027**		943	
Movements arising from in-force business:				
– expected return	**(420)**		(428)	
– experience variances[74]	**12**		1	
– changes in operating assumptions	**(3)**		(222)	
Investment return variances	**(18)**		(103)	
Changes in investment assumptions	**78**		294	
Other adjustments	**61**		241	
Return on net assets	**–**	**1,232**	–	1,057
Capital transactions	**–**	**(1,525)**	–	(500)
Disposals of subsidiaries/portfolios	**–**	**(382)**	–	(96)
Exchange differences and other	**18**	**(702)**	(74)	(336)
At 31 December	**4,847**	**9,989**	4,092	10,629

For footnotes, see page 249.

Other adjustments for 2012 included a one-off gain of US$119m for a PVIF asset recognised on linked insurance business in Brazil. For 2011, other adjustments related to the US$243m gain recognised upon refinement of the PVIF calculation.

Key assumptions used in the computation of PVIF for main life insurance operations
(Audited)

	2012			2011		
	UK %	**Hong Kong %**	**France %**	UK %	Hong Kong %	France %
Risk free rate	**1.53**	**0.60**	**2.12**	2.24	1.47	2.77
Risk discount rate	**2.03**	**7.46**	**4.05**	2.74	8.00	5.95
Expense inflation	**2.84**	**3.00**	**2.00**	3.45	3.00	2.00

Economic assumptions

(Audited)

The following table shows the effect on the PVIF of reasonably possible changes in the main economic assumption, risk-free rates, across all insurance manufacturing subsidiaries.

Due to certain characteristics of the contracts, the relationships are non-linear and the results of the sensitivity testing should not be extrapolated to higher levels of stress. The sensitivities shown are before actions that could be taken by management to mitigate effects and before resultant changes in policyholder behaviour.

Sensitivity of PVIF to changes in economic assumptions
(Audited)

	PVIF at 31 December	
	2012 US$m	2011 US$m
+ 100 basis point shift in risk-free rate	**137**	128
– 100 basis point shift in risk-free rate	**(191)**	(91)

Non-economic assumptions

(Audited)

We determine the policyholder liabilities for non-life manufacturers by reference to non-economic assumptions including claims costs and expense rates.

Policyholder liabilities and PVIF for life manufacturers are determined by reference to non-economic assumptions including mortality and/or morbidity, lapse rates and expense rates. The table below shows the sensitivity of profit for 2012 and total equity at 31 December 2012 to reasonably possible changes in these non-economic assumptions at that date across all our insurance manufacturing subsidiaries, with comparatives for 2011.

The cost of claims is a risk associated with non-life insurance business. An increase in claims costs would have a negative effect on profit. Sensitivities have significantly decreased since 2011 due to the disposal of the non-life entities or portfolios in Argentina, Hong Kong, Ireland and Singapore during 2012.

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written. Our largest exposures to mortality and morbidity risk exist in Brazil, France, Hong Kong and the US.

Sensitivity to lapse rates depends on the type of contracts being written. For insurance contracts, claims are funded by premiums received and income earned on the investment portfolio supporting the liabilities. For a portfolio of term assurance, an increase in lapse rates typically has a negative effect on profit due to the loss of future premium income on the lapsed policies. However, some contract lapses have a positive effect on profit due to the existence of policy surrender charges. Brazil, France, Hong Kong and the UK are where we are most sensitive to a change in lapse rates.

Expense rate risk is the exposure to a change in expense rates. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative impact on our profits.

Sensitivity analysis

(Audited)

	Effect on profit and total equity at 31 December		
	Life US$m	**Non-life US$m**	**Total US$m**
2012			
20% increase in claims costs	**–**	**(12)**	**(12)**
20% decrease in claims costs	**–**	**12**	**12**
10% increase in mortality and/or morbidity rates	**(88)**	**–**	**(88)**
10% decrease in mortality and/or morbidity rates	**92**	**–**	**92**
50% increase in lapse rates	**(491)**	**–**	**(491)**
50% decrease in lapse rates	**842**	**–**	**842**
10% increase in expense rates	**(105)**	**(1)**	**(106)**
10% decrease in expense rates	**106**	**1**	**107**
2011			
20% increase in claims costs	–	(135)	(135)
20% decrease in claims costs	–	135	135
10% increase in mortality and/or morbidity rates	(100)	–	(100)
10% decrease in mortality and/or morbidity rates	110	–	110
50% increase in lapse rates	(349)	–	(349)
50% decrease in lapse rates	609	–	609
10% increase in expense rates	(89)	(12)	(101)
10% decrease in expense rates	89	12	101

Other material risks

1 *Appendix to Risk – risk policies and practices.*

Reputational risk

(Unaudited)

The safeguarding of our reputation is paramount. It is the responsibility of all members of staff, supported by a global risk management structure underpinned by relevant policies and practices, readily available guidance, and regular training.

We have acknowledged, in the context of last year's US Senate Permanent Subcommittee on Investigations, the Deferred Prosecution Agreements with US authorities and the undertakings with the UK FSA, that it was not enough to fix the specific issues that they focused on. Additionally, therefore, we have outlined our implementation of a global strategy to tackle the root causes of these identified deficiencies.

With a new senior leadership team and a new strategy in place since 2011, HSBC has already taken steps to augment the framework to address these issues including making significant changes to strengthen compliance, risk management and culture. These steps, which should also serve, over time, to enhance our reputational risk management, are discussed further on page 278.

Success in detecting and preventing illicit actors' access to the global financial system calls for constant vigilance and HSBC will continue to work in close cooperation with all governments to achieve this. This is integral to the execution of HSBC's strategy, to our core values and to preserving and enhancing our reputation.

Pension risk

(Audited)

We operate a number of pension plans throughout the world. Some are defined benefit plans, of which the largest is the HSBC Bank (UK) Pension Scheme ('the principal plan').

There were no material changes to our policies and procedures for the management of pension risk in 2012.

During 2012, the Group's defined benefit pension plans reduced from a net liability of US$0.2bn to a net asset of US$0.03bn. This was mainly due to growth in the value of the principal plan's assets outstripping the comparable growth in liabilities.

The principal plan

(Audited)

In 2006 the principal plan assets consisted of a strategic portfolio. At the time, HSBC and the trustee of the principal plan agreed to change the investment strategy in order to reduce the investment risk. The target asset allocations for this strategy at that time, as revised in 2011 and at this year end are shown below, demonstrating the ongoing evolution of the strategy. The strategy is to hold the majority of assets in bonds, with the remainder in a more diverse range of investments, and includes a commitment to undertake a programme of swap arrangements (see Note 44 on the Financial Statements) by which the principal plan makes Libor-related interest payments in exchange for the receipt of cash flows which are based on projected future benefit payments to be made from the principal plan.

The principal plan – target asset allocation

	2012 %	2011 %	2006 %
Equities	**15.5**	15.5	15.0
Bonds	**60.5**	60.5	50.0
Alternative assets[75]	**9.5**	9.5	10.0
Property	**9.0**	9.0	10.0
Cash	**5.5**	5.5	15.0
	100.0	100.0	100.0

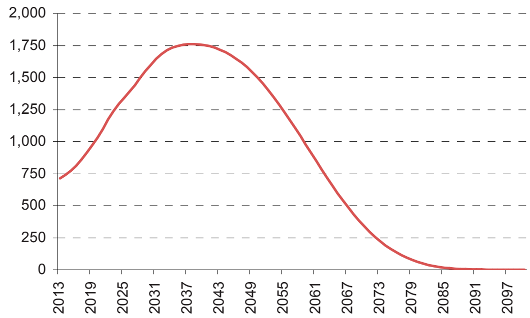
For footnote, see page 249.

As a result of a special contribution to the principal plan in June 2010 of £1,760m (US$2,638m), a cash generating portfolio was established. The portfolio comprised supra-national, agency and government-guaranteed securities, ABSs, corporate subordinated debt and auction rate securities. A further special contribution in December 2011 of £184m (US$286m) added to this portfolio. The contribution was used to purchase ABSs from HSBC at an arm's length value determined by the Scheme's independent third-party advisers. However, these assets may be supplemented with other assets from time to time.

The latest actuarial valuation of the principal plan was made as at 31 December 2011 by C G Singer, Fellow of the Institute of Actuaries, of Towers Watson Limited. At that date, the market value of the HSBC Bank (UK) Pension Scheme's assets was £18.3bn (US$28.3bn) (including assets relating to the defined benefit plan, the defined contribution plan and additional voluntary contributions). The market value of the plan assets represented 100% of the amount expected to be required, on the basis of the assumptions adopted, to provide the benefits accrued to members after allowing for expected future increases in earnings. There was therefore no resulting surplus/deficit. The method adopted for this valuation was the projected unit method.

The expected cash flows from the principal plan were projected by reference to the Retail Price Index ('RPI') swap break-even curve at 31 December 2011. Salary increases were assumed to be 0.5% per annum above RPI and inflationary pension increases, subject to a minimum of 0% and a maximum of 5% (maximum of 3% per annum in respect of service accrued since 1 July 2009), were assumed to be in line with RPI. The projected cash flows were discounted at the Libor swap curve at 31 December 2011 plus a margin for the expected return on the investment strategy of 160bps per annum. The mortality experience of the principal plan's pensioners over the six-year period (2006-2011) was analysed and, on the basis of this analysis, the mortality assumptions were set, based on the SAPS S1 series of tables adjusted to reflect the pensioner experience. Allowance was made for future improvements to mortality rates in line with the Continuous Mortality Investigation core projections with a long run improvement rate set at 2% for males and 1.5% for females. The benefits payable from the defined benefit plan from 2013 are expected to be as shown in the chart below.

Benefit payments (US$m)



As part of the 31 December 2011 valuation, calculations were also carried out as to the amount of assets that might be needed to meet the liabilities if the Scheme was discontinued and the members' benefits bought out with an insurance company (although in practice this may not be possible for a plan of this size) or the Trustee continued to run the plan without the support of HSBC. The amount required under this approach was estimated to be £26.2bn (US$40.6bn) as at 31 December 2011. In arriving at this estimation, a more prudent assumption about future mortality was made than for the assessment of the ongoing position and it was assumed that the Trustee would alter the investment strategy to be an appropriately matched portfolio of UK government bonds. An explicit allowance for expenses was also included.

Based on the latest valuation as at 31 December 2011 and there being no deficit, no Technical Provisions Recovery Plan is required and the schedule of future funding payments agreed after the 2008 actuarial valuation was dissolved.

HSBC and the Trustee have developed a general framework, which, over time, will see the Scheme's asset strategy evolve to be less risky and further aligned to future cash-flows, referred to as the Target Matching Portfolio ('TMP'). Evolution to the TMP can be achieved by asset returns in excess of that assumed and/or additional funding. In February 2013, HSBC agreed to make three general framework contributions of £64m (US$103m) in each of the calendar years 2013, 2014 and 2015.

After the 2008 valuation, HSBC considered that the agreed recovery plan payments, together with investment returns (at an expected level of 240 basis points above the Libor swap curve), would be sufficient to meet the deficit as at 31 December 2008 over the agreed period. HSBC also agreed with the Trustee, that at each subsequent actuarial valuation any shortfall in investment returns relative to this expected level, subject to a maximum of 50 basis points per annum, would be eliminated by payment of equal cash instalments over the remaining years to the end of the recovery plan period.

Although the 2011 triennial valuation disclosed no deficit and therefore no technical provisions recovery plan is required, HSBC and the Trustee have agreed to maintain this investment performance underwriting agreement. The investment performance will be assessed every three years, with an end date of 31 December 2017. Any payments due would only be payable if a Technical Provisions deficit is present at the reference date.

HSBC Bank is also making ongoing contributions to the principal plan in respect of the accrual of benefits of defined benefit section members. Since April 2010, after completion of the 2008 valuation, HSBC has paid contributions at the rate of 34% of pensionable salaries (less member contributions).

Following completion of the 2011 triennial valuation, HSBC will pay contributions at the rate of 43% of pensionable salaries (less member contributions) from 1 April 2013. An additional employer contribution will be paid on or before 30 April 2013 equal to 9% of pensionable salaries, in respect of the period 1 January 2012 to 31 March 2013.

Future developments

(Unaudited)

In January 2013, as part of a wider review of employee benefits, HSBC announced proposals to cease future accrual of service for active members of the Defined Benefit Section with effect from 30 June 2014. Under the proposals, all active members of the Defined Benefit Section will become deferred members from 30 June 2014 (and will become members of the Defined Contribution Section from 1 July 2014).

The valuation of the Scheme's defined benefit obligation is sensitive to changes in actuarial assumptions. The proposed removal of future salary escalation from the pay assumptions is estimated to reduce the defined benefit obligation by approximately US$0.3bn and the proposed change in the underlying inflation assumption for indexation from RPI, for active members, to CPI, for deferred members, by a further US$0.5bn. The proposed cessation of the Scheme to provide ill-health benefits to members, to be covered by insurance policies provided by HSBC under these proposals, is estimated to reduce the defined benefit obligation by approximately US$0.5bn.

The consultation period for these proposals will end, and a final decision is expected to be made, in the second quarter of 2013 at which time a past service credit will be recognised in the income statement.

The future effect of these proposed changes on the income statement is dependent primarily on the level of pension contributions made by HSBC and employees to the Defined Contribution Section, the final outcome of which remains uncertain. In all reasonably likely scenarios, the net effect on earnings over time is not expected to be material.

The HSBC Group Hong Kong Local Staff Retirement Benefit Scheme

(Audited)

The scheme mainly invests in bonds with a smaller portion in equities and each investment manager has been assigned an investment mandate with the targeted asset allocation. The ranges of target asset allocations for the portfolio are as follows: Bonds and cash 55-100%, Equity 0-25% and Alternative Investments 0-20%. Alternative Investments refer to high-return and high-risk alternatives, including but not limited to private equity funds, hedge funds, energy, gold, agriculture, commodities and distressed assets.

The latest actuarial valuation of the defined benefit scheme was made at 31 December 2010 by Wing Lui, Fellow of the Society of Actuaries, of Towers Watson Hong Kong Limited. At that valuation date, the market value of the defined benefit scheme's assets was US$1,109m. On an ongoing basis, the defined benefit scheme's assets represented 104% of the actuarial present value of the benefits accrued to members, after allowing for expected future increases in salaries, and the resulting surplus amounted to US$41m. On a wind-up basis, the scheme's assets represented 110% of the members' vested benefits, based on current salaries, and the resulting surplus amounted to US$105m. The attained age method has been adopted for the valuation and the major assumptions used in this valuation were a discount rate of 6% per annum and long-term salary increases of 5% per annum. The recommended employer contribution rate as a percentage of scheme salaries is 14.3% over the period 1 January 2011 to 31 December 2013. No additional special contributions have been agreed.

The HSBC North America (US) Retirement Income Plan

(Audited)

In 2010, the Investment Committee (the 'Committee') unanimously agreed to transition the Plan's target asset allocation mix to 40% equity securities, 59% fixed income securities and 1% cash over a 24-month period. In 2011, the Committee decided to accelerate this shift to the 2011 year-end and the target asset allocation mix was maintained during 2012. Should interest rates rise faster than currently projected by the Committee, a further shift to a higher percentage of fixed income securities may be made.

In the third quarter of 2012, it was agreed to cease all future contributions under the cash balance formula and freeze the plan with effect from 1 January 2013. While participants with existing balances continue to receive interest credits until the account is distributed, they no longer accrue benefits beginning in 2013.

The most recent actuarial valuation of the plan to determine compliance with US statutory funding requirements was made at 1 January 2012 by Jennifer Jakubowski, Fellow of the Society of Actuaries, Enrolled Actuary, member of the American Academy of Actuaries, formerly of Mercer. At that date, the market value of the plan's assets was US$3,194m. The assets represented 118% of the benefits accrued to members as valued under the provisions of the Pension Protection Act of 2006 that was effective for the plan year beginning 1 January 2008. The resulting surplus amounted to US$479m. The method employed for this valuation was the traditional unit credit method and the discount rate was determined using a segment rate method as selected by HSBC under the relevant regulations, which resulted in an effective interest rate of 7.13% per annum.

Sustainability risk

(Unaudited)

Assessing the environmental and social impacts of providing finance to our customers is integral to our overall risk management processes.

In 2012, we implemented several changes to our policies and procedures to streamline our management of sustainability risks. This ranged from producing guidelines on how we extend the Equator Principles beyond project finance into corporate loans, to technical fixes in our systems to improve the accuracy of our management information.

A summary of our current policies and practices regarding reputational risk, pension risk and sustainability risk is provided in the Appendix to Risk on page 278.

Footnotes to Risk

Credit risk

1 *'Other personal loans and advances' include second lien mortgages and other property-related lending.*
2 *'Financial' includes loans and advances to banks.*
3 *The amount of the loan commitments reflects, where relevant, the expected level of take-up of pre-approved loan offers made by mailshots to personal customers. In addition to those amounts, there is a further maximum possible exposure to credit risk of US$28bn (2011: US$171bn), reflecting the full take-up of such irrevocable loan commitments. The take-up of such offers is generally at modest levels.*
4 *Includes residential mortgages of HSBC Bank USA and HSBC Finance.*
5 *Comprising Rest of Asia-Pacific, Middle East and North Africa, and Latin America.*
6 *HSBC Finance lending is shown on a management basis and includes loans transferred to HSBC USA Inc. which are managed by HSBC Finance.*
7 *Property acquired through foreclosure is initially recognised at the lower of the carrying amount of the loan or its fair value less estimated costs to sell ('Initial Foreclosed Property Carrying Amount'). The average loss on sale of foreclosed properties is calculated as cash proceeds less the Initial Foreclosed Properties Carrying Amount divided by the unpaid loan principal balance prior to write-down (excluding any accrued finance income) plus certain other ancillary disbursements that, by law, are reimbursable from the cash proceeds (e.g. real estate tax advances) and were incurred prior to our taking title to the property. This ratio represents the portion of our total loss on foreclosed properties that occurred after we took title to the property.*
8 *The average total loss on foreclosed properties includes both the loss on sale of the foreclosed property as discussed in footnote 7 and the cumulative write-downs recognised on the loans up to the time we took title to the property.*
9 *'Other commercial loans and advances' include advances in respect of agriculture, transport, energy and utilities.*
10 *Impairment allowances are not reported for financial instruments whereby the carrying amount is reduced directly for impairment and not through the use of an allowance account.*
11 *Impairment is not measured for assets held in trading portfolios or designated at fair value as assets in such portfolios are managed according to movements in fair value, and the fair value movement is taken directly to the income statement. Consequently, we report all such balances under 'Neither past due nor impaired'.*
12 *'Loans and advances to customers' includes asset-backed securities that have been externally rated as strong (2012: US$2.3bn; 2011: US$3.5bn), good (2012: US$457m; 2011: US$476m), satisfactory (2012: US$390m; 2011: US$428m), sub-standard (2012: US$422m; 2011: US$556m) and impaired (2012: US$259m; 2011: US$229m).*

13 *Included in this category are loans of US$2.3bn (2011: US$2.9bn) that have been re-aged once and were less than 60 days past due at the point of re-age. These loans are not classified as impaired following re-age due to the overall expectation that these customers will perform on the original contractual terms of their borrowing in the future.*
14 *'Impaired loans and advances' are those classified as CRR 9, CRR 10, EL 9 or EL 10, retail loans 90 days or more past due, unless individually they have been assessed as not impaired (see page 156, 'Past due but not impaired gross financial instruments') and renegotiated loans and advances meeting the criteria to be disclosed as impaired (see page 162).*
15 *'Collectively assessed loans and advances' comprise homogeneous groups of loans that are not considered individually significant, and loans subject to individual assessment where no impairment has been identified on an individual basis, but on which a collective impairment allowance has been calculated to reflect losses which have been incurred but not yet identified.*
16 *'Collectively assessed loans and advances not impaired' are those classified as CRR1 to CRR8 and EL1 to EL8 but excluding retail loans 90 days past due and renegotiated loans and advances meeting the criteria to be disclosed as impaired.*
17 *'Collectively assessed impairment allowances' are allocated to geographical segments based on the location of the office booking the allowances or provisions. Consequently, the collectively assessed impairment allowances booked in Hong Kong may cover assets booked in branches located outside Hong Kong, principally in Rest of Asia-Pacific, as well as those booked in Hong Kong.*
18 *Included within 'Exchange and other movements' is US$0.8bn of impairment allowances reclassified to held for sale (2011: US$1.6bn).*
19 *Net of repo transactions, settlement accounts and stock borrowings.*
20 *As a percentage of loans and advances to banks and loans and advances to customers, as applicable.*
21 *'Currency translation' is the effect of translating the results of subsidiaries and associates for the previous year at the average rates of exchange applicable in the current year.*
22 *Negative numbers are favourable: positive numbers are unfavourable.*
23 *Equity securities not included.*
24 *'First lien residential mortgages' include Hong Kong Government Home Ownership Scheme loans of US$3.2bn at 31 December 2012 (2011: US$3.3bn). Where disclosed, earlier comparatives were 2010: US$3.5bn; 2009: US$3.5bn; 2008: US$3.9bn.*
25 *The impairment allowances on loans and advances to banks in 2012 relate to the geographical regions, Europe, North America, and Middle East and North Africa. (2011: Europe and North America).*
26 *Carrying amount of the net principal exposure.*
27 *Total includes holdings of ABSs issued by The Federal Home Loan Mortgage Corporation ('Freddie Mac') and The Federal National Mortgage Association ('Fannie Mae').*
28 *'Directly held' includes assets held by Solitaire where we provide first loss protection and assets held directly by the Group.*
29 *'Effect of impairments' represents the reduction or increase in the reserve on initial impairment and subsequent reversal of impairment of the assets.*
30 *The gross principal is the redemption amount on maturity or, in the case of an amortising instrument, the sum of the future redemption amounts through the residual life of the security.*
31 *Credit default swap ('CDS') gross protection is the gross principal of the underlying instrument that is protected by CDSs.*
32 *Net principal exposure is the gross principal amount of assets that are not protected by CDSs. It includes assets that benefit from monoline protection, except where this protection is purchased with a CDS.*
33 *Net exposure after legal netting and any other relevant credit mitigation prior to deduction of the credit valuation adjustment.*
34 *Cumulative fair value adjustment recorded against exposures to OTC derivative counterparties to reflect their creditworthiness.*
35 *Funded exposures represent the loan amount advanced to the customer, less any fair value write-downs, net of fees held on deposit.*
36 *Unfunded exposures represent the contractually committed loan facility amount not yet drawn down by the customer, less any fair value write-downs, net of fees held on deposit.*

Eurozone exposures

37 *Our available-for-sale holdings in sovereign and agency debt of Italy and Spain include debt held to support insurance contracts which provide discretionary profit participation to policyholders. For such contracts, unrealised movements in liabilities are recognised in other comprehensive income, following the treatment of the unrealised movements on related available-for-sale assets. To the extent that the movements are matched, no movement in the available-for-sale reserve is recognised. For those available-for-sale debt instruments described above that are not held to support insurance contracts which provide discretionary profit participation to policyholders, the available-for-sale reserves at 31 December 2012 were insignificant.*
38 *'In-country liabilities' in Italy include liabilities issued under local law but booked outside the country.*

Liquidity and funding

39 *The most favourable metrics are a smaller advances to core funding and larger stressed one-month and three-month coverage ratios.*
40 *The HSBC UK entity shown comprises three legal entities; HSBC Bank plc (including SPEs consolidated by HSBC Bank plc for Financial Statement purposes, HFC Bank Ltd, and all overseas branches), Marks and Spencer Financial Services Limited and HSBC Trust Company (UK) Limited, managed as a single operating entity, in line with the application of UK liquidity regulation as agreed with the UK FSA.*
41 *The Hongkong and Shanghai Banking Corporation represents the bank in Hong Kong including all overseas branches. Each branch is monitored and controlled for liquidity and funding risk purposes as a stand-alone operating entity.*
42 *The HSBC USA principal entity shown represents the HSBC USA Inc consolidated group; predominantly HSBC USA Inc and HSBC Bank USA, NA. The HSBC USA Inc consolidated group is managed as a single operating entity.*
43 *The total shown for other principal HSBC operating entities represents the combined position of all the other operating entities overseen directly by the Risk Management Meeting of the GMB.*
44 *Estimated liquidity value represents the expected realisable value of assets prior to management assumed haircuts.*
45 *The undrawn balance for the five largest committed liquidity facilities provided to customers other than facilities to conduits.*
46 *The undrawn balance for the total of all committed liquidity facilities provided to the largest market sector, other than facilities to conduits.*
47 *As a result of the significant level of disposal groups held for sale at 31 December 2012, the financial liabilities of the disposal groups held for sale has been separately shown in the table. For further details of the disposal groups held for sale, refer to Note 30 on the Financial Statements.*

Market risk

48 *The standard deviation measures the variation of daily revenues about the mean value of those revenues.*
49 *Revenues within the daily distribution graph include all revenues booked in Global Markets (gross of brokerage fees). The effect of any month-end adjustments, not attributable to a specific daily market move, is spread evenly over the days in the month in question. The 2012 daily distribution of trading revenues excludes the effect of the one-off credit valuation adjustment on derivative assets of US$903m.*
50 *Trading intent portfolios include positions arising from market-making and position taking.*
51 *Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types, for example, interest rate, equity and foreign exchange, together in one portfolio. It is measured as the difference between the sum of the VAR by individual risk type and the combined total VAR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.*
52 *The total VAR is non-additive across risk types due to diversification effects.*
53 *Investments in private equity are primarily made through managed funds that are subject to limits on the amount of investment. Potential new commitments are subject to risk appraisal to ensure that industry and geographical concentrations remain within acceptable levels for the portfolio as a whole. Regular reviews are performed to substantiate the valuation of the investments within the portfolio.*
54 *Investments held to facilitate ongoing business include holdings in government-sponsored enterprises and local stock exchanges.*
55 *Instead of assuming that all interest rates move together, we group our interest rate exposures into currency blocs whose rates are considered likely to move together. See 'Cautionary Statement regarding Forward-Looking Statements' on page 525.*

Risk management of insurance operations

56 *HSBC has no insurance manufacturing subsidiaries in the Middle East and North Africa.*
57 *The decline in life insurance liabilities in North America reflects the classification of the majority of this business as held for sale at 31 December 2012. At 31 December 2012, the held-for-sale North American life insurance liabilities by contract type comprised credit life contracts (US$15m), annuities (US$723m) and term assurance and other long-term contracts (US$205m).*
58 *Insurance contracts and investment contracts with discretionary participation features ('DPF') can give policyholders the contractual right to receive, as a supplement to their guaranteed benefits, additional benefits that may be a significant portion of the total contractual benefits, but whose amount and timing are determined by HSBC. These additional benefits are contractually based on the performance of a specified pool of contracts or assets, or the profit of the company issuing the contracts.*
59 *Although investment contracts with DPF are financial investments, HSBC continues to account for them as insurance contracts as permitted by IFRS 4.*
60 *Net written insurance premiums represent gross written premiums less gross written premiums ceded to reinsurers.*
61 *Term assurance includes credit life insurance.*
62 *The Other assets column shows shareholder assets as well as assets and liabilities classified as held for sale. The majority of the assets for insurance businesses classified as held for sale are reported as 'Other assets and investment properties' and totalled US$2.0bn at 31 December 2012 (2011: US$0.1bn). Assets classified as held for sale consist primarily of debt securities, the majority of which have a 'strong' credit rating at 31 December 2012. All liabilities for insurance businesses classified as held for sale are reported in 'Other liabilities' and totalled US$1.2bn at 31 December 2012 (2011: US$0.1bn). The majority of these liabilities were life and non-life policyholder liabilities expected to mature after 5 years.*
63 *Present value of in-force long-term insurance contracts and investment contracts with DPF.*
64 *Does not include associated insurance companies, SABB Takaful Company and Bao Viet Holdings, or joint venture insurance companies, Hana Life and Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited.*
65 *Comprise life linked insurance contracts and linked long-term investment contracts.*
66 *Comprise life non-linked insurance contracts and non-linked long-term investment contracts.*
67 *Comprise non-life insurance contracts.*
68 *Comprise mainly loans and advances to banks, cash and intercompany balances with other non-insurance legal entities.*
69 *The table excludes contracts where the risk is 100% reinsured.*
70 *The majority of reserves for immediate annuities with guarantees are within insurance businesses that are held for sale at 31 December 2012.*
71 *Shareholders' funds comprise solvency and unencumbered assets.*
72 *In most cases, policyholders have the option to terminate their contracts at any time and receive the surrender values of their policies. These may be significantly lower than the amounts shown.*
73 *Value of net new business during the year is the present value of the projected stream of profits from the business.*
74 *Experience variances include the effect of the difference between demographic, expense and persistency assumptions used in the previous PVIF calculation and actual experience observed during the year to the extent this impacts profits on future business.*

Pension risk

75 *In 2011 and 2012, alternative assets included ABSs, MBSs and infrastructure assets. In 2006, alternative assets included loans and infrastructure assets.*

Appendix to Risk

Risk policies and practices

This appendix describes the significant policies and practices employed by HSBC in managing our credit risk, liquidity and funding, market risk, operational risk (including compliance risk, legal risk and fiduciary risk), insurance risk, reputational risk, pension risk and sustainability risk.

Risk governance

(Unaudited)

Our strong risk governance reflects the importance placed by the Board on shaping the Group's risk strategy and managing risks effectively. It is supported by a clear policy framework of risk ownership, by the cascading from the Group Management Board ('GMB') of performance scorecards that align business and risk objectives, and by the accountability of all staff for identifying, assessing and managing risks within the scope of their assigned responsibilities. This personal accountability, reinforced by the governance structure, experience and mandatory learning, helps to foster a disciplined and constructive culture of risk management and control throughout HSBC.

Credit risk

Credit risk management

(Audited)

The role of an independent credit control unit is fulfilled by the Global Risk function. Credit approval authorities are delegated by the Board to certain executive officers of HSBC Holdings plc. Similar credit approval authorities are delegated by the boards of subsidiary companies to executive officers of the relevant subsidiaries. In each major subsidiary, a Chief Risk Officer reports to the local Chief Executive Officer on credit-related issues, while maintaining a direct functional reporting line to the Group Chief Risk Officer in Global Risk. Details of the roles and responsibilities of the credit risk management function and the policies and procedures for managing credit risk are set out below. Apart from the creation of a new Group Models Oversight Committee and supportive framework there were no significant changes in 2012.

The high-level oversight and management of credit risk provided globally by the Credit Risk function in Global Risk

- to formulate Group credit policy. Compliance, subject to approved dispensations, is mandatory for all operating companies which must develop local credit policies consistent with Group policies;
- to guide operating companies on our appetite for credit risk exposure to specified market sectors, activities and banking products and controlling exposures to certain higher-risk sectors;
- to undertake an independent review and objective assessment of risk. Global Risk assesses all commercial non-bank credit facilities and exposures over designated limits, prior to the facilities being committed to customers or transactions being undertaken;
- to monitor the performance and management of portfolios across the Group;
- to control exposure to sovereign entities, banks and other financial institutions, as well as debt securities which are not held solely for the purpose of trading;
- to set Group policy on large credit exposures, ensuring that concentrations of exposure by counterparty, sector or geography do not become excessive in relation to our capital base, and remain within internal and regulatory limits;
- to control our cross-border exposures (see page 259);
- to maintain and develop our risk rating framework and systems, the governance of which is under the general oversight of the Group Model Oversight Committee ('MOC'). The Group MOC meets bi-monthly and reports to the Risk Management Meeting. It is chaired by the risk function and its membership is drawn from Global Risk and global businesses;
- to report to the Risk Management Meeting, the Group Risk Committee and the Board on high risk portfolios, risk concentrations, country limits and cross-border exposures, large impaired accounts, impairment allowances, stress testing results and recommendations and retail portfolio performance; and
- to act on behalf of HSBC Holdings as the primary interface, for credit-related issues, with the Bank of England, the FSA, local regulators, rating agencies, analysts and counterparts in major banks and non-bank financial institutions.

Principal objectives of our credit risk management

- to maintain across HSBC a strong culture of responsible lending and a robust risk policy and control framework;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

Credit quality of financial instruments

(Audited)

Our credit risk rating systems and processes differentiate exposures in order to highlight those with greater risk factors and higher potential severity of loss. In the case of individually significant accounts that are predominantly within our wholesale businesses, risk ratings are reviewed regularly and any amendments are implemented promptly. Within our retail businesses, risk is assessed and managed using a wide range of risk and pricing models to generate portfolio data.

Our risk rating system facilitates the internal ratings-based ('IRB') approach under Basel II adopted by the Group to support calculation of our minimum credit regulatory capital requirement. For further details see definitions of our credit quality classifications below.

Special attention is paid to problem exposures in order to accelerate remedial action. When appropriate, our operating companies use specialist units to provide customers with support to help them avoid default wherever possible.

Group and regional Credit Review and Risk Identification teams regularly review exposures and processes in order to provide an independent, rigorous assessment of credit risk across the Group, reinforce secondary risk management controls and share best practice. Internal audit, as a tertiary control function, focuses on risks with a global perspective and on the design and effectiveness of primary and secondary controls, carrying out oversight audits via the sampling of global/regional control frameworks, themed audits of key or emerging risks and project audits to assess major change initiatives.

The five credit quality classifications defined below each encompass a range of more granular, internal credit rating grades assigned to wholesale and retail lending businesses, as well as the external ratings attributed by external agencies to debt securities.

There is no direct correlation between the internal and external ratings at granular level, except to the extent each falls within a single quality classification.

Credit quality classification

(Unaudited)

	Debt securities and other bills	Wholesale lending and derivatives		Retail lending	
	External credit rating	Internal credit rating	12 month probability of default %	Internal credit rating[1]	Expected loss %
Quality classification					
Strong	A– and above	CRR1 to CRR2	0 – 0.169	EL1 to EL2	0 – 0.999
Good	BBB+ to BBB–	CRR3	0.170 – 0.740	EL3	1.000 – 4.999
Satisfactory	BB+ to B+ and unrated	CRR4 to CRR5	0.741 – 4.914	EL4 to EL5	5.000 – 19.999
Sub-standard	B to C	CRR6 to CRR8	4.915 – 99.999	EL6 to EL8	20.000 – 99.999
Impaired	Default	CRR9 to CRR10	100	EL9 to EL10	100+ or defaulted[2]

1 *We observe the disclosure convention that, in addition to those classified as EL9 to EL10, retail accounts classified EL1 to EL8 that are delinquent by 90 days or more are considered impaired, unless individually they have been assessed as not impaired (see page 156, 'Past due but not impaired gross financial instruments').*

2 *The EL percentage is derived through a combination of PD and LGD, and may exceed 100% in circumstances where the LGD is above 100% reflecting the cost of recoveries.*

Quality classification definitions

- *'Strong'* exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss. Retail accounts operate within product parameters and only exceptionally show any period of delinquency.
- *'Good'* exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk. Retail accounts typically show only short periods of delinquency, with any losses expected to be minimal following the adoption of recovery processes.
- *'Satisfactory'* exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk. Retail accounts typically show only short periods of delinquency, with any losses expected to be minor following the adoption of recovery processes.
- *'Sub-standard'* exposures require varying degrees of special attention and default risk is of greater concern. Retail portfolio segments show longer delinquency periods of generally up to 90 days past due and/or expected losses are higher due to a reduced ability to mitigate these through security realisation or other recovery processes.
- *'Impaired'* exposures have been assessed as impaired. Wholesale exposures where the bank considers that either the customer is unlikely to pay its credit obligations in full, without recourse by the bank to the actions such as realising security if held, or the customer is past due more than 90 days on any material credit obligation. Retail loans and advances greater than 90 days past due unless individually they have been assessed as not impaired. Renegotiated loans that have met the requirements to be disclosed as impaired and have not yet met the criteria to be returned to the unimpaired portfolio (see page 255).

The customer risk rating ('CRR') 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All HSBC customers are rated using the 10 or 23-grade scale, depending on the degree of sophistication of the Basel II approach adopted for the exposure.

The expected loss ('EL') 10-grade scale for retail business summarises a more granular underlying EL scale for these customer segments; this combines obligor and facility/product risk factors in a composite measure.

For debt securities and certain other financial instruments, external ratings have been aligned to the five quality classifications. The ratings of Standard and Poor's are cited, with those of other agencies being treated equivalently. Debt securities with short-term issue ratings are reported against the long-term rating of the issuer of those securities. If major rating agencies have different ratings for the same debt securities, a prudent rating selection is made in line with regulatory requirements.

Renegotiated loans and forbearance

(Audited)

A range of forbearance strategies is employed in order to improve the management of customer relationships, maximise collection opportunities and, if possible, avoid default, foreclosure or repossession. They include extended payment terms, a reduction in interest or principal repayments, approved external debt management plans, debt consolidations, the deferral of foreclosures, and other forms of loan modifications and re-ageing.

Our policies and practices are based on criteria which enable local management to judge whether repayment is likely to continue. These typically provide a customer with terms and conditions that are more favourable than those provided initially. Loan forbearance is only granted in situations where the customer has showed a willingness to repay the borrowing and is expected to be able to meet the revised obligations.

For retail lending our credit risk management policy sets out restrictions on the number and frequency of renegotiations, the minimum period an account must have been opened before any renegotiation can be considered and the number of qualifying payments that must be received. The application of this policy varies according to the nature of the market, the product and the management of customer relationships through the occurrence of exceptional events.

Identifying renegotiated loans

The contractual terms of a loan may be modified for a number of reasons including changing market conditions, customer retention and other factors not related to the current or potential credit deterioration of a customer. When the contractual payment terms of a loan have been modified because we have significant concerns about the borrower's ability to meet contractual payments when due, these loans are classified as 'renegotiated loans'. For the purposes of this disclosure the term 'forbearance' is synonymous with the renegotiation of loans.

For retail lending, when considering whether there is 'significant concern' regarding a customer's ability to meet contractual loan repayments when due, we assess the customer's delinquency status, account behaviour, repayment history, current financial situation and continued ability to repay. Where the customer is not meeting contractual repayments or it is evident that they will be unable to do so without the renegotiation, there will be a significant concern regarding their ability to meet contractual payments, and the loan will be disclosed as impaired, unless the concession granted is insignificant as discussed below.

For loan restructurings in wholesale lending, indicators of significant concerns regarding a borrower's ability to pay include:

- the debtor is currently in default on any of its debt;
- the debtor has declared or is in the process of declaring bankruptcy or entering into a similar process;
- there is significant doubt as to whether the debtor will continue to be a going concern;
- currently, the debtor has securities that have been delisted, are in the process of being delisted, or are under threat of being delisted from an exchange as a result of trading or financial difficulties;
- based on estimates and projections that only encompass the current business capabilities, the bank forecasts that the debtor's entity-specific cash flows will be insufficient to service the debt (both interest and principal) in accordance with the contractual terms of the existing agreement through maturity. Thus actual payment default may not yet have occurred; and
- absent the modification, the debtor cannot obtain funds from sources other than the existing creditors at an effective interest rate equal to the current market interest rate for similar debt for a non-distressed debtor.

Where the modification of contractual payment terms of a loan represents a concession for economic or legal reasons relating to the borrower's financial difficulty, and is a concession that we would not otherwise consider, then the renegotiated loan is disclosed as impaired in accordance with our impaired loan disclosure convention described in more detail on page 162, unless the concession is insignificant and there are no other indicators of impairment. Insignificant concessions are primarily restricted to our CML portfolio in HSBC Finance, where loans which are in the early stages of delinquency (less than 60 days delinquent), and typically have the equivalent of two payments deferred for the first time, are excluded from our impaired loan classification as the contractual payment deferrals are deemed to be insignificant compared with payments due on the loan as a whole. For details of HSBC Finance's loan renegotiated programmes and portfolios, see pages 158 to 162.

Credit quality classification of renegotiated loans
(Audited)

Under IFRSs, an entity is required to assess whether there is objective evidence that financial assets are impaired at the end of each reporting period. A loan is impaired, and an impairment allowance is recognised, when there is objective evidence of a loss event that has an effect on the cash flows of the loan which can be reliably estimated. When we grant a concession to a customer that we would not otherwise consider, as a result of their financial difficulty, this is objective evidence of impairment and impairment losses are measured accordingly.

A renegotiated loan is presented as impaired when:

- there has been a change in contractual cash flows as a result of a concession which the lender would otherwise not consider, and
- it is probable that without the concession, the borrower would be unable to meet contractual payment obligations in full.

This presentation applies unless the concession is insignificant and there are no other indicators of impairment.

The renegotiated loan will continue to be disclosed as impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, and there are no other indicators of impairment. For loans that are assessed for impairment on a collective basis, the evidence typically comprises a history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case by case basis.

For retail lending the minimum period of payment performance required depends on the nature of loans in the portfolio, but is typically not less than six months. Where portfolios have more significant levels of forbearance activity, such as that undertaken by HSBC Finance, the minimum repayment performance period required may be substantially more (for further details on HSBC Finance see page 150). Payment performance periods are monitored to ensure they remain appropriate to the levels of recidivism observed within the portfolio. These performance periods are in addition to the receipt of a minimum of two payments within a 60 day period which must be received for the customer to initially qualify for the renegotiation (in the case of HSBC Finance, in certain circumstances, for example where debt has been restructured in bankruptcy proceedings, fewer or no qualifying payments may be required). The qualifying payments are required in order to demonstrate that the renegotiated terms are sustainable for the borrower. For corporate and commercial loans, which are individually assessed for impairment and where non-monthly payments are more commonly agreed, the history of payment performance will depend on the underlying structure of payments agreed as part of the restructure.

Renegotiated loans are classified as unimpaired where the renegotiation has resulted from significant concern about a borrower's ability to meet their contractual payment terms but the renegotiated terms are based on current market rates and contractual cash flows are expected to be collected in full following the renegotiation. Unimpaired renegotiated loans also include previously impaired renegotiated loans that have demonstrated satisfactory performance over a period of time or have been assessed based on all available evidence as having no remaining indicators of impairment.

Loans that have been identified as renegotiated retain this designation until maturity or derecognition. When a loan is restructured as part of a forbearance strategy and the restructuring results in derecognition of the existing loan, such as in some debt consolidations, the new loan is disclosed as renegotiated.

When determining whether a loan that is restructured should be derecognised and a new loan recognised, we consider the extent to which the changes to the original contractual terms result in the renegotiated loan, considered as a whole, being a substantially different financial instrument. The following are examples of circumstances that are likely to result in this test being met and derecognition accounting being applied:

- an uncollateralised loan becomes fully collateralised;
- the addition or removal of cross collateralisation provisions;
- multiple facilities are consolidated into a single new facility;
- removal or addition of conversion features attached to the loan agreement;
- a change in the currency in which the principal or interest is denominated;
- a change in the liquidation preference or ranking of the instrument; or
- the contract is altered in any other manner so that the terms under the new or modified contract are substantially different from those under the original contract.

The following are examples of factors that we consider may indicate that the revised loan is a substantially different financial instrument, but are unlikely to be conclusive in themselves:

- change in guarantees or loan covenants provided;
- less significant changes to collateral arrangements; or
- the addition of repayment provisions or prepayment premium clauses.

Renegotiated loans and recognition of impairment allowances
(Audited)

For retail lending, renegotiated loans are segregated from other parts of the loan portfolio for collective impairment assessment to reflect the higher rates of losses often encountered in these segments. When empirical evidence indicates an increased propensity to default and higher losses on such accounts, such as for re-aged loans in the US, the use of roll-rate methodology ensures these factors are taken into account when calculating impairment allowances by applying roll rates specifically calculated on the pool of loans subject to forbearance. When the portfolio size is small or when information is insufficient or not reliable enough to adopt a roll-rate methodology, a basic formulaic approach based on historical loss rate experience is used. As a result of our roll-rate methodology, we recognise collective impairment allowances on homogeneous groups of loans, including renegotiated loans, where there is historical evidence that there is a likelihood that loans in these groups will progress through the various stages of delinquency, and ultimately prove irrecoverable as a result of events occurring before the balance sheet date. This treatment applies irrespective of whether or not those loans are presented as impaired in accordance with our impaired loans disclosure convention. When we consider that there are additional risk factors inherent in the portfolios that may not be fully reflected in the statistical roll rates or historical experience, these risk factors are taken into account by adjusting the impairment allowances derived solely from statistical or historical experience. For further details of the risk factor adjustments see 'Critical accounting policies' on page 54.

In the corporate and commercial sectors, renegotiated loans are typically assessed individually. Credit risk ratings are intrinsic to the impairment assessment. A distressed restructuring is classified as an impaired loan. The individual impairment assessment takes into account the higher risk of the non-payment of future cash flows inherent in renegotiated loans.

Corporate and commercial forbearance
(Unaudited)

In the corporate and commercial sectors, forbearance activity is undertaken selectively where it has been identified that repayment difficulties against the original terms already have, or are very likely to, materialise. These cases are treated as impaired loans where:

- the customer is experiencing, or is very likely to experience, difficulty in meeting a payment obligation to the bank (i.e. due to current credit distress); and
- the bank is offering to the customer revised payment arrangements which constitute a concession (i.e. it is offering terms it would not normally be prepared to offer).

These cases are described as distressed restructurings. The agreement of a restructuring which meets the criteria above requires all loans, advances and counterparty exposures to the customer to be treated as impaired. Against the background of this requirement, as a customer approaches the point that it becomes clear that there is an increasing risk that a restructuring of this kind might be necessary, the exposures will typically be regarded as sub-standard to reflect the deteriorating credit risk profile, and will be graded as impaired when the restructure is proposed for approval, or sooner if there is sufficient concern regarding the customer's likeliness to pay.

For the purposes of determining whether changes to a customer's agreement should be treated as a distressed restructuring the following types of modification are regarded as concessionary:

- transfers from the customer of receivables from third parties, real estate, or other assets to satisfy fully or partially a debt;
- issuance or other granting of an equity interest to satisfy fully or partially a debt unless the equity interest is granted pursuant to existing terms for converting the debt into an equity interest; and
- modification of the terms of a debt, such as one or more of the following:
  - reduction (absolute or contingent) of the stated interest rate for the remaining original life of the debt;
  - extension of the maturity date or dates at a stated interest rate lower than the current market rate for new debt with similar risk;
  - reduction (absolute or contingent) of the face amount or maturity amount of the debt; and
  - reduction (absolute or contingent) of accrued interest.

Modifications that are unrelated to payment arrangements, such as the restructuring of collateral or security arrangements or the waiver of rights under covenants within documentation, are not regarded by themselves to be evidence of credit distress affecting payment capacity. Typically, covenants are in place to give the bank rights of repricing or acceleration, but they are frequently set at levels where payment capacity has yet to be affected. They provide rights of action at earlier stages of credit deterioration. However, when these modifications are made in conjunction with modifications affecting payment arrangements as a result of significant concerns regarding the payment of contractual cash flows, they are treated as a distressed restructuring.

In assessing whether payment-related forbearance is a satisfactory and sustainable strategy, the customer's entire exposure and facilities will be reviewed and the customer's ability to meet the terms of both the revised obligation and other credit facilities not amended in the renegotiation is assessed. Should this assessment identify that a renegotiation will not deal with a customer's payment capacity issues satisfactorily, other special management options may be applied. This process may identify the need to provide assistance to a customer specifically to restructure their business operations and activities so as to restore satisfactory payment capacity.

Modifications may be made on a temporary basis when time is needed for the customer to make arrangements for payment, when deterioration in payment capacity is expected to be acute but short lived, or when more time is needed to accommodate discussions regarding a more permanent accommodation with other bankers, for example in syndicated facilities where multilateral negotiation commonly features.

If a restructuring proceeds and the customer demonstrates satisfactory performance over a period of time, the case may be returned to a non-impaired grade (CRR1-8) provided no other indicators of impairment remain. Such a case cannot be returned to a non-impaired grade when a specific impairment reserve remains against any of the customer's credit facilities. The period of performance will vary depending on the frequency of payments to be made by the customer under the amended agreement and the extent to which the customer's financial position is considered to have improved.

Impairment assessment

(Audited)

It is our policy that each operating company in HSBC creates impairment allowances for impaired loans promptly and appropriately.

For details of our impairment policies on loans and advances and financial investments, see Notes 2g and 2j on the Financial Statements.

Impairment and credit risk mitigation

The existence of collateral has an impact when calculating impairment on individually assessed impaired loans. When we no longer expect to recover the principal and interest due on a loan in full or in accordance with the original terms and conditions, it is assessed for impairment. If exposures are secured, the current net realisable value of the collateral will be taken into account when assessing the need for an impairment allowance. No impairment allowance is recognised in cases where all amounts due are expected to be settled in full on realisation of the security.

Personal lending portfolios are generally assessed for impairment on a collective basis as the portfolios typically consist of large groups of homogeneous loans. Two methods are used to calculate allowances on a collective basis: a roll rate methodology or a more basic formulaic approach based on historical losses.

The historical loss methodology is typically used to calculate collective impairment allowances for secured, or low default portfolios such as mortgages, until the point at which they are individually identified and assessed as impaired. For loans which are collectively assessed using historical loss methodology, the historical loss rate is derived from the average contractual write-off net of recoveries over a defined period. The net contractual write-off rate is the actual amount of loss experienced after the realisation of collateral and receipt of recoveries.

A roll rate methodology is more commonly adopted for unsecured portfolios when there are sufficient volumes of empirical data to develop robust statistical models. In certain circumstances mortgage portfolios have a statistically significant number of defaults and losses available, enabling reliable roll rates to be generated. In these cases a roll rate methodology is applied until the point at which the loans are individually identified and assessed as impaired, and the average loss rate for each delinquency bucket is adjusted to reflect the average loss expected following realisation of security and receipt of recoveries. The average loss expected is derived from average historical collateral realisation values.

The nature of the collective allowance assessment prevents individual collateral values or loan-to-value ('LTV') ratios from being included within the calculation. However, the loss rates used in the collective assessment are adjusted for the collateral realisation experiences which will vary depending on the LTV composition of the portfolio. For example mortgage portfolios under a historical loss rate methodology with lower LTV ratios will typically experience lower loss history and consequently a lower net contractual write-off rate.

For wholesale collectively assessed loans historical loss methodologies are applied to measure loss event impairments which have been incurred but not reported. Loss rates are derived from the observed contractual write-off net of recoveries over a defined period, typically 60 months. The net contractual write-off rate is the actual amount of loss experienced after realisation of collateral and receipt of recoveries. These historical loss rates are adjusted by an economic factor which adjusts the historical averages to better represent current economic conditions affecting the portfolio. In order to reflect the likelihood of a loss event not being identified and assessed an emergence period assumption is applied. This reflects the period between a loss occurring and its identification. The emergence period is estimated by local management for each identified portfolio. The factors that may influence this estimation include economic and market conditions, customer behaviour, portfolio management information, credit management techniques and collection and recovery experiences in the market. A fixed range for the period between a loss occurring and its identification is not defined across the Group and as it is assessed empirically on a periodic basis, it may vary over time as these factors change. Given that credit management policies require all customers to be reviewed at least annually, we expect this estimated period would be at most 12 months.

Write-off of loans and advances

For details of our policy on the write-off of loans and advances, see Note 2g on the Financial Statements.

In HSBC Finance, the carrying amounts of residential mortgage and second lien loans in excess of net realisable value are written off at or before the time foreclosure is completed or settlement is reached with the borrower. If there is no reasonable expectation of recovery, and foreclosure is pursued, the loan is normally written off no later than the end of the month in which the loan becomes 180 days contractually past due.

Unsecured personal facilities, including credit cards, are generally written off at between 150 and 210 days past due, the standard period being the end of the month in which the account becomes 180 days contractually delinquent. Write-off periods may be extended, generally to no more than 360 days past due but, in very exceptional circumstances, exceeding that figure in a few countries where local regulation or legislation constrain earlier write-off, or where the realisation of collateral for secured real estate lending extends to this time.

In the event of bankruptcy or analogous proceedings, write-off may occur earlier than at the periods stated above. Collections procedures may continue after write-off.

Concentration of exposure

(Audited)

Concentrations of credit risk arise when a number of counterparties or exposures have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors, so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimise undue concentration of exposure in our portfolios across industry, country and global businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

Wrong-way risk is an aggravated form of concentration risk and arises when there is a strong correlation between the counterparty's probability of default and the mark-to-market value of the underlying transaction. We use a range of procedures to monitor and control wrong-way risk, including requiring entities to obtain prior approval before undertaking wrong-way risk transactions outside pre-agreed guidelines.

Cross-border exposures

We assess the vulnerability of countries to foreign currency payment restrictions, including economic and political factors, when considering impairment allowances on cross-border exposures. Impairment allowances are assessed in respect of all qualifying exposures within vulnerable countries unless these exposures and the inherent risks are:

- performing, trade-related and of less than one year's maturity;
- mitigated by acceptable security cover which is, other than in exceptional cases, held outside the country concerned;
- in the form of securities held for trading purposes for which a liquid and active market exists, and which are measured at fair value daily; and
- performing facilities with a principal (excluding security) of US$1m or below and/or with maturity dates shorter than three months.

Nature of HSBC's securitisation and other structured exposures

(Audited)

Mortgage-backed securities ('MBS's) are securities that represent interests in groups of mortgages and provide investors with the right to receive cash from future mortgage payments (interest and/or principal). An MBS which references mortgages with different risk profiles is classified according to the highest risk class.

Collateralised debt obligations ('CDO's) are securities backed by a pool of bonds, loans or other assets such as asset-backed securities ('ABS's). CDOs may include exposure to sub-prime or Alt-A mortgage assets where these are part of the underlying assets or reference assets. As there is often uncertainty surrounding the precise nature of the underlying collateral supporting CDOs, all CDOs supported by residential mortgage-related assets are classified as sub-prime. Our holdings of ABSs and CDOs and direct lending positions, and the categories of mortgage collateral and lending activity, are described overleaf.

Our exposure to non-residential mortgage-related ABSs and direct lending includes securities with collateral relating to:

- commercial property mortgages;
- leveraged finance loans;
- student loans; and
- other assets, such as securities with other receivable-related collateral.

Categories of ABSs and CDOs	Definition	Classification
Sub-prime	Loans to customers who have limited credit histories, modest incomes or high debt-to-income ratios or have experienced credit problems caused by occasional delinquencies, prior charge-offs, bankruptcy or other credit-related actions.	For US mortgages, a FICO score of 620 or less has primarily been used to determine whether a loan is sub-prime. For non-US mortgages, management judgement is used.
US Home Equity Lines of Credit ('HELoC's)	A form of revolving credit facility provided to customers, which is supported in the majority of circumstances by a second lien or lower ranking charge over residential property.	Holdings of HELoCs are classified as sub-prime.
US Alt-A	Lower risk loans than sub-prime, but they share higher risk characteristics than lending under fully conforming standard criteria.	US credit scores and the completeness of documentation held (such as proof of income), are considered when determining whether an Alt-A classification is appropriate. Non sub-prime mortgages in the US are classified as Alt-A if they are not eligible for sale to the major US Government mortgage agencies or sponsored entities.
US Government agency and sponsored enterprises mortgage-related assets	Securities that are guaranteed by US Government agencies such as the Government National Mortgage Association ('Ginnie Mae'), or by US Government sponsored entities including the Federal National Mortgage Association ('Fannie Mae') and the Federal Home Loan Mortgage Corporation ('Freddie Mac').	Holdings of US Government agency and US Government sponsored enterprises' mortgage-related assets are classified as prime exposures.
UK non-conforming mortgages	UK mortgages that do not meet normal lending criteria. Examples include mortgages where the expected level of documentation is not provided (such as income with self-certification), or where poor credit history increases risk and results in pricing at a higher than normal lending rate.	UK non-conforming mortgages are treated as sub-prime exposures.
Other mortgages	Residential mortgages, including prime mortgages, that do not meet any of the classifications described above.	Prime residential mortgage-related assets are included in this category.

Impairment methodologies

(Audited)

To identify objective evidence of impairment for available-for-sale ABSs, an industry standard valuation model is normally applied which uses data with reference to the underlying asset pools and models their projected future cash flows. The estimated future cash flows of the securities are assessed at the specific financial asset level to determine whether any of them are unlikely to be recovered as a result of loss events occurring on or before the reporting date.

The principal assumptions and inputs to the models are typically the delinquency status of the underlying loans, the probability of delinquent loans progressing to default, the prepayment profiles of the underlying assets and the loss severity in the event of default. However, the models utilise other variables relevant to specific classes of collateral to forecast future defaults and recovery rates. Management uses externally available data and applies judgement when determining the appropriate assumptions in respect of these factors. We use a modelling approach which incorporates historically observed progression rates to default to determine if the decline in aggregate projected cash flows from the underlying collateral will lead to a shortfall in contractual cash flows. In such cases, the security is considered to be impaired.

In respect of CDOs, expected future cash flows for the underlying collateral are assessed to determine whether there is likely to be a shortfall in the contractual cash flows of the CDO.

When a security benefits from a contract provided by a monoline insurer that insures payments of principal and interest, the expected recovery on the contract is assessed in determining the total expected credit support available to the ABS.

Liquidity and funding

(Audited)

The management of liquidity and funding is primarily undertaken locally (by country) in our operating entities in compliance with the Group's liquidity and funding risk management framework (the 'LFRF'), and with practices and limits set by the GMB through the Risk Management Meeting and approved by the Board. These limits vary according to the depth and the liquidity of the markets in which the entities operate. Our general policy is that each defined operating entity should be self-sufficient in funding its own activities. Where transactions exist between operating entities, they are reflected symmetrically in both entities.

As part of our Asset, Liability and Capital Management ('ALCM') structure, we have established ALCOs at Group level, in the regions and in operating entities. The terms of reference of all ALCOs include the monitoring and control of liquidity and funding.

The primary responsibility for managing liquidity and funding within the Group's framework and risk appetite resides with the local operating entity ALCO. Our most significant operating entities are overseen by regional ALCOs, Group ALCO and the Risk Management Meeting. The remaining smaller operating entities are overseen by regional ALCOs, with appropriate escalation of significant issues to Group ALCO and the Risk Management Meeting.

Operating entities are predominately defined on a country basis to reflect our local management of liquidity and funding. Typically, an operating entity will be defined as a single legal entity. However, to take account of the situation where operations in a country are booked across multiple subsidiaries or branches:

- an operating entity may be defined as a wider sub-consolidated group of legal entities if they are incorporated in the same country, liquidity and funding are freely fungible between the entities and permitted by local regulation, and the definition reflects how liquidity and funding are managed locally; or
- an operating entity may be defined more narrowly as a principal office (branch) of a wider legal entity operating in multiple countries, reflecting the local country management of liquidity and funding.

The list of entities it directly oversees and the composition of these entities is reviewed and agreed annually by the Risk Management Meeting.

Primary sources of funding

(Audited)

Customer deposits in the form of current accounts and savings deposits payable on demand or at short notice form a significant part of our funding, and we place considerable importance on maintaining their stability. For deposits, stability depends upon maintaining depositor confidence in our capital strength and liquidity, and on competitive and transparent pricing.

We also access wholesale funding markets by issuing senior secured and unsecured debt securities (publically and privately) and borrowing from the secured repo markets against high quality collateral, in order to obtain funding for non-banking subsidiaries that do not accept deposits, to align asset and liability maturities and currencies and to maintain a presence in local wholesale markets.

The management of funding and liquidity risk

Inherent liquidity risk categorisation

We place our operating entities into one of three categories (low, medium and high) to reflect our assessment of their inherent liquidity risk, considering political, economic and regulatory factors within the host country and factors specific to the operating entities themselves, such as the local market, market share and balance sheet strength. The categorisation involves management judgement and is based on the perceived liquidity risk of an operating entity relative to other entities in the Group. The categorisation is intended to reflect the possible impact of a liquidity event, not the probability of an event. The categorisation is part of our risk appetite and is used to determine the prescribed stress scenario that we require our operating entities to be able to withstand, and to manage to.

Core deposits

A key assumption of our internal framework is the categorisation of customer deposits into core and non-core based on our expectation of the behaviour of these deposits during liquidity stress. This characterisation takes into account the inherent liquidity risk categorisation of the operating entity originating the deposit, the nature of the customer and the size and pricing of the deposit. No deposit is considered to be core in its entirety unless it is contractually collateralising a loan. The core deposit base in each operating entity is considered to be a long-term source of funding and therefore is assumed not to be withdrawn in the liquidity stress scenario that we use to calculate our principal liquidity risk metrics.

The three filters considered in assessing whether a deposit in any operating entity is core are:

- *price:* any deposit priced significantly above market or benchmark rates is generally treated as entirely non-core;
- *size:* depositors with total funds above certain monetary thresholds are excluded. Thresholds are established by considering the business line and inherent liquidity risk categorisation; and
- *line of business:* the element of any deposit remaining after the application of the price and size filters is assessed on the basis of the line of business to which the deposit is associated. The proportion of any customer deposit that can be considered core under this filter is between 35% and 90%.

Repo transactions and bank deposits cannot be categorised as core deposits.

Advances to core funding ratio

Core customer deposits are an important source of funding to finance lending to customers, and mitigate against reliance on short-term wholesale funding. Limits are placed on operating entities to restrict their ability to increase loans and advances to customers without corresponding growth in core customer deposits or long-term debt funding with a residual maturity beyond one year; this measure is referred to as the 'advances to core funding' ratio.

Advances to core funding ratio limits are set by the Risk Management Meeting for the most significant operating entities, and by regional ALCOs for smaller operating entities, and are monitored by ALCM teams. The ratio describes current loans and advances to customers as a percentage of the total of core customer deposits and term funding with a remaining term to maturity in excess of one year. In general, customer loans are assumed to be renewed and are included in the numerator of the advances to core funding ratio, irrespective of the contractual maturity date. Reverse repo arrangements are excluded from the advances to core funding ratio.

Stressed coverage ratios

Stressed coverage ratios are derived from stressed cash flow scenario analyses and express the stressed cash inflows as a percentage of stressed cash outflows over one-month and three-month time horizons.

The stressed cash inflows include:

- inflows (net of assumed haircuts) expected to be generated from the realisation of liquid assets; and
- contractual cash inflows from maturing assets that are not already reflected as a utilisation of liquid assets.

In line with the approach adopted for the advances to core funding ratio, customer loans are, in general, assumed not to generate any cash inflows under stress scenarios and are therefore excluded from the numerator of the stressed coverage ratios, irrespective of the contractual maturity date.

A stressed coverage ratio of 100% or higher reflects a positive cumulative cash flow under the stress scenario being monitored. Group operating entities are required to maintain a ratio of 100% or greater out to three months under the combined market-wide and HSBC-specific stress scenario defined by the inherent liquidity risk categorisation of the operating entity concerned.

Compliance with operating entity limits is monitored by ALCM teams and reported monthly to the Risk Management Meeting for the main operating entities and to regional ALCOs for the smaller operating entities.

Stressed scenario analysis

We use a number of standard Group stress scenarios designed to model:

- combined market-wide and HSBC-specific liquidity crisis scenarios; and
- market-wide liquidity crisis scenarios.

These scenarios are modelled by all operating entities. The appropriateness of the assumptions for each scenario is reviewed by ALCM regularly and formally approved by the Risk Management Meeting and the Board annually as part of the liquidity and funding risk appetite approval process.

Stressed cash outflows are determined by applying a standard set of prescribed stress assumptions to the Group's cash flow model. Our framework prescribes the use of two market-wide scenarios and three further combined market-wide and HSBC-specific stress scenarios of increasing severity. In addition to our standard stress scenarios, individual operating entities are required to design their own scenarios to reflect specific local market conditions, products and funding bases.

The three combined market-wide and HSBC-specific scenarios model a more severe scenario than the two market-wide scenarios. The relevant combined market-wide and HSBC-specific stress scenario that an operating entity manages to is based upon its inherent liquidity risk categorisation. The key assumptions factored into the three combined market-wide and HSBC-specific stress scenarios are summarised as follows:

- all non-core deposits are deemed to be withdrawn within three months (80% within one month), with the level of non-core deposits dependent on the operating entity's inherent liquidity risk categorisation;
- the ability to access interbank funding and unsecured term debt markets ceases for the duration of the scenario;
- the ability to generate funds from illiquid asset portfolios (securitisation and secured borrowing) is restricted to 25-75% of the lower of issues in the last six months or the expected issues in the next six months. The restriction is based on current market conditions and is dependent on the operating entity's inherent liquidity risk categorisation;
- the ability to access repo funding ceases for any asset not classified as liquid under our liquid asset policy for the duration of the scenario;
- drawdowns on committed lending facilities must be consistent with the severity of the market stress being modelled and dependent on the inherent liquidity risk categorisation of the operating entity;
- outflows are triggered by a defined downgrade in long-term ratings. We maintain an on-going assessment of the appropriate number of notches to reflect;
- customer loans are assumed to be renewed at contractual maturity;
- interbank loans and reverse repos are assumed to run off contractually; and
- assets defined as liquid assets are assumed to be realised in cash ahead of their contractual maturity, after applying a defined stressed haircut of up to 20%.

Liquid assets of HSBC's principal operating entities

Stressed scenario analysis and the numerator of the coverage ratio include the assumed cash inflows that would be generated from the realisation of liquid assets, after applying the appropriate stressed haircut. These assumptions are made based on management's expectation of when an asset is deemed to be realisable.

Liquid assets are unencumbered assets that meet the Group's definition of liquid assets and are either held outright or as a consequence of a reverse repo transaction with a residual contractual maturity beyond the time horizon of the stressed coverage ratio being monitored. Any unencumbered asset held as a result of reverse repo transactions with a contractual maturity within the time horizon of the stressed coverage ratio being monitored is excluded from the stock of liquid assets and instead reflected as a contractual cash inflow.

Our framework defines the asset classes that can be assessed locally as high quality and realisable within one month and between one month and three months. Each local ALCO has to be satisfied that any asset which may be treated as liquid in accordance with the Group's liquid asset policy will remain liquid under the stress scenario being managed to.

Inflows from the utilisation of liquid assets within one month can generally only be based on confirmed withdrawable central bank deposits, gold or the sale or repo of government and quasi-government exposures generally restricted to those denominated in the sovereign's domestic currency. High quality ABSs (predominantly US MBSs) and covered bonds are also included but inflows assumed for these assets are capped.

Inflows after one month are also reflected for high quality non-financial and non-structured corporate bonds and equities within the most liquid indices.

Internal categorisation	Cash inflow recognised	Asset classes
Level 1	Within one month	Central government Central bank (including confirmed withdrawable reserves) Supranationals Multilateral development banks
Level 2	Within one month but capped	Local and regional government Public sector entities Secured covered bonds and pass-through ABSs Gold
Level 3	From one to three months	Unsecured non-financial entity securities Equities listed on recognised exchanges and within liquid indices

Any entity owned and controlled by central or local/regional government but not explicitly guaranteed is treated as a public sector entity.

Any exposure explicitly guaranteed is reflected as an exposure to the ultimate guarantor.

In terms of the criteria used to ensure liquid assets are of a high quality, the Group's liquid asset policy sets out the following additional criteria:

1. Central bank and central government exposures denominated in the domestic currency of the related sovereign and held onshore in the domestic banking system qualify as level 1 liquid assets.
2. Central bank and central government exposures denominated in the domestic currency of the related sovereign and held offshore must be risk weighted 20% or lower under the Basel standardised risk weighting methodology, to qualify as level 1 liquid assets.
3. Central bank and central government exposures denominated in a currency other than the currency of the related sovereign (i.e. foreign currency) must be risk weighted 20% or lower under the Basel standardised risk weighting methodology and issued in a limited number of major currencies, to qualify as level 1 liquid assets.

The treatment of eurozone countries using the euro as their domestic currency depends on whether the exposures are held onshore in the domestic banking system or offshore. Central bank and central government exposures held onshore in the domestic banking system qualify as level 1 liquid assets under criteria 1, but central bank and central government exposures held offshore are considered to be denominated in a foreign currency and considered under criteria 3.

4. Local/regional government exposures held onshore and considered by the local regulator to be the same risk as central government exposures can be considered central government exposures.
5. Supranationals and multilateral development banks must be 0% risk weighted under the Basel standardised risk weighting methodology, to qualify as level 1 liquid assets.
6. To qualify as a level 2 liquid asset the exposure must be risk weighted 20% or lower under the Basel standardised risk weighting methodology.
7. To qualify as a level 3 liquid asset an unsecured non-financial corporate debt exposure must satisfy a minimum internal rating requirement.

Wholesale debt monitoring

Where wholesale debt term markets are accessed to raise funding, ALCO is required to establish cumulative rolling three-month and 12-month debt maturity limits to ensure no concentration of maturities within these timeframes.

Liquidity behaviouralisation

Liquidity behaviouralisation is applied to reflect our assessment of the expected period for which we are confident that we will have access to our liabilities, even under a severe liquidity stress scenario, and the expected period for which we must assume that we will need to fund our assets. Behaviouralisation is applied when the contractual terms do not reflect the expected behaviour. Liquidity behaviouralisation is reviewed and approved by local ALCO in compliance with policies set by the Risk Management Meeting. Our approach to liquidity risk management will often mean a different approach is applied to assets and liabilities. For example, management may assume a shorter life for liabilities and a longer-term funding requirement for assets.

Contingent liquidity risk

Operating entities provide customers with committed facilities and committed backstop lines to the conduit vehicles we sponsor. These facilities increase our funding requirements when customers draw down. The liquidity risk associated with the potential drawdown on non-cancellable committed facilities is factored into our stressed scenarios and limits are set for these facilities.

Management of cross-currency liquidity and funding risk

Our liquidity and funding risk framework also considers the ability of each entity to continue to access foreign exchange markets under stress when a surplus in one currency is used to meet a deficit in another currency, for example, by the use of the foreign currency swap markets. Where appropriate, operating entities are required to monitor stressed coverage ratios and advances to core funding ratios for non-local currencies.

HSBC Holdings

(Audited)

HSBC Holdings' primary sources of cash are dividends received from subsidiaries, interest on and repayment of intra-group loans and interest earned on its own liquid funds. HSBC Holdings also raises ancillary funds in the debt capital markets through subordinated and senior debt issuance. Cash is primarily used for the provision of capital to subsidiaries, interest payments to debt holders and dividend payments to shareholders.

HSBC Holdings is also subject to contingent liquidity risk by virtue of loan and other credit-related commitments and guarantees and similar contracts issued. Such commitments and guarantees are only issued after due consideration of HSBC Holdings' ability to finance the commitments and guarantees and the likelihood of the need arising.

HSBC Holdings actively manages the cash flows from its subsidiaries to optimise the amount of cash held at the holding company level. The ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective regulatory capital requirements, statutory reserves, and financial and operating performance. The wide range of our activities means that HSBC Holdings is not dependent on a single source of profits to fund its dividend payments to shareholders.

Market risk

Overview of market risk in global businesses

The diagram below illustrates the main business areas where trading and non-trading market risks reside.

	Trading risk	Non-trading risk			
Risk types	– Interest rates – Foreign exchange and commodities – Credit spreads – Equities	– Interest rates – Credit spreads – Foreign exchange (structural)			
Global businesses	– GB&M (including Balance Sheet Management ('BSM'))	GB&M (including BSM)	GPB	CMB	RBWM

Monitoring and limiting market risk exposures

(Audited)

We employ a range of tools to monitor and limit market risk exposures. These include sensitivity analysis, value at risk ('VAR'), stressed VAR and stress testing. While VAR provides the GMB with a measure of the market risk in the Group, sensitivity analysis and VAR are more commonly utilised for the management of the business units. Stress testing and stressed VAR complement these measures with potential losses arising from market turmoil.

Market risk is managed and controlled through limits approved by the GMB for HSBC Holdings and our various global businesses. These limits are allocated across business lines and to the Group's legal entities.

The management of market risk is principally undertaken in Global Markets, where 85% of the total value at risk of HSBC Holdings (excluding Insurance) and almost all trading VAR resides, using risk limits approved by the GMB. Limits are set for portfolios, products and risk types, with market liquidity being a primary factor in determining the level of limits set. Group Risk, an independent unit within Group Head Office, is responsible for our market risk management policies and measurement techniques. Each major operating entity has an independent market risk management and control function which is responsible for measuring market risk exposures in accordance with the policies defined by Group Risk, and monitoring and reporting these exposures against the prescribed limits on a daily basis. The risk appetite is governed according to the framework illustrated below.

Each operating entity is required to assess the market risks arising on each product in its business and to transfer them to either its local Global Markets unit for management, or to separate books managed under the supervision of the local ALCO. Our aim is to ensure that all market risks are consolidated within operations that have the necessary skills, tools, management and governance to manage them professionally. In certain cases where the market risks cannot be fully transferred, we identify the impact of varying scenarios on valuations or on net interest income resulting from any residual risk positions. Further details on the control and management process for residual risks are provided on pages 268 to 269.

Sensitivity analysis

(Unaudited)

We use sensitivity measures to monitor the market risk positions within each risk type, for example, the present value of a basis point movement in interest rates for interest rate risk. Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

Value at risk and stressed value at risk

(Audited)

VAR is a technique that estimates the potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. Stressed VAR is primarily used for Regulatory Capital purposes but is integrated into the risk management process to facilitate efficient capital management and to highlight possible high-risk positions based on previous market volatility.

Both the VAR and Stressed VAR models we use are based predominantly on historical simulation. These models derive plausible future scenarios from past series of recorded market rates and prices, taking into account inter-relationships between different markets and rates such as interest rates and foreign exchange rates. The models also incorporate the effect of option features on the underlying exposures.

The historical simulation models used incorporate the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates and commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements utilised for VAR are calculated with reference to data from the past two years,
- *(unaudited)* potential market movements employed for stressed VAR calculations are based on a continuous one-year period of stress for the trading portfolio; the choice of period (March 2008 to February 2009) is based on the assessment at the Group level of the most volatile period in recent history; and

- VAR measures are calculated to a 99% confidence level and use a one-day holding period scaled to 10 days, whereas stressed VAR uses a 10-day holding period.

The nature of the VAR models means that an increase in observed market volatility will lead to an increase in VAR without any changes in the underlying positions.

We routinely validate the accuracy of our VAR models by back-testing the actual daily profit and loss results, adjusted to remove non-modelled items such as fees and commissions, against the corresponding VAR numbers. We expect on average to see losses in excess of VAR 1% of the time over a one-year period.

Although a valuable guide to risk, VAR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- the use of a one-day holding period assumes that all positions can be liquidated or the risks offset in one day. This may not fully reflect the market risk arising at times of severe illiquidity, when a one-day holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level does not take into account losses that might occur beyond this level of confidence;
- VAR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures; and
- VAR is unlikely to reflect loss potential on exposures that only arise under significant market moves.

Our VAR model is designed to capture significant basis risks such as CDS vs bond, asset swap spreads and cross-currency basis. Other basis risks which are not completely covered in VAR, such as the Libor tenor basis, are complemented by our risk-not-in-VAR calculations and are integrated into our capital framework. Stress testing is also used as one of the market risk tools for managing basis risks.

Stress testing
(Audited)

In recognition of the limitations of VAR, we augment it with stress testing to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables.

Stress testing is implemented at the legal entity, regional and the overall Group levels. A standard set of scenarios is utilised consistently across all regions within the Group. Scenarios are tailored in order to capture the relevant events or market movements at each level. The risk appetite around potential stress losses for the Group is set and monitored against referral limits.

The process is governed by the Stress Testing Review Group forum which, in conjunction with regional risk management, determines the scenarios to be applied at portfolio and consolidated levels, as follows:

- single risk factor stress scenarios that are unlikely to be captured within the VAR models, such as the break of a currency peg;
- technical scenarios consider the largest move in each risk factor without consideration of any underlying market correlation;
- hypothetical scenarios consider potential macroeconomic events, for example, the slowdown in mainland China and the potential effects of a sovereign debt default, including its wider contagion effects; and
- historical scenarios incorporate historical observations of market movements during previous periods of stress which would not be captured within VAR.

Stress testing results are submitted to the GMB and Risk Management Committee ('RMC') meetings in order to provide senior management with an assessment of the financial effect such events would have.

In addition, the reverse stress test is based upon the premise that there is a fixed loss. The stress test process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios which are beyond normal business settings that could have contagion and systemic implications.

Stressed VAR and stress testing, together with reverse stress testing and the management of gap risk (see page 268), provide management with insights regarding the 'tail risk' beyond VAR. HSBC appetite for tail risk is limited.

Trading portfolios

(Audited)

Our control of market risk in the trading portfolios is based on a policy of restricting individual operations to trading within a list of permissible instruments authorised for each site by Group Risk, of enforcing new product approval procedures, and of restricting trading in the more complex derivative products only to offices with appropriate levels of product expertise and robust control systems.

Gap risk

Certain transactions are structured to render the risk to HSBC negligible under a wide range of market conditions or events, however, there exists a remote possibility that a gap event could lead to loss. A gap event could arise from a significant change in market price with no accompanying trading opportunity, with the result that the threshold is breached beyond which the risk profile changes from no risk to full exposure to the underlying structure. Such movements may occur, for example, when, in reaction to an adverse event or unexpected news announcement, the market for a specific investment becomes illiquid, making hedging impossible.

Given their characteristics, these transactions make little or no contribution to VAR or to traditional market risk sensitivity measures. We capture their risks within our stress testing scenarios and monitor gap risk on an ongoing basis. We regularly consider the probability of gap loss, and fair value adjustments are booked against this risk where significant.

Gap risk derived from certain transactions in legacy portfolios continued to be managed down during 2012. The residual exposure is immaterial. We did not incur any material gap loss in 2012.

ABS/MBS exposures

The ABS/MBS exposures within the trading portfolios are managed within sensitivity and VAR limits as described on page 220, and are included within the stress testing scenarios described above.

Non-trading portfolios

(Audited)

The principal objective of market risk management of non-trading portfolios is to optimise net interest income.

Interest rate risk in non-trading portfolios arises principally from mismatches between the future yield on assets and their funding cost, as a result of interest rate changes. Analysis of this risk is complicated by having to make assumptions on embedded optionality within certain product areas such as the incidence of mortgage prepayments, and from behavioural assumptions regarding the economic duration of liabilities which are contractually repayable on demand such as current accounts.

Our control of market risk in the non-trading portfolios is based on transferring the risks to the books managed by Global Markets or the local ALCO. The net exposure is typically managed through the use of interest rate swaps within agreed limits. The VAR for these portfolios is included within the Group VAR.

Credit spread risk for available-for-sale debt instruments

The risk associated with movements in credit spreads is primarily managed through sensitivity limits, stress testing and VAR. The VAR shows the effect on income from a one-day movement in credit spreads over a two-year period, calculated to a 99% confidence interval.

Available for sale equity securities

Potential new commitments are subject to risk appraisal to ensure that industry and geographical concentrations remain within acceptable levels for the portfolio. Regular reviews are performed to substantiate the valuation of the investments within the portfolio and investments held to facilitate ongoing business, such as holdings in government-sponsored enterprises and local stock exchanges.

Structural foreign exchange exposures

(Unaudited)

Structural foreign exchange exposures represent net investments in subsidiaries, branches and associates, the functional currencies of which are currencies other than the US dollar. An entity's functional currency is that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in other comprehensive income. We use the US dollar as our presentation currency in our consolidated financial statements because the US dollar and currencies linked to it form the major currency bloc in which we transact and fund our business. Our consolidated balance sheet is, therefore, affected by exchange differences between the US dollar and all the non-US dollar functional currencies of underlying subsidiaries.

We hedge structural foreign exchange exposures only in limited circumstances. Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates. This is usually achieved by ensuring that, for each subsidiary bank, the ratio of structural exposures in a given currency to risk-weighted assets denominated in that currency is broadly equal to the capital ratio of the subsidiary in question.

We may also transact hedges where a currency in which we have structural exposures is considered likely to revalue adversely, and it is possible in practice to transact a hedge. Any hedging is undertaken using forward foreign exchange contracts which are accounted for under IFRSs as hedges of a net investment in a foreign operation, or by financing with borrowings in the same currencies as the functional currencies involved.

Sensitivity of net interest income

(Unaudited)

A principal part of our management of market risk in non-trading portfolios is to monitor the sensitivity of projected net interest income under varying interest rate scenarios (simulation modelling). We aim, through our management of market risk in non-trading portfolios, to mitigate the effect of prospective interest rate movements which could reduce future net interest income, while balancing the cost of such hedging activities on the current net revenue stream.

Entities apply a combination of scenarios and assumptions relevant to their local businesses, and standard scenarios which are required throughout HSBC. The latter are consolidated to illustrate the combined pro forma effect on our consolidated net interest income.

Projected net interest income sensitivity figures represent the effect of the pro forma movements in net interest income based on the projected yield curve scenarios and the Group's current interest rate risk profile. This effect, however, does not incorporate actions which would probably be taken by Balance Sheet Management or in the business units to mitigate the effect of interest rate risk. In reality, Balance Sheet Management seeks proactively to change the interest rate risk profile to minimise losses and optimise net revenues. The net interest income sensitivity calculations assume that interest rates of all maturities move by the same amount in the up shock scenario. Rates are not assumed to become negative in the down shock scenario which may, in certain currencies, effectively result in non-parallel shock. In addition, the net interest income sensitivity calculations take account of the effect on net interest income of anticipated differences in changes between interbank interest rates and interest rates over which the entity has discretion in terms of the timing and extent of rate changes.

Defined benefit pension schemes

(Audited)

Market risk arises within our defined benefit pension schemes to the extent that the obligations of the schemes are not fully matched by assets with determinable cash flows. Pension scheme obligations fluctuate with changes in long-term interest rates, inflation, salary levels and the longevity of scheme members. Pension scheme assets include equities and debt securities, the cash flows of which change as equity prices and interest rates (and credit risk) vary. There is a risk that market movements in equity prices and interest rates could result in asset values which, taken together with regular ongoing contributions, are insufficient over time to cover the level of projected obligations and these, in turn, could increase with a rise in inflation and members living longer. Management, together with the trustees who act on behalf of the pension scheme beneficiaries, assess these risks using reports prepared by independent external actuaries, take action and, where appropriate, adjust investment strategies and contribution levels accordingly.

Report of the Directors: Operating and Financial Review (continued)

HSBC Holdings

(Audited)

As a financial services holding company, HSBC Holdings has limited market risk activity. Its activities predominantly involve maintaining sufficient capital resources to support the Group's diverse activities; allocating these capital resources across our businesses; earning dividend and interest income on its investments in our businesses; providing dividend payments to HSBC Holdings' equity shareholders and interest payments to providers of debt capital; and maintaining a supply of short-term cash resources. It does not take proprietary trading positions.

The main market risks to which HSBC Holdings is exposed are interest rate risk and foreign currency risk. Exposure to these risks arises from short-term cash balances, funding positions held, loans to subsidiaries, investments in long-term financial assets and financial liabilities including debt capital issued. The objective of HSBC Holdings' market risk management strategy is to reduce exposure to these risks and minimise volatility in economic income, cash flows and distributable reserves. Market risk for HSBC Holdings is monitored by HSBC Holdings ALCO, which reviews foreign exchange VAR, repricing gap and net interest income and EVE sensitivities on a monthly basis.

HSBC Holdings has entered into a number of cross-currency swaps to manage the market risk arising on certain long-term debt capital issues for which hedge accounting has not been applied. Changes in the market values of these swaps are recognised directly in the income statement. HSBC Holdings expects that these swaps will be held to final maturity with the accumulated changes in market value consequently trending to zero.

Certain loans to subsidiaries of a capital nature that are not denominated in the functional currency of either the provider or the recipient are accounted for as financial assets. Changes in the carrying amount of these assets due to exchange differences are taken directly to the income statement. These loans, and the associated foreign exchange exposures, are eliminated on a Group consolidated basis.

Operational risk

(Unaudited)

The objective of our operational risk management is to manage and control operational risk in a cost effective manner within targeted levels of operational risk consistent with our risk appetite, as defined by the GMB.

Operational risk is organised as a specific risk discipline within Group Risk, and a formal governance structure provides oversight over its management. The Group Operational Risk function reports to the Group Chief Risk Officer and supports the Global Operational Risk and Control Committee. It is responsible for establishing and maintaining the operational risk management framework ('ORMF'), monitoring the level of operational losses and the effectiveness of the control environment. It is also responsible for operational risk reporting at Group level, including the preparation of reports for consideration by the Risk Management Meeting and Group Risk Committee. The Global Operational Risk and Control Committee meets at least quarterly to discuss key risk issues and review the effective implementation of the ORMF.

The ORMF defines minimum standards and processes and the governance structure for the management of operational risk and internal control in our geographical regions, global businesses and global functions. The ORMF has been codified in a high level standards manual supplemented with detailed policies, which describe our approach to identifying, assessing, monitoring and controlling operational risk and give guidance on mitigating action to be taken when weaknesses are identified.

Business managers throughout the Group are responsible for maintaining an acceptable level of internal control, commensurate with the scale and nature of operations, and for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The ORMF helps managers to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

A centralised database is used to record the results of the operational risk management process. Operational risk and control self-assessments are input and maintained by business units. Business and functional management and Business Risk and Control Managers monitor the progress of documented action plans to address shortcomings. To ensure that operational risk losses are consistently reported and monitored at Group level, all Group companies are required to report individual losses when the net loss is expected to exceed US$10,000, and to aggregate all other operational risk losses under US$10,000. Losses are entered into the operational risk system and are reported to the Group Operational Risk function quarterly.

For further details, see the *Pillar 3 Disclosures 2012* report, page 61.

Compliance risk

(Unaudited)

Compliance risk falls within the definition of operational risk. All Group companies are required to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice. These rules, regulations, other standards and Group policies include those relating to anti-money laundering, anti-bribery and corruption, conduct of business, counter-terrorist financing and sanctions compliance.

The Global Compliance Function is a control function, working as part of our Global Risk Function. It is responsible for resourcing decisions, performance reviews, objectives, strategy, budget and accountability within the Compliance Function and is empowered to set standards and has the authority to ensure those standards are met. The Group's Compliance Function is currently being reorganised under a Head of Group Financial Crime Compliance and a Global Head of Regulatory Compliance, each of whom reports to the Group Chief Risk Officer. There are compliance teams in all of the countries where we operate and in all global businesses lines. These compliance teams are principally overseen by Regional Compliance Officers located in Europe, the US, Canada, Latin America, the Middle East and North Africa and Asia-Pacific and each business line is supported by a Global Business Compliance Officer. There is an Assurance team within Compliance that reviews the effectiveness of the Regional and Global Business Compliance Officers.

Global Compliance policies and procedures require the prompt identification and escalation to Group Compliance of all actual or suspected breaches of any law, rule, regulation, policy or other relevant requirement. These escalation procedures are supplemented by a requirement for the submission of compliance certificates at the half-year and year-end by all Group companies detailing any known breaches as above. The contents of these escalation and certification processes are used for reporting to the Risk Management Meeting, the Group Risk Committee and the Board and disclosure in the *Annual Report and Accounts* and *Interim Report*, if appropriate.

Legal risk

(Unaudited)

Each operating company is required to have processes and procedures in place to manage legal risk that conform to Group standards.

Legal risk falls within the definition of operational risk and includes:

- contractual risk, which is the risk that the rights and/or obligations of an HSBC company within a contractual relationship are defective;
- dispute risk, which is made up of the risks that an HSBC company is subject to when it is involved in or managing a potential or actual dispute;
- legislative risk, which is the risk that an HSBC company fails to adhere to the laws of the jurisdictions in which it operates; and
- non-contractual rights risk, which is the risk that an HSBC company's assets are not properly owned or are infringed by others, or an HSBC company infringes another party's rights.

We have a global legal function to assist management in controlling legal risk. There are legal departments in 58 of the countries in which we operate. There are also regional legal functions in each of Europe, North America, Latin America, the Middle East and North Africa and Asia-Pacific headed by Regional General Counsels as well as General Counsel responsible for each of the global businesses.

Global security and fraud risk

(Unaudited)

Security and fraud risk issues are managed at Group level by Global Security and Fraud Risk. This unit, which has responsibility for physical risk, fraud, information and contingency risk, and geopolitical risk and business intelligence is fully integrated within the central Group Risk function. This enables management to identify and mitigate the permutations of these and other non-financial risks to its business lines across the jurisdictions in which we operate.

The Fraud Risk function is responsible for ensuring that effective protection measures are in place against all forms of fraudulent activity, whether initiated internally or externally, and is available to support any part of the business. To achieve that and to attain the level of integration needed to face the threat, the management of all types of fraud (e.g. card fraud, non-card fraud and internal fraud, including investigations), is established within one management structure and is part of the Global Risk function.

We use technology extensively to prevent and detect fraud. For example, customers' credit and debit card spending is monitored continuously and suspicious transactions are highlighted for verification, internet banking sessions are reviewed and transactions monitored in a similar way and all new account applications are screened for fraud. We have a fraud systems strategy which is designed to provide minimum standards and allow easier sharing of best practices to detect fraud and minimise false alerts.

We have developed a holistic and effective anti-fraud strategy comprising fraud prevention policies and practices, the implementation of strong internal controls, an investigations response team and liaison with law enforcement where appropriate.

The Contingency Risk function is responsible for ensuring that in any circumstances where our employees, customers or buildings are exposed to a disaster or other catastrophic event, normal business operations can be restored promptly.

Within this wider risk, Business Continuity Management covers the pre-planning for the recovery, seeking to minimise the adverse effects of major business disruption, either globally, regionally or within country, against a range of actual or emerging risks. The pre-planning concentrates on the protection of customer services, our staff, revenue generation and the integrity of data and documents.

Each business has its own recovery plan, which is developed following the completion of a Business Impact Analysis. This determines how much time the business could sustain an outage before the level of losses becomes unacceptable, i.e. its criticality. These plans are reviewed and tested every year. The planning is undertaken against Group policy and standards and each business confirms in an annual compliance certificate that all have been met. Should there be exceptions, these are raised and their short-term resolution is overseen by Group and regional business continuity teams.

It is important that plans are dynamic and meet all risks, particularly those of an emerging nature such as possible pandemics and the eurozone crisis. The operational risk framework is used to measure our resilience to these risks, and is confirmed to Group and regional risk committees.

Resilience is managed through various risk mitigation measures. These include agreeing with IT acceptable recovery times of systems, ensuring our critical buildings have the correct infrastructure to enable ongoing operations, requiring critical vendors to have their own recovery plans and arranging with Group insurance appropriate cover for business interruption costs.

Systems risk

(Unaudited)

Systems risk is the risk of failure or other deficiency in the automated platforms that support the Group's daily execution (application systems) and the systems infrastructure on which they reside (data centres, networks and distributed computers).

The management of systems risk is overseen globally by the HSBC Technology and Services ('HTS') organisation. Oversight is provided through monthly risk management committee meetings that provide a comprehensive overview of existing and emerging top risks.

HTS line management manages the control environment over systems risks using Risk and Control Assessments and Top Risk Analysis. Key risk indicators are used to assure a consistent basis of risk evaluation across geographic and line of business boundaries.

Business critical services have been identified through a central, global oversight body. Quantitative scorecards, called Risk Appetite Statements, have been established for each of these services.

Vendor risk management

(Unaudited)

Our vendor risk management ('VRM') is a global framework for managing risk with third party vendors, especially where we are reliant on outsourced agreements to provide critical services to our customers. VRM contains a rigorous process to identify material contracts and their key risks and ensure controls are in place to manage and mitigate these risks.

Fiduciary risk

(Unaudited)

Business activities in which fiduciary risk is inherent should only be undertaken within designated lines of business. Fiduciary risk is managed within the designated businesses via a comprehensive policy framework and monitoring of key indicators. The Group's principal fiduciary businesses ('designated businesses') are:

- HSBC Securities Services, where it is exposed to fiduciary risk via its Securities Services and Corporate Trust activities;
- HSBC Asset Management, which is exposed to fiduciary risks via its investment activities on behalf of clients;
- HSBC Private Banking, which is exposed to fiduciary risks via its Private Wealth Services division and discretionary investment management; and
- HSBC Insurance, which is exposed to fiduciary risks via the investment management activities it undertakes when providing insurance products and services.

The Group's requirements for the management of fiduciary risk are laid down in the Fiduciary Functional Instruction Manual ('Fiduciary FIM'), which is owned by Group Operational Risk. No business other than the designated businesses may undertake fiduciary activities without notifying Global Operational Risk and receiving specific dispensations from the relevant Fiduciary FIM requirements.

Other policies around the provision of advice, including investment advice and corporate advisory, and the management of potential conflicts of interest, also mitigate our fiduciary risks.

Risk management of insurance operations

Overview of insurance products

(Audited)

The main contracts we manufacture are listed below:

Life insurance business

- life insurance contracts with discretionary participation features ('DPF');
- credit life insurance business;
- annuities;
- term assurance and critical illness policies;
- linked life insurance;
- investment contracts with DPF;
- unit-linked investment contracts; and
- other investment contracts (including pension contracts written in Hong Kong).

Non-life insurance business

Non-life insurance contracts include motor, fire and other damage to property, accident and health, repayment protection and commercial insurance.

Nature and extent of risks

(Audited)

The majority of the risks in our Insurance business derive from manufacturing activities and can be categorised between insurance risk and financial risks; financial risks include market risk, credit risk and liquidity risk. Operational and sustainability risks are also present and are covered by the Group's overall respective risk management processes.

The following sections describe how insurance risk and financial risks are managed. The assets of insurance manufacturing subsidiaries are included within the consolidated risk disclosures on pages 123 to 251, although separate disclosures in respect of insurance manufacturing subsidiaries are provided in the 'Risk management of insurance operations' section. The consolidated liquidity risk and market risk disclosures focus on banking entities and exclude insurance operations. Disclosures specific to the insurance manufacturing subsidiaries are provided in the 'Risk management of insurance operations' section on pages 232 to 245.

Insurance manufacturers set their own control procedures in addition to complying with guidelines issued by the Group Insurance Head Office. The control framework for monitoring risk includes the Group Insurance Risk Management Committee, which oversees the status of the significant risk categories in the insurance operations. Five sub-committees of this Committee focus on products and pricing, market and liquidity risk, credit risk, operational risk and insurance risk, respectively. The Group Insurance Risk Management Committee monitors the risk profile of the insurance operations against a risk appetite for insurance business agreed by the GMB. Any issues requiring escalation from the Group Insurance Risk Management Committee would be reported to the RBWM Risk Management Committee.

In addition, local ALCOs and Risk Management Committees monitor certain risk exposures, mainly for life business where the duration and cash flow matching of insurance assets and liabilities are reviewed.

All insurance products, whether manufactured internally or by a third party, are subjected to a product approval process prior to introduction. Approval by Group Insurance Head Office may be required depending on the type of product and its risk profile. The approval process is formalised through the Product and Pricing Committee, which comprises the heads of the relevant risk functions within insurance.

Insurance risk

(Audited)

Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to the issuer (HSBC). The principal risk we face in manufacturing insurance contracts is that, over time, the cost of acquiring and administering a contract, claims and benefits may exceed the aggregate amount of premiums received and investment income.

The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, lapse and surrender rates and, if the policy has a savings element, the performance of the assets held to support the liabilities.

Life and non-life business insurance risks are controlled by high-level policies and procedures set both centrally and locally, taking into account where appropriate local market conditions and regulatory requirements. Formal underwriting, reinsurance and claims-handling procedures designed to ensure compliance with regulations are applied, supplemented with stress testing.

As well as exercising underwriting controls, we use reinsurance as a means of mitigating exposure to insurance risk. Where we manage our exposure to insurance risk through the use of third-party reinsurers, the associated revenue and manufacturing profit is ceded to the reinsurers. Although reinsurance provides a means of managing insurance risk, such contracts expose us to credit risk, the risk of default by the reinsurer.

The principal drivers of our insurance risk are described below. The liabilities for long-term contracts are set by reference to a range of assumptions around these drivers. These typically reflect the issuers' own experiences. The type and quantum of insurance risk arising from life insurance depends on the type of business, and varies considerably.

- *mortality and morbidity:* the main contracts which generate exposure to these risks are term assurance, whole life products, critical illness and income protection contracts and annuities. The risks are monitored on a regular basis, and are primarily mitigated by underwriting controls and reinsurance and by retaining the ability in certain cases to amend premiums in the light of experience;
- *lapses and surrenders:* the risks associated with this are generally mitigated by product design, the application of surrender charges and management actions, for example, managing the level of bonus payments to policyholders. A detailed persistency analysis at a product level is carried out at least on an annual basis; and
- *expense risk* is mitigated by pricing, for example, retaining the ability in certain cases to amend premiums and/or policyholder charges based on experience, and cost management discipline.

Liabilities are affected by changes in assumptions (see 'Sensitivity analysis' on page 245).

The main risks associated with non-life business are:

- *underwriting:* the risk that premiums are not appropriate for the cover provided; and
- *claims experience:* the risk that claims exceed expectations.

We manage these risks through pricing (for example, imposing restrictions and deductibles in the policy terms and conditions), product design, risk selection, claims handling and reinsurance policy. The majority of our non-life insurance contracts are renewable annually, providing added flexibility to the underwriting terms and conditions.

Financial risks

(Audited)

Our Insurance businesses are exposed to a range of financial risks, including market risk, credit risk and liquidity risk. Market risk includes interest rate, equity and foreign exchange risks. The nature and management of these risks is described below.

Manufacturing subsidiaries are exposed to financial risks when, for example, the proceeds from financial assets are not sufficient to fund the obligations arising from insurance and investment contracts. In many jurisdictions, local regulatory requirements prescribe the type, quality and concentration of assets that these subsidiaries must maintain to meet insurance liabilities. These requirements complement Group-wide policies.

Market risk

(Audited)

Description of market risk

The main features of products manufactured by our insurance manufacturing subsidiaries which generate market risk, and the market risk to which these features expose the subsidiaries, are discussed below.

Interest rate risk arises to the extent that yields on the assets are lower than the investment returns implied by the guarantees payable to policyholders by insurance manufacturing subsidiaries. When the asset yields are below guaranteed yields, products may be discontinued, repriced or restructured. A list of the different types of guarantees within our insurance contracts is outlined below.

Categories of guaranteed benefits

- annuities in payment;
- deferred/immediate annuities: these consist of two phases – the savings and investing phase and the retirement income phase;
- annual return: the annual return is guaranteed to be no lower than a specified rate. This may be the return credited to the policyholder every year, or the average annual return credited to the policyholder over the life of the policy, which may occur on the maturity date or the surrender date of the contract; and
- capital: policyholders are guaranteed to receive no less than the premiums paid plus declared bonuses less expenses.

The proceeds from insurance and investment products with DPF are primarily invested in bonds with a proportion allocated to other asset classes in order to provide customers with the potential for enhanced returns. Subsidiaries with portfolios of such products are exposed to the risk of falls in market prices which cannot be fully reflected in the discretionary bonuses. An increase in market volatility could also result in an increase in the value of the guarantee to the policyholder.

Long-term insurance and investment products typically permit the policyholder to surrender the policy or let it lapse at any time. When the surrender value is not linked to the value realised from the sale of the associated supporting assets, the subsidiary is exposed to market risk. In particular, when customers seek to surrender their policies when asset values are falling, assets may have to be sold at a loss to fund redemptions.

A subsidiary holding a portfolio of long-term insurance and investment products, especially with DPF, may attempt to reduce exposure to its local market by investing in assets in countries other than that in which it is based. These assets may be denominated in currencies other than the subsidiary's local currency. Where the foreign exchange exposure associated with these assets is not hedged, for example because it is not cost effective to do so, this exposes the subsidiary to the risk of its local currency strengthening against the currency of the related assets.

For unit-linked contracts, market risk is substantially borne by the policyholder, but market risk exposure typically remains as fees earned for management are related to the market value of the linked assets.

Asset and liability matching

It is not always possible to match asset and liability durations, partly because there is uncertainty over policyholder behaviour, which introduces uncertainty over the receipt of all future premiums and the timing of claims, and partly because the forecast payment dates of liabilities may exceed the duration of the longest dated investments available.

We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how to best structure asset holdings to support liabilities. The scenarios include stresses applied to factors which affect insurance risk such as mortality and lapse rates. Of particular importance is assessing the expected pattern of cash inflows against the benefits payable on the underlying contracts, which can extend for many years.

Our current portfolio of assets includes debt securities issued at a time when yields were higher than those observed in the current market. As a result, yields on extant holdings of debt securities exceed those available on current issues. We reduced short-term bonus rates paid to policyholders on certain participating contracts to manage the immediate strain on the business. Should interest rates and yield curves remain low further reductions may be necessary.

How market risk is managed

All our insurance manufacturing subsidiaries have market risk mandates which specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk which they may retain. They manage market risk by using some or all of the techniques listed below, depending on the nature of the contracts they write.

Techniques for managing market risk

- for products with DPF, adjusting bonus rates to manage the liabilities to policyholders. The effect is that a significant portion of the market risk is borne by the policyholder;
- structuring asset portfolios to support projected liability cash flows;
- using derivatives, to a limited extent, to protect against adverse market movements or better match liability cash flows;
- for new products with investment guarantees, considering the cost when determining the level of premiums or the price structure;
- periodically reviewing products identified as higher risk, which contain investment guarantees and embedded optionality features linked to savings and investment products;
- including features designed to mitigate market risk in new products, such as charging surrender penalties to recoup losses incurred when policyholders surrender their policies;
- exiting, to the extent possible, investment portfolios whose risk is considered unacceptable; and
- repricing of premiums charged to policyholders.

In the product approval process, the risks embedded in new products are identified and assessed. When, for example, options and guarantees are embedded in new products, the due diligence process ensures that complete and appropriate risk management procedures are in place. For all but the simplest of guaranteed benefits the assessment is undertaken by Group Insurance Head Office. Management reviews certain exposures more frequently when markets are more volatile to ensure that any matters arising are dealt with in a timely fashion.

How the exposure to market risk is measured

Our insurance manufacturing subsidiaries monitor exposures against mandated limits regularly and report them to Group Insurance Head Office. Exposures are aggregated and reported on a quarterly basis to senior risk management forums in the Group, including the Group Insurance Market and Liquidity Risk Committee, Group Insurance Risk Management Committee and the Group Stress Test Review Group.

In addition, large insurance manufacturing subsidiaries perform a high-level monthly assessment of market risk exposure against risk appetite. This is submitted to Group Insurance Head Office and a global assessment presented to the RBWM RMC.

Standard measures for quantifying market risks

- for interest rate risk, the sensitivities of the net present values of asset and expected liability cash flows, in total and by currency, to a one basis point parallel shift in the discount curves used to calculate the net present values;
- for equity price risk, the total market value of equity holdings and the market value of equity holdings by region and country; and
- for foreign exchange risk, the total net short foreign exchange position and the net foreign exchange positions by currency.

The standard measures are relatively straightforward to calculate and aggregate, but they have limitations. The most significant one is that a parallel shift in yield curves of one basis point does not capture the non-linear relationships between the values of certain assets and liabilities and interest rates. Non-linearity arises, for example, from investment guarantees and product features which enable policyholders to surrender their policies. We bear the shortfall if the yields on investments held to support contracts with guaranteed benefits are less than the investment returns implied by the guaranteed benefits.

We recognise these limitations and augment our standard measures with stress tests which examine the effect of a range of market rate scenarios on the aggregate annual profits and total equity of our insurance manufacturing subsidiaries, after taking into consideration tax and accounting treatments where material and relevant. The results of these tests are reported to Group Insurance Head Office and risk committees every quarter.

See also 'Sensitivity of HSBC's insurance subsidiaries to market risk factors' on page 240) which indicates the sensitivity of insurance manufacturers profit and total equity to market risk factors.

Credit risk
(Audited)

Description of credit risk

Credit risk arises in two main areas for our insurance manufacturers:

i) risk of default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
ii) risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

How credit risk is managed

Our insurance manufacturing subsidiaries are responsible for the credit risk, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information.

Investment credit exposures are monitored against limits by our local insurance manufacturing subsidiaries, and are aggregated and reported to Group Credit Risk, the Group Insurance Credit Risk Committee and the Group Insurance Risk Management Committee. Stress testing is performed by Group Insurance Head Office on the investment credit exposures using credit spread sensitivities and default probabilities. The stresses are reported to the Group Insurance Credit Risk Meeting.

We use a number of tools to manage and monitor credit risk. These include a Credit Watch Report which contains a watch-list of investments with current credit concerns and is circulated fortnightly to senior management in Group Insurance Head Office and the individual Country Chief Risk Officers to identify investments which may be at risk of future impairment.

Liquidity risk
(Audited)

Description of liquidity risk

It is an inherent characteristic of almost all insurance contracts that there is uncertainty over the amount of claims liabilities that may arise and the timing of their settlement, and this creates liquidity risk.

There are three aspects to liquidity risk. The first arises in normal market conditions and is referred to as funding liquidity risk; specifically, the capacity to raise sufficient cash when needed to meet payment obligations. Secondly, market liquidity risk arises when the size of a particular holding may be so large that a sale cannot be completed around the market price. Finally, standby liquidity risk refers to the capacity to meet payment terms in abnormal conditions.

How liquidity risk is managed

Our insurance manufacturing subsidiaries primarily fund cash outflows arising from claim liabilities from the following sources of cash inflows:

- premiums from new business, policy renewals and recurring premium products;
- interest and dividends on investments and principal repayments of maturing debt investments;
- cash resources; and

- the sale of investments.

They manage liquidity risk by utilising some or all of the following techniques:

- matching cash inflows with expected cash outflows using specific cash flow projections or more general asset and liability matching techniques such as duration matching;
- maintaining sufficient cash resources;
- investing in good credit-quality investments with deep and liquid markets to the degree to which they exist;
- monitoring investment concentrations and restricting them where appropriate, for example, by debt issues or issuers; and
- establishing committed contingency borrowing facilities.

Each of these techniques contributes to mitigating the three types of liquidity risk described above.

Every quarter, our insurance manufacturing subsidiaries are required to complete and submit liquidity risk reports to Group Insurance Head Office for collation and review by the Group Insurance Market and Liquidity Risk Committee. Liquidity risk is assessed in these reports by measuring changes in expected cumulative net cash flows under a series of stress scenarios designed to determine the effect of reducing expected available liquidity and accelerating cash outflows. This is achieved, for example, by assuming new business or renewals are lower, and surrenders or lapses are greater, than expected.

Reputational risk

(Unaudited)

We regularly review our policies and procedures for safeguarding against reputational risk. This is an evolutionary process which takes account of relevant developments, industry guidance, best practice and societal expectations.

We have always aspired to the highest standards of conduct and, as a matter of routine, take account of reputational risks to our business. Reputational risks can arise from a wide variety of causes. As a banking group, our good reputation depends not only upon the way in which we conduct our business, but also by the way in which clients, to whom we provide financial services, conduct themselves.

Group functions with responsibility for activities that attract reputational risk are represented at the Group Reputational Risk Policy Committee ('GRRPC'), which is chaired by the Group Chairman. The primary role of the GRRPC is to consider areas and activities presenting significant reputational risk and, where appropriate, to make recommendations to the Global Standards Steering Committee for policy or procedural changes to mitigate such risk. Reputational Risk Policy Committees, which have been established in each of the Group's geographical regions, are required to ensure that reputational risks are also considered at a regional level. Minutes from the regional committees are tabled at GRRPC.

Standards on all major aspects of business are set for HSBC and for individual subsidiaries, businesses and functions. Reputational risks, including environmental, social and governance matters, are considered and assessed by the Board, the GMB, the Risk Management Meeting, the Global Standards Steering Committee, subsidiary company boards, Board committees and senior management during the formulation of policy and the establishment of our standards. These policies, which form an integral part of the internal control system (see page 332), are communicated through manuals and statements of policy and are promulgated through internal communications and training. The policies set out our risk appetite and operational procedures in all areas of reputational risk, including money laundering deterrence, counter-terrorist financing, environmental impact, anti-bribery and corruption measures and employee relations. The policy manuals address risk issues in detail and co-operation between Group departments and businesses is required to ensure a strong adherence to our risk management system and our sustainability practices.

Pension risk

(Audited)

We operate a number of pension plans throughout the world, as described in Note 7 on the Financial Statements, the Pension risk section on page 224 and below. Some of them are defined benefit plans, of which the largest is the HSBC Bank (UK) Pension Scheme ('the principal plan').

In order to fund the benefits associated with these plans, sponsoring Group companies (and, in some instances, employees) make regular contributions in accordance with advice from actuaries and in consultation with the scheme's trustees (where relevant). The defined benefit plans invest these contributions in a range of investments designed to meet their long-term liabilities.

The level of these contributions has a direct impact on HSBC's cash flow and would normally be set to ensure that there are sufficient funds to meet the cost of the accruing benefits for the future service of active members. However, higher contributions will be required when plan assets are considered insufficient to cover the existing pension liabilities. Contribution rates are typically revised annually or triennially, depending on the plan. The agreed contributions to the principal plan are revised triennially.

A deficit in a defined benefit plan may arise from a number of factors, including

- investments delivering a return below that required to provide the projected plan benefits. This could arise, for example, when there is a fall in the market value of equities, or when increases in long-term interest rates cause a fall in the value of fixed income securities held;
- the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset values (both equity and debt);
- a change in either interest rates or inflation which causes an increase in the value of the scheme liabilities; and
- scheme members living longer than expected (known as longevity risk).

A plan's investment strategy is determined after taking into consideration the market risk inherent in the investments and its consequential impact on potential future contributions. The long-term investment objectives of both HSBC and, where relevant and appropriate, the trustees are:

- to limit the risk of the assets failing to meet the liabilities of the plans over the long-term; and
- to maximise returns consistent with an acceptable level of risk so as to control the long-term costs of the defined benefit plans.

In pursuit of these long-term objectives, a benchmark is established for the allocation of the defined benefit plan assets between asset classes. In addition, each permitted asset class has its own benchmarks, such as stock market or property valuation indices and, where relevant, desired levels of out-performance. The benchmarks are reviewed at least triennially within 18 months of the date at which an actuarial valuation is made, or more frequently if required by local legislation or circumstances. The process generally involves an extensive asset and liability review.

Ultimate responsibility for investment strategy rests with either the trustees or, in certain circumstances, a Management Committee. The degree of independence of the trustees from HSBC varies in different jurisdictions.

Pension plans in the UK

The largest plan globally exists in the UK, where the HSBC Bank (UK) Pension Scheme ('the Scheme') covers employees of HSBC Bank plc and certain other employees of HSBC. This comprises a funded final salary defined benefit plan ('the principal plan'), which is closed to new entrants, and a defined contribution plan which was established in July 1996 for new employees.

The principal plan, which accounts for approximately 70% of the obligations of our defined benefit pension plans, is overseen by a corporate trustee who has a fiduciary responsibility for the operation of the pension scheme. The Trustee is responsible for monitoring and managing the investment strategy and administration of scheme benefits.

The principal plan holds a diversified portfolio of investments to meet future cash flow liabilities arising from accrued benefits as they fall due to be paid. The trustee of the principal plan is required to produce a written Statement of Investment Principles which governs decision-making about how investments are made and the need for adequate diversification is taken into account in the choice of asset allocation and manager structure in the Defined Benefit Section.

Longevity risk in the principal plan is assessed as part of the measurement of the pension liability and managed through the funding process of the scheme.

Pension plans in Hong Kong

In Hong Kong, the HSBC Group Hong Kong Local Staff Retirement Benefit Scheme covers employees of The Hongkong and Shanghai Banking Corporation and certain other employees of HSBC. The scheme comprises a funded defined benefit scheme and a defined contribution scheme. The defined benefit section of the scheme is a final salary lump sum scheme and therefore its exposure to longevity risk is limited; it was closed to new members from 1999.

The trustee assumes the overall responsibility for the scheme but a management committee and a number of sub-committees have also been established. These committees have been established to broaden the governance and manage the concomitant issues. The finance and investment sub-committee manages the various issues in relation to both assets and liabilities of the scheme.

Pension plans in North America

The HSBC North America (US) Retirement Income Plan covers all employees of HSBC Bank USA, HSBC Finance and other HSBC entities in the US who have reached the age of 21 and met the one year of service participation requirement. The Retirement Income Plan is a funded defined benefit plan which provides final average pay benefits to legacy participants and cash balance benefits to all other participants. Prior to 1 January 2013 all new employees participate in the cash balance section of the plan. In November 2009, the Board of Directors of HSBC North America Holdings, Inc. ('HNAH') approved actions to cease all future benefit accruals for legacy participants under the final average pay formula components of the HSBC North America Retirement Income Plan with effect from 1 January 2011.

The Plan is governed by the Employee Retirement Security Act of 1974 ('ERISA'), ERISA regulations serve as guidance for the management of plan assets. In this regard, an Investment Committee (the 'Committee') for the Plan has been established and its members have been appointed by the Chief Executive Officer as authorized by the Board of Directors of HSBC North America. The Committee is responsible for establishing the funding policy and investment objectives supporting the Plan including allocating the assets of the Plan, monitoring the diversification of the Plan's investments and investment performance, assuring the Plan does not violate any provisions of ERISA and the appointment, removal and monitoring of investment advisers and the trustee.

A key factor shaping the Committee's attitude towards risk is the generally long-term nature of the underlying benefit obligations. The asset allocation decision reflects this long-term horizon as well as the ability and willingness to accept some short-term variability in the performance of the portfolio in exchange for the expectation of competitive long-term investment results for its participants.

Sustainability risk

(Unaudited)

Sustainability risks arise from the provision of financial services to companies or projects which run counter to the needs of sustainable development; in effect this risk arises when the environmental and social effects outweigh economic benefits. Within Group Head Office, a separate function, Group Corporate Sustainability, is mandated to manage these risks globally working through local offices as appropriate. Sustainability Risk Managers have regional or national responsibilities for advising on and managing environmental and social risks.

Group Corporate Sustainability's risk management responsibilities include:

- formulating sustainability risk policies. This includes oversight of our sustainability risk standards, management of the Equator Principles for project finance lending, and sector-based sustainability policies covering those sectors with high environmental or social impacts (forestry, freshwater infrastructure, chemicals, energy, mining and metals, and defence-related lending); undertaking an independent review of transactions where sustainability risks are assessed to be high, and supporting our operating companies to assess similar risks of a lower magnitude;
- building and implementing systems-based processes to ensure consistent application of policies, reduce the costs of sustainability risk reviews and capture management information to measure and report on the effect of our lending and investment activities on sustainable development; and
- providing training and capacity building within our operating companies to ensure sustainability risks are identified and mitigated consistently to either our own standards, international standards or local regulations, whichever is higher.

Capital

1 *Appendix to Capital*

Report of the Directors: Operating and Financial Review (continued)

Our objective in the management of Group capital is to maintain appropriate levels of capital to support our business strategy and meet our regulatory requirements.

Capital highlights

- Core tier 1 capital ratio 12.3%, up from 10.1% in 2011, as a result of capital generation and management actions.
- CRD IV, which implements Basel III in Europe, remains unfinalised and the timetable for implementation is uncertain.

Capital overview

Capital ratios
(Unaudited)

	At 31 December	
	2012	2011
	%	%
Core tier 1 ratio	**12.3**	10.1
Tier 1 ratio	**13.4**	11.5
Total capital ratio	**16.1**	14.1

Our approach to managing Group capital has been to ensure that we exceed current, and are well placed to meet expected future, regulatory requirements. Within the remit of Pillar 2, the FSA has defined a common equity tier 1 ('CET1') capital resources floor for the Group. This is expressed as a minimum target CETI ratio calculated on a Basel III end point basis, to be achieved by December 2013. In effect this accelerates our full implementation date for Basel III even though there remains uncertainty around the precise requirements in Europe.

We currently manage our capital position to meet an internal target CET1 ratio in the range 9.5%-10.5% for 31 December 2013 and will review this on an ongoing basis.

The eligibility requirements in the UK for non-equity capital securities, under Basel III rules, remained under review so we did not issue any such capital securities during 2012.

A summary of our policies and practices regarding capital management, measurement and allocation is provided in the Appendix to Capital on page 294.

Risk-weighted assets

RWAs by risk type
(Unaudited)

	At 31 December	
	2012	2011
	US$m	US$m
Credit risk	**898,416**	958,189
Standardised approach	**374,469**	372,039
IRB foundation approach	**10,265**	8,549
IRB advanced approach	**513,682**	577,601
Counterparty credit risk	**48,319**	53,792
Standardised approach[1]	**2,645**	3,163
IRB approach	**45,674**	50,629
Market risk	**54,944**	73,177
Operational risk	**122,264**	124,356
Total	**1,123,943**	1,209,514
Of which:		
Run-off portfolios	**145,689**	181,657
Legacy credit in GB&M	**38,587**	50,023
US CML and Other	**107,102**	131,634
Card and Retail Services[2]	**6,858**	52,080

For footnotes, see page 292.

Market risk RWAs
(Unaudited)

	At 31 December	
	2012	2011
	US$m	US$m
VAR	**7,616**	11,345
Stressed VAR	**11,048**	19,117
Incremental risk charge	**11,062**	5,249
Comprehensive risk measure	**3,387**	6,013
Other VAR and stressed VAR	**11,355**	12,957
Internal model based	**44,468**	54,681
FSA standard rules	**10,476**	18,496
	54,944	73,177

RWAs by global businesses
(Unaudited)

	At 31 December	
	2012	2011
	US$bn	US$bn
Retail Banking and Wealth Management	**276.6**	351.2
Commercial Banking	**397.0**	382.9
Global Banking and Markets	**403.1**	423.0
Global Private Banking	**21.7**	22.5
Other	**25.5**	29.9
Total	**1,123.9**	1,209.5

RWAs by geographical regions[3]
(Unaudited)

	At 31 December 2012 US$bn	2011 US$bn
Total	**1,123.9**	1,209.5
Europe	**314.7**	340.2
Hong Kong	**111.9**	105.7
Rest of Asia-Pacific	**302.2**	279.3
MENA	**62.2**	58.9
North America	**253.0**	337.3
Latin America	**97.9**	102.3

For footnote, see page 292.

RWAs reduced by US$86bn to US$1,124bn in 2012, due to a combination of management actions and business growth.

Credit risk RWAs

(Unaudited)

Credit risk RWAs are calculated using three approaches as permitted by the UK regulator. For consolidated Group reporting we have adopted the advanced IRB approach for the majority of our business, with a small proportion on the foundation IRB approach and the remaining portfolios being on the standardised approach.

For portfolios treated under the standardised approach, credit risk RWA movements were primarily due to the increase of US$30bn in our associates in mainland China, mainly from loan growth in BoCom and Industrial Bank. This was partially offset by the first tranche sale of Ping An, which resulted in its banking subsidiary no longer being included in the regulatory consolidation for RWAs. The remaining holding, at year end, was treated as a deduction from capital, giving a year-on-year reduction in RWAs of US$21bn. For further details see page 39.

In Europe, a reduction in standardised RWAs for CMB and GB&M of US$6.5bn reflected reduced corporate lending in selected eurozone countries and a movement to the IRB supervisory slotting approach for the shipping portfolio in Greece. In Latin America, corporate lending growth in the region was more than offset by the reduction in corporate exposure from the sale of operations in Costa Rica, El Salvador and Honduras, and the managing down of vehicle finance and payroll loan portfolios in Brazil.

Credit risk RWA movements by key driver for portfolios treated under the IRB approach are set out in the table below. For the basis of preparation, see the Appendix to Capital on page 298. Foreign exchange movements had an impact of US$6.2bn; the discussion of the remaining drivers excludes the effect of foreign exchange.

RWA movement by key driver – credit risk – IRB only
(Unaudited)

	Europe US$bn	Hong Kong US$bn	Rest of Asia-Pacific US$bn	MENA US$bn	North America US$bn	Latin America US$bn	Total US$bn
RWAs at 1 January 2012	**156.5**	**68.0**	**82.3**	**12.9**	**254.5**	**12.0**	**586.2**
Foreign exchange movement	**4.7**	**0.1**	**0.8**	**(0.2)**	**0.7**	**0.1**	**6.2**
Acquisitions and disposals	**–**	**–**	**(0.1)**	**(0.7)**	**(40.3)**	**(0.9)**	**(42.0)**
Book size	**(1.8)**	**3.6**	**5.4**	**1.0**	**(7.6)**	**(0.6)**	**–**
Book quality	**(6.6)**	**1.5**	**(1.1)**	**(0.3)**	**(17.9)**	**0.1**	**(24.3)**
Model updates	**0.4**	**–**	**–**	**0.1**	**–**	**–**	**0.5**
Portfolios moving onto IRB approach	**1.4**	**–**	**–**	**0.1**	**–**	**–**	**1.5**
New/updated models	**(1.0)**	**–**	**–**	**–**	**–**	**–**	**(1.0)**
Methodology and policy	**(2.5)**	**(3.0)**	**4.8**	**(0.2)**	**(2.3)**	**0.5**	**(2.7)**
Internal updates	**(1.3)**	**(3.0)**	**4.8**	**(0.2)**	**(2.3)**	**0.5**	**(1.5)**
External updates	**(1.2)**	**–**	**–**	**–**	**–**	**–**	**(1.2)**
Total RWA movement	**(5.8)**	**2.2**	**9.8**	**(0.3)**	**(67.4)**	**(0.8)**	**(62.3)**
RWAs at 31 December 2012	**150.7**	**70.2**	**92.1**	**12.6**	**187.1**	**11.2**	**523.9**

Management actions in the North America RBWM business, most notably the disposal of the Card and Retail Services business and the non-strategic branches in upstate New York, reduced RWAs by US$40bn.

Movements in book quality in the RBWM North America retail business accounted for US$14bn of the US$18bn reduction in RWAs. These retail reductions were mainly due to a refinement in risk metrics for mortgage exposures with a US$6.1bn RWA impact attained through recalibration with more recent data observations. Further reductions of US$7.4bn were due to positive credit quality migration and the progression of assets into default as a result of the challenging conditions in the US mortgage market. As assets approach and go into default, capital requirements are increasingly reflected in an expected loss deduction from capital, rather than having a direct effect on RWAs (see 'Deductions' within 'Composition of regulatory capital' on page 286). Additionally, RBWM continued to manage down the residual balances in our North America retail portfolios through a combination of run-off and write-off which resulted in a reduction in RWAs of US$12bn. In our North America wholesale portfolios, there was an increase in book size with RWA growth of US$4.9bn, mainly in our CMB and GB&M businesses. This was partially offset by favourable movements in book quality for those portfolios which reduced RWAs by US$4.5bn.

Corporate and commercial lending and trade finance activity in our CMB and GB&M businesses were the primary drivers of the book size RWA growth of US$9.0bn in Rest of Asia-Pacific and Hong Kong, while the book quality was relatively stable overall. Data enhancements in Rest of Asia-Pacific and Hong Kong allowed us to improve the quantification of exposure and risk metrics, and are reflected in internal methodology and policy updates.

In Europe, rating agency actions on ABSs held in GB&M business were one of the main drivers for the movement in book quality of a reduction of US$6.6bn in RWAs. Lower grade investments are deducted from capital rather than risk-weighted, such that the effect is reflected in reduced RWAs and increased capital deductions (see 'Deductions' within 'Composition of regulatory capital' on page 286). Other drivers of the movement in book quality included an improvement in the credit quality of the corporate portfolio in CMB and retail portfolios in RBWM. Reductions in the Europe IRB book size were from lower corporate and institutional exposures in GB&M, partly offset by corporate exposure growth in the top CMB markets. A change in methodology for the regulatory treatment of European Economic Area ('EEA') central bank exposures, to include them in the standardised approach, resulted in a reduction of US$1.2bn.

In the Middle East and Latin America, book size and book quality levels were stable, with the main credit risk RWA movements reflecting mergers and acquisitions, including purchases in Oman and the UAE and disposals in Costa Rica, Honduras and El Salvador.

Counterparty credit risk and market risk RWAs

(Unaudited)

Trading portfolio movements for the modelled approaches to market risk and counterparty credit risk ('CCR') RWAs are outlined in the tables below. For the basis of preparation, see the Appendix to Capital on page 295.

RWA movement by key driver – counterparty credit risk – IRB only

(Unaudited)

	US$bn
RWAs at 1 January 2012	50.6
Book size	(0.8)
Book quality	0.1
Model updates	(0.2)
Methodology and policy	(4.0)
Internal updates	(4.0)
External updates	–
Total RWA movement	(4.9)
RWAs at 31 December 2012	45.7

CCR RWAs decreased by US$4.9bn during the year, primarily due to methodology and policy changes in GB&M. The main drivers of the change arose through the increased application of counterparty netting within the calculation and from counterparty data refinement which allowed us to apply lower potential future exposure add-on factors. There were reductions in book size in North America, due to a decrease in the GB&M legacy credit portfolio and from maturing trades, and in Latin America due to reduced repo activity with central banks and lower exposure in respect of derivative transactions.

RWA movement by key driver – market risk – internal model based

(Unaudited)

	US$bn
RWAs at 1 January 2012	54.7
Foreign exchange movement and other	(0.4)
Movement in risk levels	(7.4)
Model updates	–
Methodology and policy	(2.4)
Internal updates	(2.4)
External updates	–
Total RWA movement	(10.2)
RWAs at 31 December 2012	44.5

Market risk RWAs decreased by US$10bn in 2012 with the main driver being a reduction in risk levels of US$11bn in GB&M, primarily as a result of decreasing VAR due to reductions in exposure and improvements in market conditions. The factors affecting the reductions in VAR also drove the reductions in the levels of stressed VAR. The effect was partly offset by a US$4.0bn risk level increase in the incremental risk charge as a result of a recalibration of the sovereign correlation matrix. RWA changes due to methodology and policy of US$2.4bn were due to a reduction in the VAR multiplier in France.

Movement in total regulatory capital in 2012

(Audited)

Source and application of total regulatory capital

Market risk RWA movements for portfolios not within scope of modelled approaches showed a reduction of US$8.0bn. This was mainly driven by management actions by GB&M to reduce legacy positions in North America.

Operational risk RWAs

(Unaudited)

Operational risk RWAs remained stable in 2012, being calculated on a three-year average of revenues.

	At 31 December	
	2012	2011
	US$m	US$m
Movement in total regulatory capital *(Audited)*		
Opening core tier 1 capital	**122,496**	116,116
Contribution to core tier 1 capital from profit for the year	**17,827**	14,011
Consolidated profits attributable to shareholders of the parent company	**14,027**	16,797
Removal of own credit spread net of tax	**3,800**	(2,786)
Net dividends	**(5,613)**	(5,271)
Dividends	**(8,042)**	(7,501)
Add back: shares issued in lieu of dividends	**2,429**	2,230
Decrease in goodwill and intangible assets deducted	**1,686**	582
Ordinary shares issued	**594**	96
Foreign currency translation differences	**989**	(2,705)
Other, including regulatory adjustments	**810**	(333)
Closing core tier 1 capital	**138,789**	122,496
Opening other tier 1 capital	**17,094**	17,063
Hybrid capital securities redeemed	**(776)**	–
Unconsolidated investments	**(4,120)**	71
Other, including regulatory adjustments	**61**	(40)
Closing tier 1 capital	**151,048**	139,590
Opening tier 2 capital	**30,744**	34,376
Redeemed capital	**(1,483)**	(3,360)
Other, including regulatory adjustments	**497**	(272)
Closing total regulatory capital	**180,806**	170,334

We complied with the FSA's capital adequacy requirements throughout 2011 and 2012. Internal capital generation contributed US$12bn to core tier 1 capital, being profits attributable to shareholders of the parent company after regulatory adjustment for own credit spread and net of dividends. The table below sets out the composition of our capital under the current regulatory requirements.

Capital structure

Composition of regulatory capital

(Audited)

	Ref	At 31 December 2012 US$m	2011 US$m
Tier 1 capital			
Shareholders' equity		**167,360**	154,148
Shareholders' equity per balance sheet[4]	*a*	**175,242**	158,725
Preference share premium	*b*	**(1,405)**	(1,405)
Other equity instruments	*c*	**(5,851)**	(5,851)
Deconsolidation of special purpose entities[5]	*a*	**(626)**	2,679
Non-controlling interests		**4,348**	3,963
Non-controlling interests per balance sheet	*d*	**7,887**	7,368
Preference share non-controlling interests	*e*	**(2,428)**	(2,412)
Non-controlling interests transferred to tier 2 capital	*f*	**(501)**	(496)
Non-controlling interests in deconsolidated subsidiaries	*d*	**(610)**	(497)
Regulatory adjustments to the accounting basis		**(2,437)**	(4,331)
Unrealised losses on available-for-sale debt securities[6]		**1,223**	2,228
Own credit spread		**112**	(3,608)
Defined benefit pension fund adjustment[7]	*g*	**(469)**	(368)
Reserves arising from revaluation of property and unrealised gains on available-for-sale equities		**(3,290)**	(2,678)
Cash flow hedging reserve		**(13)**	95
Deductions		**(30,482)**	(31,284)
Goodwill and intangible assets	*h*	**(25,733)**	(27,419)
50% of securitisation positions		**(1,776)**	(1,207)
50% of tax credit adjustment for expected losses		**111**	188
50% of excess of expected losses over impairment allowances	*i*	**(3,084)**	(2,846)
Core tier 1 capital		**138,789**	122,496
Other tier 1 capital before deductions		**17,301**	17,939
Preference share premium	*b*	**1,405**	1,405
Preference share non-controlling interests	*e*	**2,428**	2,412
Hybrid capital securities	*j*	**13,468**	14,122
Deductions		**(5,042)**	(845)
Unconsolidated investments[8]		**(5,153)**	(1,033)
50% of tax credit adjustment for expected losses		**111**	188
Tier 1 capital		**151,048**	139,590
Tier 2 capital			
Total qualifying tier 2 capital before deductions		**48,231**	48,676
Reserves arising from revaluation of property and unrealised gains on available-for-sale equities		**3,290**	2,678
Collective impairment allowances	*k*	**2,717**	2,660
Perpetual subordinated debt	*l*	**2,778**	2,780
Term subordinated debt	*m*	**39,146**	40,258
Non-controlling interests in tier 2 capital	*f*	**300**	300
Total deductions other than from tier 1 capital		**(18,473)**	(17,932)
Unconsolidated investments[8]		**(13,604)**	(13,868)
50% of securitisation positions		**(1,776)**	(1,207)
50% of excess of expected losses over impairment allowances	*i*	**(3,084)**	(2,846)
Other deductions		**(9)**	(11)
Total regulatory capital		**180,806**	170,334

For footnotes, see page 292.

The references (a) – (m) identify balance sheet components on page 287 which are used in the calculation of regulatory capital.

Regulatory impact of management actions

(Unaudited)

	At 31 December 2012			
	Risk-weighted assets	Core tier 1 capital	Tier 1 capital	Total regulatory capital
Reported capital ratios before management actions		12.3%	13.4%	16.1%
Reported totals (US$m)	1,123,943	138,789	151,048	180,806
Management actions completed in 2013 (US$m)				
Dilution of our shareholding in Industrial Bank and the subsequent change in accounting treatment	(38,073)	981	(423)	(1,827)
Completion of the second tranche of the sale of Ping An	–	553	4,637	7,984
Estimated total after management actions completed in 2013 (US$m)	1,085,870	140,323	155,262	186,963
Estimated capital ratios after management actions completed in 2013		12.9%	14.3%	17.2%

Reconciliation of accounting and regulatory balance sheets

(Unaudited)

		At 31 December 2012			
	Ref	Accounting balance sheet US$m	Deconsolidation of insurance/ other entities US$m	Consolidation of banking associates US$m	Regulatory balance sheet US$m
Assets					
Trading assets		408,811	(144)	1,477	410,144
Loans and advances to customers		997,623	(11,957)	119,698	1,105,364
of which:					
– impairment allowances on IRB portfolios	*i*	(10,255)	–	–	(10,255)
– impairment allowances on STD portfolios	*k*	(5,857)	–	(2,726)	(8,583)
Financial investments		421,101	(50,256)	33,110	403,955
Capital invested in insurance and other entities		–	8,384	–	8,384
Interests in associates and joint ventures		17,834	–	(17,127)	707
of which:					
– positive goodwill on acquisition	*h*	670		(640)	30
Goodwill and intangible assets	*h*	29,853	(4,983)	687	25,557
Other assets		817,316	(34,672)	82,469	865,113
of which:					
– goodwill and intangible assets of disposal groups held for sale	*h*	146	(117)	–	29
– retirement benefits assets	*g*	2,846	–	–	2,846
– impairment allowances on asset held for sale		(703)	–	–	(703)
of which:					
– IRB portfolios	*i*	(691)	–	–	(691)
– STD portfolios	*k*	(12)	–	–	(12)
Total assets		2,692,538	(93,628)	220,314	2,819,224

	Ref	At 31 December 2012 Accounting balance sheet US$m	Deconsolidation of insurance/ other entities US$m	Consolidation of banking associates US$m	Regulatory balance sheet US$m
Liabilities and equity					
Deposits by banks		107,429	(202)	51,296	158,523
Customer accounts		1,340,014	(652)	158,631	1,497,993
Trading liabilities		304,563	(131)	119	304,551
Financial liabilities designated at fair value		87,720	(12,437)	–	75,283
of which:					
– term subordinated debt included in tier 2 capital	*m*	16,863	–	–	16,863
– hybrid capital securities included in tier 1 capital	*j*	4,696	–	–	4,696
Debt securities in issue		119,461	(11,390)	1,888	109,959
Retirement benefits liabilities	g	3,905	(21)	52	3,936
Subordinated liabilities		29,479	3	2,953	32,435
of which:					
– hybrid capital securities included in tier 1 capital.	*j*	2,828	–	–	2,828
– perpetual subordinated debt included in tier 2 capital	*l*	2,778	–	–	2,778
– term subordinated debt included in tier 2 capital	*m*	23,873	–	–	23,873
Other liabilities		516,838	(67,562)	5,375	454,651
of which:					
– contingent liabilities and contractual commitments		301	–	–	301
of which:					
– credit-related provisions on IRB portfolios	*i*	267	–	–	267
– credit-related provisions on STD portfolios	*k*	34	–	–	34
Total shareholders' equity	*a*	175,242	(626)	(0)	174,616
of which:					
– other equity instruments included in tier 1 capital	*c, j*	5,851	–	–	5,851
– preference share premium included in tier 1 capital	*b*	1,405	–	–	1,405
Non-controlling interests	*d*	7,887	(610)	0	7,277
of which:					
– non-cumulative preference shares issued by subsidiaries included in tier 1 capital	*e*	2,428	–	–	2,428
– non-controlling interests included in tier 2 capital, cumulative preferred stock	*f*	300	–	–	300
– non-controlling interests attributable to holders of ordinary shares in subsidiaries included in tier 2 capital	*f,m*	201	–	–	201
Total liabilities and equity		2,692,538	(93,628)	220,314	2,819,224

For footnote, see page 292.

The references (a) – (m) identify balance sheet components which are used in the calculation of regulatory capital on page 286.

Regulatory and accounting consolidations

(Unaudited)

The basis of consolidation for financial accounting purposes is described in Note 1 on the Financial Statements and differs from that used for regulatory purposes. The table above provides a reconciliation of the financial accounting balance sheet to the regulatory balance sheet. Not all items are reconcilable, due to regulatory adjustments that are applied, for example to non-core capital instruments before they can be included in the Group's regulatory capital base. It is the regulatory balances, and not the financial accounting balance sheet, which form the basis for the regulatory capital calculations. Investments in banking associates are equity accounted in the financial accounting consolidation, whereas their assets and liabilities are proportionally consolidated for regulatory purposes. Subsidiaries and associates engaged in insurance and non-financial activities are excluded from the regulatory consolidation and are deducted from regulatory capital. The regulatory consolidation does not include SPEs where significant risk has been transferred to third parties. Exposures to these SPEs are risk-weighted as securitisation positions for regulatory purposes. Entities in respect of which the basis of consolidation for financial accounting purposes differs from that used for regulatory purposes can be found in the *Pillar 3 Disclosures 2012* report.

Basel III and its implementation in Europe

(Unaudited)

In July 2011, the European Commission published proposals for a new Regulation and Directive, known collectively as CRD IV, to give effect to the Basel III framework in the EU. The majority of the Basel III proposals are in the Regulation, removing national discretion. However, capital buffers such as those for countercyclical and capital conservation are in the Directive and are subject to transposition into national law by member states. CRD IV implementation has been delayed and the timetable for finalisation is uncertain.

In October 2012, the FSA wrote to large firms to set out the disclosures they are required to make of capital resources on a first year transitional basis under CRD IV. We have made these disclosures in appendix III of the *Pillar 3 Disclosures 2012* report.

Following the FSA's setting of a Capital Resources Floor, and in order to manage our transition to Basel III under CRD IV, we provide below some insight for investors of the possible effects of these rules on our capital position. We have estimated our pro-forma CET1 ratio by applying our interpretation of the CRD IV draft July 2011 text post the transition period (end point CRD IV) to our balance sheet position at 31 December 2012.

In managing our capital position to meet our internal CET1 target, we consider management actions resulting from our six filters strategy that we either have already taken or would take, if the CRD IV rules were to be finalised in the July 2011 form. These are reflected in the table below under 'Estimated regulatory impact of management actions'. Other management actions could be taken depending upon the finalised rules and timing of implementation but, as such, have not been included.

The application of the CRD IV rules on this basis would translate into an estimated CET1 ratio of 9.0% before management actions and 10.3% after such actions, as detailed in the table below.

Estimated effect of CRD IV end point rules applied to the 31 December 2012 position
(Unaudited)

	At 31 December 2012	
	RWAs US$m	Capital US$m
Reported core tier 1 capital under the current regime		138,789
Regulatory adjustments applied to core tier 1 in respect of amounts subject to CRD IV treatment		
Investments in own shares through the holding of composite products of which HSBC is a component (exchange traded funds, derivatives, and index stock)		(1,322)
Surplus non-controlling interest disallowed in CET1		(2,299)
Removal of filters under current regime		
– Unrealised gains/(losses) on available-for-sale debt securities		(1,223)
– Unrealised gains on available-for-sale equities		2,088
– Reserves arising from revaluation of property		1,202
– Defined benefit pension fund liabilities		(1,596)
Excess of expected losses over impairment allowances deducted 100% from CET1		(3,084)
Removal of 50% of tax credit adjustment for expected losses		(111)
Securitisations positions risk-weighted under CRD IV		1,776
Deferred tax liabilities on intangibles		267
Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)		(456)
Additional valuation adjustment (referred to as PVA)		(1,720)
Debit valuation adjustment		(372)
Individually immaterial holdings in CET1 capital of banks, financial institutions and insurance in aggregate above 10% of HSBC CET1		(5,994)
Deductions under threshold approach		
Amount exceeding the 10% threshold:		
– Significant investments in CET1 capital of banks, financial institutions and insurance		(6,697)
Amount in aggregate exceeding the 15% threshold:		
– Significant investments in CET1 capital of banks, financial institutions and insurance		(2,265)
– Deferred tax assets		(1,532)
Estimated CET1 capital under CRD IV		**115,451**
Reported total RWAs	1,123,943	
Changes to capital requirements introduced by CRD IV		
Credit valuation adjustment	60,360	
Counterparty credit risk (other than credit valuation adjustment)	25,682	
Amounts in aggregate below 15% threshold and therefore subject to 250% risk weight	43,295	
Securitisation positions and free deliveries risk-weighted under CRD IV	44,513	
Investments in commercial entities now risk-weighted	393	
Deferred tax assets moved to threshold deduction under CRD IV	(8,976)	
Estimated total RWAs under CRD IV	**1,289,210**	
Estimated CET1 ratio		**9.0%**

	At 31 December 2012	
	RWAs US$m	Capital US$m
Estimated regulatory impact of management actions		
Management actions completed in 2013:		
Dilution of our shareholding in Industrial Bank and the subsequent change in accounting treatment	(38,880)	(2,150)
Completion of the second tranche of the sale of Ping An	3,522	9,393
Estimated total after management actions completed in 2013	1,253,852	122,694
Estimated CET1 ratio after management actions completed in 2013		**9.8%**
Planned short-term management actions if rules are finalised in their current form:		
Mitigation of immaterial holdings[9]	2,645	7,052
Estimated total after planned management actions	1,256,497	129,746
Estimated CET1 ratio after planned management actions		**10.3%**

For the detailed basis of preparation, see page 298 of the Appendix to Capital.

The table above presents a reconciliation of our reported core tier 1 capital and RWAs position at 31 December 2012 to the pro-forma estimated CET1 end point capital and estimated RWAs based on our interpretation of the July 2011 draft CRD IV regulation, supplemented by FSA guidance and, in lieu of guidance, our expectation of how these draft rules will be updated following EU negotiations.

CRD IV is not yet in law and its provisions are subject to ongoing negotiation and amendment. As such, the finalised rules could have a materially different effect on CET1 and RWAs.

The CRD IV rule changes introduce a revised definition of regulatory capital, primarily focused on CET1 capital as the predominant form of going concern capital, with a greater quantum to be held by banks. There are increased capital deductions and new regulatory adjustments affecting this higher tier of capital. The new rules also introduce increased RWA requirements, mainly for CCR.

The largest impact on our CET1 capital is the deduction of unconsolidated significant investments in banks, financial institutions and insurance entities of US$9.0bn (shown as US$6.7bn and US$2.3bn in the table above). This results from a reallocation of current deductions to this higher tier of capital and new rules for calculating the amounts to be deducted.

Adding to the above, the regulatory treatment applied to immaterial unconsolidated investments in banks, financial institutions and insurance entities, whereby a maturity restriction does not recognise the netting of long and short positions when the short position is less than one year residual maturity, even though they are hedged from a market risk perspective. This results in an estimated deduction of US$6.0bn. The effect on capital is exacerbated by its impact on the threshold for other deductions.

The rules are currently in draft and subject to ongoing negotiation. If they were to be finalised in their current form, the holdings of such positions would generate a disproportionate capital cost and potentially the relevant business could be curtailed, closed or our hedging would be adjusted to negate the impact.

Capital management initiatives and management actions already adopted by the Group, in accordance with our six filters strategic framework, have contributed to mitigating the effect of the future rules. In 2012, this included the continuing run-off of capital intensive portfolios including the US CML and the GB&M legacy credit portfolios and the sale of the Card and Retail Services business. Post year-end, we sold our remaining investment in Ping An and reduced our percentage holding in Industrial Bank following a private placement by the company.

Although the effect of the future CRD IV rules is shown above on an end point basis, the rules allow for a transition period of six years to phase in the new deductions and regulatory adjustments. On a CRD IV first year transitional basis our CET1 ratio, if applied to our year end 2012 position, would be 11.5% before management actions.

As a result of the capital resources floor, we currently manage our capital position to meet an internal target CET1 ratio on an end point basis for year end 2013. We will continue to manage our capital position to ensure that it exceeds current regulatory requirements and is well placed to meet expected future regulatory requirements. We will review our capital target ratios on an ongoing basis, reflecting any changes in the regulatory environment as they develop.

Future developments

Systemically important banks

(Unaudited)

In parallel with the Basel III proposals, the Basel Committee issued a consultative document in July 2011, 'Global systemically important banks: assessment methodology and the additional loss absorbency requirement'. In November 2011, it published its rules and the Financial Stability Board ('FSB') issued the initial list of global systemically important banks ('G-SIB's). This list, which included HSBC and 28 other major banks from around the world, will be re-assessed periodically through annual re-scoring of the individual banks and a triennial review of the methodology.

The requirements, initially for those banks identified in November 2014 as G-SIBs, will be phased in from 1 January 2016, becoming fully effective on 1 January 2019. National regulators have discretion to introduce higher thresholds than the minima. In November 2012, the FSB published a revised list of G-SIBs and their current assessment of the appropriate capital charge. HSBC was assigned an add-on of 2.5%.

UK regulatory reform

(Unaudited)

The FSA supervises HSBC on a consolidated basis. However, the UK financial services regulatory structure is currently in the process of substantial reform. Legislation has been passed to abolish the FSA and establish three new regulatory bodies from 1 April 2013.

The three new bodies will comprise the Financial Policy Committee ('FPC') of the Bank of England, the Prudential Regulation Authority ('PRA') and the Financial Conduct Authority ('FCA'). The FPC will not directly supervise firms, being responsible for macro-prudential regulation and considering systemic risk affecting economic and financial stability. The PRA and the FCA will inherit the majority of the FSA's existing functions as the micro-prudential supervisors. Some subsidiaries such as HSBC Bank will be 'dual-regulated' firms, subject to prudential regulation by the PRA and to conduct regulation by the FCA. These reforms will endow the new regulatory bodies with additional powers. For example, under certain circumstances the PRA and FCA will be able to issue directions to unregulated qualifying parent undertakings such as HSBC Holdings.

In the case of the FPC, its January 2013 Draft Policy Statement, 'The Financial Policy Committee's power to supplement capital requirements', states that it will have two main powers: the first is to make recommendations, and the second is a power to direct the FCA and the PRA to adjust specific macro-prudential tools, namely the countercyclical capital buffer ('CCB') and sectoral capital requirements ('SCR's'). The UK Government is proposing to make the FPC responsible for setting the CCB, a Basel III global requirement applied to certain financial institutions in the UK. The CCB is a macro-prudential tool at the disposal of national authorities that can be deployed to protect the banking sector from future potential losses when the FPC judges that threats to financial stability have arisen in the UK which increase system-wide risk. Should a CCB be required, it is expected to be set in the range of 0-2.5%.

It is also planned under the new legislation to give the FPC 'direction power', over SCR's. The SCR tool is more targeted and would allow the FPC to change capital requirements above minimum regulatory standards for exposures to three broad sectors judged to pose a risk to the system as a whole (residential property, including mortgages; commercial property; and other parts of the financial sector). However, on occasion this may be applied to more granular sub-sectors (for example, to mortgages with high loan to value or loan to income ratios at origination). This will include both banking book and trading book exposures and be irrespective of the domicile of the ultimate borrower.

The CCB and SCR tools are described as broad tools designed to reduce the likelihood and severity of financial crises, their primary purpose being to tackle cyclical risks. They provide the FPC with the means to increase the amount of capital that banks must hold when threats to financial stability are judged to be emerging. However, the scale of capital add-ons in respect of SCR has not been quantified.

There is also a proposal for a systemic risk buffer for the banking system as a whole (or a subset thereof) to mitigate structural macro-prudential risk.

Potential effect of regulatory proposals on HSBC's capital requirements

Given the above it is uncertain what HSBC's final capital requirement will be. However, quantified Pillar 1 capital requirements are as follows:

CET1 requirements from 1 January 2019	
Minimum CET1	4.5%
Capital conservation buffer	2.5%
G-SIB buffer	2.5%

Against the backdrop of eurozone instability, on a temporary basis, the EBA recommended that banks aim to reach a 9% EBA defined core tier 1 ratio by the end of June 2012. In October 2012 the EBA announced that they would no longer monitor the core tier 1 ratio but instead expect banks to hold an equivalent nominal amount of capital. This new EBA recommendation on capital conservation will require banks to maintain a nominal amount of core tier 1 capital corresponding to the level of 9% of RWAs at the end of June 2012. This equates to US$104bn for HSBC. We will continue to review our internal target CETI ratio of 9.5% to 10.5% as the applicable regulatory capital requirements evolve during the period until 1 January 2019.

We also hold additional capital in respect of Pillar 2, the process of internal capital adequacy assessment and supervisory review which leads to a final determination by the FSA of individual capital guidance and any capital planning buffer that may be required.

Complementing the above, and also within the Pillar 2 process, the FSA first advised the Group in 2012 of a capital resources floor. This is expressed as a minimum target CET1 ratio calculated on a Basel III end point basis, to be achieved by December 2013.

In 2013 the FSA will introduce new industry-wide capital measures. They will floor all sovereign loss given defaults ('LGD's) at 45% and we estimate the effect of this to be an increase of US$19bn RWAs. Additionally, a stringent supervisory slotting approach for our UK commercial real estate portfolio will be introduced. For HSBC, this will roll out across the relevant business during 2013. Furthermore, the FSA have informed HSBC of a framework which will be used when assessing wholesale portfolios with a low number of defaults. This framework will impose LGD and exposure at default ('EAD') floors based on the foundation approach for portfolios with less than 20 events of default per country.

Structural banking reform

(Unaudited)

In September 2011, the Independent Commission on Banking ('ICB') recommended heightened capital requirements for UK banking groups. In June 2012, the UK Government published its consultation, 'Banking reform: delivering stability and supporting a sustainable economy', which set out its detailed proposals for implementing the ICB's recommendations, such as ring-fencing and bail-in debt. In October 2012, the UK Government published draft primary legislation. This legislation was presented for pre-legislative scrutiny to the UK's Parliamentary Commission on Banking Standards who presented their initial findings in December 2012. In February 2013, the UK Government responded to these findings and issued a revised Bill. The Government intends to enact the legislation by the end of this parliament in 2015 and to have reforms in place by 2019.

In October 2012, the Liikanen Report delivered its recommendations to the EC to reform the structure of the European banking sector. This also recommends ring-fencing, focused on isolating trading activities (rather than deposits as in the ICB recommendations) and, in principle, additional bail-in debt. We continue to monitor these developments.

Footnotes to Capital

1 *The value represents marked-to-market method only.*
2 *Operational risk RWAs, under the standardised approach, are calculated using an average of the last three years' revenues. For business disposals, the operational risk RWAs are not released immediately on disposal, but diminish over a period of time. The RWAs for the Card and Retail Services business at 31 December 2012 represent the remaining operational risk RWAs for the business.*
3 *RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.*
4 *Includes externally verified profits for the year ended 31 December 2012.*
5 *Mainly comprises unrealised gains/losses on available-for-sale debt securities related to SPEs.*
6 *Under FSA rules, unrealised gains/losses on debt securities net of tax must be excluded from capital resources.*
7 *Under FSA rules, any defined benefit asset is derecognised and a defined benefit liability may be substituted with the additional funding that will be paid into the relevant schemes over the following five-year period.*
8 *Mainly comprise investments in insurance entities and the AFS investment in Ping An. Due to the expiry of the transitional provision, with effect from 1 January 2013, material insurance holding companies acquired prior to 20 July 2006, will be deducted 50% from tier 1 and 50% from total capital.*
9 *This management action potentially arises only under rules on a CRD IV basis and has therefore not been included in the composition of regulatory capital table, which is drawn up on the basis of the current rules.*

Appendix to Capital

Capital management, capital measurement and RWA movement

Capital management

(Audited)

Approach and policy

Our approach to capital management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment in which we operate. Pre-tax return on risk-weighted assets ('RoRWA') is an operational metric by which the global businesses are managed on a day-to-day basis. The metric combines return on equity and regulatory capital efficiency objectives. It is our objective to maintain a strong capital base to support the risks inherent in our business and invest in accordance with our six filters framework, exceeding both consolidated and local regulatory capital requirements at all times.

Our policy on capital management is underpinned by a capital management framework which enables us to manage our capital in a consistent manner. The framework, which is approved by the GMB annually, incorporates a number of different capital measures including market capitalisation, invested capital, economic capital and regulatory capital. Following the FSA setting of a capital resources floor as a Basel III ratio, whilst also monitoring capital at a Group level on a Basel II basis, we set our internal target on an end point Basel III CET1 basis.

Capital measures

- market capitalisation is the stock market value of HSBC;
- invested capital is the equity capital invested in HSBC by our shareholders, adjusted for certain reserves and goodwill previously amortised or written off;
- economic capital is the internally calculated capital requirement which we deem necessary to support the risks to which we are exposed; and
- regulatory capital is the capital which we are required to hold in accordance with the rules established by the FSA for the consolidated Group and by our local regulators for individual Group companies.

Our assessment of capital adequacy is aligned to our assessment of risks, including: credit, market, operational, interest rate risk in the banking book, pension fund, insurance, structural foreign exchange risk and residual risks.

Stress testing

We incorporate stress testing in capital plans because it helps us to understand how sensitive the core assumptions in our capital plans are to the adverse effect of extreme but plausible events. Stress testing allows us to formulate our response and mitigate risk in advance of conditions exhibiting the identified stress scenarios. The actual market stresses which occurred throughout the financial system in recent years have been used to inform our capital planning process and enhance the stress scenarios we employ. In addition to our internal stress tests, others are undertaken, both at the request of regulators and by the regulators themselves using their prescribed assumptions. We take into account the results of all such regulatory stress testing when assessing our internal capital requirements.

Risks to capital

Outside the stress-testing framework, a list of top and emerging risks is regularly evaluated for their effect on the core tier 1 capital ratio. In addition, there are risks identified that are technically not within the scope of this list, but which still have the potential to affect our RWAs and/or capital position. These risks are also included in the evaluation of risks to capital. The downside or upside scenarios are assessed against our capital management objectives and mitigating actions are assigned as necessary. The responsibility for global capital allocation principles and decisions rests with the GMB. Through our internal governance processes, we seek to maintain discipline over our investment and capital allocation decisions and seek to ensure that returns on investment are adequate after taking into account capital costs. Our strategy is to allocate capital to businesses and entities on the basis of their ability to achieve established RoRWA objectives and their regulatory and economic capital requirements.

Risk-weighted asset targets

Top-down RWA targets are established for the global business lines, in accordance with the Group's strategic direction and risk appetite. As these targets are deployed to lower levels of management, action plans for implementation are developed. These may include growth strategies; active portfolio management; restructuring; business and/or customer-level reviews; RWA efficiency and optimisation initiatives and risk-mitigation. Our capital management process is articulated in the annual Group capital plan which is approved by the Board.

RWA targets are approved by the GMB on an annual basis and business performance against them is monitored through regular reporting to the Group ALCO. The management of capital deductions is also addressed in the RWA monitoring framework through additional notional charges for these items.

A range of analysis is employed in the RWA monitoring framework to identify the key drivers of movements in the position, such as book size and book quality. Particular attention is paid to identifying and segmenting items within the day-to-day control of the business and those items that are driven by changes in risk models or regulatory methodology.

Capital generation

HSBC Holdings is the primary provider of equity capital to its subsidiaries and also provides them with non-equity capital where necessary. These investments are substantially funded by HSBC Holdings' own capital issuance and profit retention. As part of its capital management process, HSBC Holdings seeks to maintain a prudent balance between the composition of its capital and its investment in subsidiaries.

Capital measurement and allocation

(Unaudited)

The FSA supervises HSBC on a consolidated basis and therefore receives information on the capital adequacy of, and sets capital requirements for, the Group as a whole. Individual banking subsidiaries are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements. In 2012, we calculated capital at a Group level using the Basel II framework as amended for CRD III, commonly known as Basel 2.5.

Our policy and practice in capital measurement and allocation at Group level is underpinned by the Basel II rules and Basel III proposals. However, local regulators are at different stages of implementation and some local reporting, notably in the US, is still on a Basel I basis. In most jurisdictions, non-banking financial subsidiaries are also subject to the supervision and capital requirements of local regulatory authorities.

Basel II is structured around three 'pillars': minimum capital requirements, supervisory review process and market discipline. The CRD implemented Basel II in the EU and the FSA then gave effect to the CRD by including the latter's requirements in its own rulebooks.

Regulatory capital

For regulatory purposes, our capital base is divided into three main categories, namely core tier 1, other tier 1 and tier 2, depending on the degree of permanency and loss absorbency exhibited.

- core tier 1 capital comprises shareholders' equity and related non-controlling interests. The book values of goodwill and intangible assets are deducted from core tier 1 capital and other regulatory adjustments are made for items reflected in shareholders' equity which are treated differently for the purposes of capital adequacy;
- qualifying capital instruments such as non-cumulative perpetual preference shares and hybrid capital securities are included in other tier 1 capital; and
- tier 2 capital comprises qualifying subordinated loan capital, related non-controlling interests, allowable collective impairment allowances and unrealised gains arising on the fair valuation of equity instruments held as available for sale. Tier 2 capital also includes reserves arising from the revaluation of properties.

To ensure the overall quality of the capital base, the FSA's rules set restrictions on the amount of hybrid capital instruments that can be included in tier 1 capital relative to core tier 1 capital, and limits overall tier 2 capital to no more than tier 1 capital.

Pillar 1 capital requirements

Pillar 1 covers the capital resources requirements for credit risk, market risk and operational risk. Credit risk includes counterparty credit risk and securitisation requirements. These requirements are expressed in terms of RWAs.

Credit risk capital requirements

Basel II applies three approaches of increasing sophistication to the calculation of Pillar 1 credit risk capital requirements. The most basic, the standardised approach, requires banks to use external credit ratings to determine the risk weightings applied to rated counterparties. Other counterparties are grouped into broad categories and standardised risk weightings are applied to these categories. The next level, the internal ratings-based ('IRB') foundation approach, allows banks to calculate their credit risk capital requirements on the basis of their internal assessment of a counterparty's probability of default ('PD'), but their estimates of exposure at default ('EAD') and loss given default ('LGD') are subject to standard supervisory parameters. Finally, the IRB advanced approach allows banks to use their own internal assessment in both determining PD and quantifying EAD and LGD.

The capital resources requirement, which is intended to cover unexpected losses, is derived from a formula specified in the regulatory rules which incorporates PD, LGD, EAD and other variables such as maturity and correlation. Expected losses under the IRB approaches are calculated by multiplying PD by EAD and LGD. Expected losses are deducted from capital to the extent that they exceed total accounting impairment allowances.

For credit risk we have adopted the IRB advanced approach for the majority of our portfolios, with the remainder on either IRB foundation or standardised approaches.

Under our Basel II rollout plans, a number of our Group companies and portfolios are in transition to advanced IRB approaches. At the end of 2012, portfolios in most of Europe, Hong Kong, Rest of Asia-Pacific and North America were on advanced IRB approaches. Others remain on the standardised or foundation approaches under Basel II, pending definition of local regulations or model approval, or under exemptions from IRB treatment.

- *Counterparty credit risk*

  CCR arises for OTC derivatives and securities financing transactions. It is calculated in both the trading and non-trading books and is the risk that the counterparty to a transaction may default before completing the satisfactory settlement of the transaction. Three approaches to calculating CCR and determining exposure values are defined by Basel II: standardised, mark-to-market and internal model method. These exposure values are used to determine capital requirements under one of the credit risk approaches: standardised, IRB foundation and IRB advanced.

  We use the mark-to-market and internal model method approaches for CCR. Our longer-term aim is to migrate more positions from the mark-to-market to the internal model method approach.

- *Securitisation*

  Securitisation positions are held in both the trading and non-trading books. For non-trading book securitisation positions, Basel II specifies two methods for calculating credit risk requirements, the standardised and the IRB approaches. Both rely on the mapping of rating agency credit ratings to risk weights, which range from 7% to 1,250%. Positions that would otherwise be weighted at 1,250% are deducted from capital.

  Within the IRB approach, we use the ratings-based method for the majority of our non-trading book securitisation positions, and the internal assessment approach for unrated liquidity facilities and programme-wide enhancements for asset-backed securitisations.

  The majority of securitisation positions in the trading book are treated for capital purposes as if they are held in the non-trading book under the standardised or IRB approaches. Other traded securitisation positions, known as correlation trading, are treated under an internal model approach approved by the FSA.

Market risk capital requirement

The market risk capital requirement is measured using internal market risk models where approved by the FSA, or the FSA's standard rules. Our internal market risk models comprise VAR, stressed VAR, incremental risk charge and correlation trading under the comprehensive risk measure.

Operational risk capital requirement

Basel II includes a capital requirement for operational risk, again utilising three levels of sophistication. The capital required under the basic indicator approach is a simple percentage of gross revenues, whereas under the standardised approach it is one of three different percentages of total operating income less insurance premiums allocated to each of eight defined business lines. Both these approaches use an average of the last three financial years' revenues. Finally, the advanced measurement approach uses banks' own statistical analysis and modelling of operational risk data to determine capital requirements. We have adopted the standardised approach in determining our operational risk capital requirements.

Pillar 2 capital requirements

We conduct an Internal Capital Adequacy Assessment Process ('ICAAP') to determine a forward looking assessment of our capital requirements given our business strategy, risk profile, risk appetite and capital plan. This process incorporates the Group's risk management processes and governance framework. A range of stress tests are applied to our base capital plan. These, coupled with our economic capital framework and other risk management practices, are used to assess our internal capital adequacy requirements.

The ICAAP is examined by the FSA as part of its Supervisory Review and Evaluation Process, which occurs periodically to enable the regulator to define the individual capital guidance or minimum capital requirements for HSBC and capital planning buffer where required.

Pillar 3 disclosure requirements

Pillar 3 of Basel II is related to market discipline and aims to make firms more transparent by requiring them to publish specific, prescribed details of their risks, capital and risk management under the Basel II framework at least annually. Our *Pillar 3 Disclosures 2012* report is published on the HSBC website, www.hsbc.com.

RWA movement by key driver - basis of preparation and supporting notes

(Unaudited)

Credit risk and counterparty credit risk drivers – definitions and quantification

The causal analysis of RWA movements splits the total movement in IRB RWAs into six drivers, described below. The first four relate to specific, identifiable and measurable changes. The remaining two, book size and book quality, are derived after accounting for movements in the first four specific drivers.

1. Foreign exchange movements

This is the movement in RWAs as a result of changes in the exchange rate between the functional currency of the HSBC company owning each portfolio and US dollars, being our presentation currency for consolidated reporting. Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates.

2. Acquisitions and disposals

This is the movement in RWAs as a result of the disposal or acquisition of business operations. This can be whole businesses or parts of a business. The movement in RWAs is quantified based on the credit risk exposures as at the end of the month preceding a disposal or following an acquisition.

3. Model updates

New/updated models
RWA movements arising from the implementation of new models and from changes to existing parameter models are allocated to this driver. This figure will also include changes which arise following review of modelling assumptions. Where a model recalibration reflects an update to more recent performance data, the resulting RWA changes are not assigned here, but instead reported under book quality.

RWA changes are estimated based on the impact assessments made in the testing phase prior to implementation. These values are used to simulate the impact of new or updated models on the portfolio at the point of implementation, assuming there were no major changes in the portfolio from the testing phase to implementation phase.

Portfolios moving onto IRB approach
Where a portfolio moves from the standardised approach to the IRB approach, the RWA movement by key driver statement shows the increase in IRB RWAs, but does not show the corresponding reduction in standardised approach RWAs as its scope is limited to IRB only.

The movement in RWAs is quantified at the date at which the IRB approach is applied, and not during the testing phase as with a new/updated model.

4. Methodology and policy

Internal updates
This captures the RWA impact resulting from changing the internal treatment of exposures. This may include, but is not limited to, identification of netting and credit risk mitigation.

External updates
This specifies the impact resulting from additional or changing regulatory requirements. This includes, but is not limited to, regulatory-prescribed changes to the RWA calculation. The movement in RWAs is quantified by comparing the RWAs calculated for that portfolio under the old and the new requirements.

5. Book size

RWA movements attributed to this driver are those we would expect to experience for the given movement in exposure, as measured by EAD, assuming a stable risk profile. These RWA movements arise in the normal course of business, such as growth in credit exposures or reduction in book size from run-offs and write-offs.

The RWA movement is quantified as follows:

- RWA and EAD changes captured in the four drivers above are excluded from the total movements to create an adjusted movement in EAD and RWA for the period.
- The average RWA to EAD percentage is calculated for the opening position and is applied to the adjusted movement in EAD. This results in an estimated book size RWA movement based on the assumption that the EAD to RWA percentage is constant throughout the period.

As the calculation relies on averaging, the output is dependent upon the degree of portfolio aggregation and the number of discrete time periods for which the calculation is undertaken. For each quarter of 2012 this calculation was performed for each HSBC company with an IRB portfolio, split by the main Basel categories of credit exposures, as described in the table below:

Basel categories of IRB credit exposures within HSBC		
Central governments and central banks	Corporate foundation IRB	Qualifying revolving retail exposures
Institutions	Other advanced IRB	Retail SME
Corporate advanced IRB	Retail mortgages	Other retail

The total of the results is shown in book size within the RWA movement by key driver table.

6. Book quality

This represents RWA movements resulting from changes in the underlying credit quality of customers. These are caused by changes to IRB risk parameters which arise from actions such as, but not limited to, model recalibration, change in counterparty external rating, or the influence of new lending on the average quality of the book. The change in RWAs attributable to book quality is calculated as the balance of RWA movements after taking account of all drivers described above.

The RWA movement by key driver statement includes only movements which are calculated under the IRB approach. Certain classes of credit risk exposure are treated as capital deductions and therefore reductions are not shown in this statement. If the treatment of a credit risk exposure changes from RWA to capital deduction in the period, then only the reduction in RWAs would appear in the RWA movement by key driver tables. In this instance, a reduction in RWAs does not necessarily indicate an improvement in the capital position.

Market risk drivers – definitions and quantification

The RWA movement by key driver for market risk combines the credit risk drivers 5 and 6 into a single driver called ‘Movements in risk levels’. The market risk RWA driver called ‘Foreign exchange movements and other’ includes foreign exchange movements and additional items which can not be reasonably assigned to any of the other drivers.

Basis of preparation of the estimated effect of the CRD IV end point applied to the 31 December 2012 position.

(Unaudited)

The table on page 289 presents a reconciliation of our reported core tier 1 and RWA position at 31 December 2012 to the pro-forma estimated CET1 and estimated RWAs based on the Group’s interpretation of the draft July 2011 CRD IV legislation and/or guidance provided by the FSA and, in lieu of guidance, our current expectation of how these draft 2011 rules will be updated by subsequent EU deliberations.

CRD IV has not yet become law and its provisions are subject to on-going negotiation and amendment. In addition, formal Implementing Technical Standards (‘ITS’) due for issue by the EBA are still to be drafted and finalised, leaving the CRD IV rules subject to significant interpretation. Despite the uncertainty around a number of areas in the rules, our disclosures are based on the draft July 2011 CRD IV text. Pending finalisation of CRD IV, we have not definitively upgraded the models and systems used to calculate capital numbers in a CRD IV environment which, as a consequence, are subject to change. Consequently, the final CRD IV impact on the Group’s CET1 and RWAs may be different from our current estimates.

The detailed basis of preparation is described below for items that are different from our current treatment under Basel II. For individual immaterial holdings in banks, financial institutions and insurance that are, in aggregate, above 10% of the Group’s CET1 capital, we have included specific short term management actions that could be taken to negate the capital deduction. For other CRD IV proposals, additional management actions could also be taken dependent upon the finalised rules and timing of implementation but, as such, have not been included.

Regulatory adjustments applied to core tier 1 in respect of amounts subject to CRD IV treatment

Investments in own shares through the holding of composite products of which HSBC is a component (exchange traded funds, derivatives, and index stock): the value of our holdings of own CET1 instruments, where it is not already deducted under IFRSs, is deducted from CET1. Under CRD IV, deduction comprises not only direct but also indirect, actual and contingent, banking and trading book gross long positions. Trading book positions are calculated net of short positions only where there is no counterparty credit risk on these short positions (this restriction does not apply to index positions). We have not recognised the benefit of non-index short positions, even where they are executed with central counterparties or are fully collateralised. Under current rules, there is no regulatory adjustment made on the amounts already deducted under IFRS rules.

Surplus non-controlling interest disallowed in CET1: non-controlling interests arising from the issue of common shares by our banking subsidiaries receive limited recognition. The excess over a minimum of 7% of the CET1 of the relevant subsidiary is not allowable in the Group’s CET1 to the extent it is attributable to minority shareholders. Under current rules, there is no regulatory restriction applied to these items.

Unrealised gains/(losses) on available-for-sale debt securities: under CRD IV, there is no adjustment to remove from CET1 capital unrealised gains and losses on available-for-sale debt securities. Under current FSA rules, these are removed from capital (net of tax).

Unrealised gains on available-for-sale equities and reserves arising from revaluation of property: there is no adjustment for unrealised gains and losses on reserves arising from the revaluation of property and on available-for-sale equities. Under current FSA rules, unrealised net gains on these items are included in tier 2 capital (net of deferred tax) and net losses are deducted from tier 1 capital.

Defined benefit pension fund liabilities: the amount of retirement benefit liabilities as reported on the balance sheet is fully recognised in CET1 rather than being replaced by any committed funding plans as current FSA rules permit.

Excess of expected losses over impairment allowances deducted 100% from CET1: the amount of excess expected loss over impairment allowance is deducted 100% from CET1. Under current FSA rules, this amount is deducted 50% from core tier 1 (‘CT1’) and 50% from total capital.

Removal of 50% of tax credit adjustment for expected losses: the amount of expected losses in excess of impairment allowances that is deducted from CET1 capital is not reduced for any related tax effects. Under current FSA rules, any related tax credit offset is recognised 50% in CT1 and 50% in tier 1 capital.

Securitisation positions risk-weighted under CRD IV: securitisation positions that were deducted from core tier 1 under current rules have been included in RWAs at 1,250%.

Deferred tax liabilities on intangibles: the amount of intangible assets deducted from CET1 has been reduced by the related deferred tax liability. Under current rules, the goodwill and intangibles are deducted at their accounting value.

Deferred tax assets that rely on future profitability (excluding those arising from temporary differences): the deferred tax assets that rely on future profitability and do not arise from temporary differences are deducted 100% from CET1. The deferred tax assets that rely on future profitability and arise from temporary differences are subject to the separate threshold deduction approach detailed separately. Under current rules, these items receive a risk weighting of 100%.

Additional valuation adjustment (referred to as prudent valuation adjustment or 'PVA'): under current FSA rules, banks are required to comply with requirements for prudent and reliable valuation of any balance sheet position measured at market or fair value. Under CRD IV, all assets and derivatives measured at fair value are subject to specified standards for prudent valuation, covering uncertainty around the input factors into the fair value valuation models – namely, uncertainty around the mark to market of positions, model risk, valuation of less liquid positions and credit valuation adjustments ('CVA').

Where the accounting fair value calculated under IFRS is higher than the valuation amount resulting from the application of the prudential adjustments, this would result in an additional valuation adjustment or PVA deduction from common equity tier 1 capital.

Following FSA direction, we have included an estimate of the impact of PVA, although there is guidance outstanding following a recent consultation on a related EBA draft regulatory technical standard issued on 13 November 2012. Further clarity on the requirements following finalisation of the EBA process and discussions with our regulator could potentially change this figure.

Debit valuation adjustment ('DVA'): the amount of gains and losses on OTC derivative liabilities that results from changes to our own credit spread are derecognised from CET1.

Individually immaterial holdings in CET1 capital of banks, financial institutions and insurance in aggregate above 10% of HSBC CET1: under CRD IV, the investments in CET1 instruments of banks, financial institutions and insurance entities, where we have a holding of not more than 10% of the CET1 instruments issued by those entities, are deducted from CET1, to the extent the aggregate amount of such holdings exceeds 10% of our CET1 (calculated before any threshold deductions).

The estimated deduction follows the draft July 2011 CRD IV rules and guidance provided by the FSA, which impose a restriction on the netting of long and short positions held in the trading book, whereby the maturity of the short positions has to match the maturity of the long position, or have a residual maturity of no less than a year.

While rules are in draft and this aspect is still being debated, we have disclosed the impact of the rules as written. However, a range of management actions from adjustment to the hedging strategy, curtailment or closure of the business could be applied to mitigate the capital deduction.

Deductions under threshold approach: under CRD IV, where we have a holding of more than 10% of the CET1 instruments issued by banks, financial institutions and insurance entities which is not part of our regulatory consolidation, that holding is subject to a threshold deduction approach. Under current rules, these exposures are deducted 50% from tier 1 capital and 50% from total capital, except for certain insurance holdings that met the requirements under the transitional provision of the current rules and until 31 December 2012 were allowed to be deducted 100% from total capital.

Deferred tax assets that rely on the future profitability of the bank to be realised and which arise from temporary differences are also subject to this threshold deduction approach. Under current rules, these assets would be subject to 100% risk weighting.

Under CRD IV, the amount of such deferred tax assets and significant investments which individually and in aggregate exceed 10% and 15%, respectively, of our CET1 are fully deducted from CET1 capital. Amounts falling below the 10% and 15% thresholds are risk weighted at 250%.

Changes to capital requirements introduced by CRD IV

Credit valuation adjustment: introduced as a new requirement under CRD IV rules, this is a capital charge to cover the risk of mark-to-market losses on expected counterparty risk and referred to as a regulatory CVA risk capital charge.

We have estimated our regulatory CVA risk capital charge based on the draft July 2011 CRD IV text, calculated on a full range of OTC derivative counterparties without exemptions that may be available under the final CRD IV text. Where we have both specific risk VAR approval and internal model method approval for a product, the CVA VAR approach has been used to calculate the CVA capital charge. Where we do not hold both approvals, the standardised approach has been applied.

Counterparty credit risk (other than credit valuation adjustment): the additional requirements introduced by CRD IV and included in the CCR charge include: the increase in the asset value correlation multiplier for financial counterparties, additional requirements for collateralised counterparties, margin period of risk and new requirements for exposures to central clearing counterparties ('CCPs').

In estimating the amount included for CCPs, we have assumed that all our CCPs are 'qualifying' under the requirements of CRD IV, although this will ultimately depend on confirmation from the competent regulatory authority of the CCP in question that the CCP complies with all the recommendations for CCPs published by the Committee on payment and settlement systems and by the technical committee of the International Organisation of Securities Commissions. Where we do not have full data disclosed for a given CCP, we have assumed full deduction of default fund exposures.

Amounts in aggregate below 15% threshold and therefore subject to 250% risk weight: as explained above, items that fall under the threshold approach treatment under CRD IV, and which are below the 10% and 15% thresholds, are risk-weighted at 250%.

Securitisation positions and free deliveries risk-weighted under CRD IV: securitisation positions which were deducted 50% from core tier 1 and 50% from total capital, and free deliveries that were deducted from total capital under current rules, are now included in RWAs at 1,250%.

Investment in commercial entities now risk-weighted: under CRDIV investments in commercial entities that are not qualifying holdings are risk weighted. These were deducted under the current rules.

Deferred tax assets moved to threshold approach or deduction under CRD IV: deferred tax assets, which were risk-weighted at 100% under the standardised approach under current rules, are treated as a capital deduction from CET1 to the extent they rely on the future profitability of the bank to be realised. Those that do not rely on future profitability shall continue to be risk weighted.