Report of the independent auditors to the members of HSBC Holdings plc

Report on the financial statements[1]

Our opinion on the financial statements

In our opinion HSBC Holdings plc's ('HSBC') Group financial statements and Parent Company financial statements:

- give a true and fair view of the state of the Group's and Parent Company's affairs at 31 December 2015 and of the Group's and Parent Company's profit and cash flows for the year then ended;
- have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union ('IFRS'); and
- have been prepared in accordance with the requirements of the Companies Act 2006, and as regards the Group financial statements, Article 4 of the IAS Regulation.

Performing the audit

On behalf of PricewaterhouseCoopers LLP ('PwC'), it is my responsibility to form these opinions. This was the first year that you have appointed PwC as HSBC's auditors, and I have therefore provided more information on how PwC prepared for the audit together with an explanation of the audit approach applied and details of the significant discussions on accounting issues I, and my colleagues, have had with the Group Audit Committee ('GAC').

Preparing to change auditors

Before commencing audit work in September 2014, PwC member firms, their partners and staff took 12 months to ensure that we were independent of HSBC. This involved ceasing commercial relationships and changing financial arrangements for our partners and more than 2,000 staff who work on the audit of HSBC and its subsidiaries worldwide. During this period, members of my team took the opportunity to meet with HSBC's management team to understand the issues faced by the business, and to gather information which we required to plan our audit.

From September 2014 and throughout the 31 December 2014 year-end process, we worked alongside the former auditors, attending their key meetings with HSBC and understanding the complex or significant audit judgements which they made. We also observed the GAC and Group Risk Committee meetings and met with the primary regulators of HSBC.

In September 2014, I chaired a two day meeting of the partners and staff from PwC member firms who undertake audits of the most significant HSBC subsidiaries. This meeting ensured that we would have one approach to the audit globally, assisted in our determination of the most significant audit risks and provided an opportunity for those partners and staff to hear directly from HSBC management.

We also reviewed the working papers of the former auditors, to help familiarise ourselves with the controls on which they relied for the purposes of issuing their opinion, and to understand the evidence they obtained over key judgements.

How the audit approach was structured

I structured the audit approach to reflect how HSBC is organised. It incorporated four important aspects.

(i) Risk assessment and audit planning at a Group level, having regard to both regions and HSBC's global businesses

In addition to having partners coordinate the audit in each region, I appointed partners for each global business. These global business partners met regularly with the relevant HSBC management to understand strategy and matters which arose throughout the year that could have impacted the financial reporting. These partners are specialists in the nature of the relevant businesses and were best placed to design an appropriate audit approach for that part of HSBC. They oversaw each PwC member firm involved in the audit of that global business and assisted me in my review of their work.

(ii) Audit work performed at global shared service centres

A significant amount of HSBC's operational processes which are critical to financial reporting are undertaken in offshore shared service centres across 11 sites in five countries. Working closely with me, a partner coordinated our audit work on shared service centres, building up an end to end picture of the key processes that supported material balances, classes of transactions and disclosures within the HSBC financial statements. We then evaluated the effectiveness of controls over these processes and considered the implications for the remainder of our audit work.

1 *HSBC Holdings plc's financial statements comprise the consolidated and Parent Company balance sheets as at 31 December 2015, the consolidated and Parent Company income statements and the consolidated statement of comprehensive income for the year then ended, the consolidated and Parent Company cash flow statements for the year then ended; the consolidated and Parent Company statements of changes in equity for the year then ended, and the notes to the financial statements, which include a summary of significant accounting policies and other explanatory information.*

(iii) Audit work executed on individual legal entities

We received opinions from PwC member firms which had been appointed as the external auditors of The Hongkong and Shanghai Banking Corporation Limited, HSBC Bank plc, HSBC North America Holdings Inc, HSBC Mexico S.A., HSBC Bank Brasil S.A. – Banco Multiplo, HSBC Vida e Previdência (Brasil) S.A., HSBC Bank Argentina S.A., HSBC Bank Middle East Limited, HSBC Bank Canada, HSBC Private Banking Holdings (Suisse) S.A. and HSBC Insurance (Bermuda) Limited. I was in active dialogue throughout the year with the partners responsible for these audits; this included consideration of how they planned and performed their work. I visited most of these subsidiaries since HSBC's decision to appoint PwC as auditor, as well as businesses in a further 7 countries. I also attended meetings with management in each of these key subsidiaries at the year end.

The audits of these key subsidiaries relied upon work performed by PwC member firms in Germany, France, Turkey, Malta, China, India, Australia, Qatar, Oman, the UAE and Bahrain. I considered how my subsidiary audit teams instructed and reviewed the work undertaken in these locations in order to ensure the quality and adequacy of the work. Collectively, these teams completed procedures covering 81% of total assets, 77% of total operating income and 88% of profit before tax.

(iv) Audit procedures undertaken at a Group level and on the Parent Company.

I ensured that appropriate further audit work was undertaken for HSBC as the Parent Company. This work included auditing, for example, the consolidation of the Group's results, the preparation of the financial statements, certain disclosures within the Directors remuneration report, litigation provisions and exposures and management's entity level and oversight controls relevant to financial reporting.

In aggregate, these four areas provided me with the evidence required to form an opinion on the consolidated financial statements of HSBC.

The purpose and scope of my audit

An audit has an important role in providing confidence in the financial statements that are provided by companies to their members. The audit opinion does not provide assurance over any particular number or disclosure, but over the financial statements taken as a whole. It is the Directors' responsibility to prepare the financial statements and to be satisfied that they give a true and fair view. These responsibilities have been recognised on behalf of the Board of Directors on page 322.

The scope of an audit is sometimes not fully understood. I believe that it is important that you understand the scope in order to understand the assurance that my opinion provides. My responsibility is to undertake my work and express my opinion in accordance with applicable law and the International Standards on Auditing (UK and Ireland) as issued by the Financial Reporting Council of the United Kingdom. These standards also require me to comply with the APB's Ethical Standards for auditors. A description of the scope of an audit is provided on the Financial Reporting Council's website at www.frc.org.uk/auditscopeukprivate; I recommend that you read this description carefully. It is also important that you understand the inherent limitations of the audit which are disclosed in the description, for example the possibility that an approach based upon sampling and other audit techniques may not identify all issues.

In order for me to perform my work, I had regard to the concept of materiality. I have determined materiality as follows:

Overall Group materiality	$1,050m.
How I determined it	5% of adjusted profit before tax excluding the debt valuation adjustment and non-qualifying hedges.
Why I believe this is appropriate	Given the geographically dispersed nature of HSBC and the diversity of its banking activities, I believe a standard benchmark of 5% of adjusted profit before tax is an appropriate quantitative indicator of materiality, although of course an item could also be material for qualitative reasons. I selected adjusted profit before tax, because as discussed on page 48, management believes it best reflects the performance of HSBC. I excluded the debt valuation adjustment and non-qualifying hedges as they are recurring items.

When planning the audit, I considered if multiple errors may exist which, when aggregated, could exceed $1,050m. In order to reduce the risk of multiple errors which could aggregate to this amount I used a lower level of materiality, known as performance materiality, of $788m to identify the individual balances, classes of transactions and disclosures that were subject to audit. I asked each of the partners reporting to me on the subsidiaries of HSBC to work to assigned materiality levels reflecting the size of the operations they audited. These ranged from $67m (HSBC Mexico S.A.) to $840m (The Hongkong and Shanghai Banking Corporation Limited).

Where the audit identified some items that were not reflected appropriately in the audited financial information, I considered these items carefully to assess if they were individually or in aggregate material. I reported any such items which exceeded $50m to the GAC, who were responsible for deciding whether adjustments should be made to the financial statements in respect of those items. The Directors have concluded that all items which remained unadjusted were not material to the financial statements, either individually or in aggregate. I agree with their conclusion.

Matters discussed with the GAC

I attended each of the seven GAC meetings held during the year. Part of each meeting involved a discussion with me without management present. I also met with members of the Committee on an ad hoc basis. During these various conversations we discussed my observations on a variety of accounting matters, and initial observations on controls over financial reporting.

In November 2014, the Committee held a special meeting to understand and challenge the audit plan. The plan included the matters which I considered presented the highest risk to the audit and other information on our audit approach such as our approach to the audit of journals, interest income and financial instrument valuation, and where the latest technology would be used to obtain better quality audit evidence.

The areas of highest risk to the audit and where I focused most effort and resource, were:

- Access to technology applications and data
- Carrying value of goodwill
- Application of hedge accounting
- Impairment of loans and advances
- Litigation and conduct
- Investment in Bank of Communications Co., Ltd (‘BoCom’)
- Impact of the deferred prosecution agreement (‘DPA’)
- Recoverability of deferred tax assets.

To help you understand their impact on the audit, I have listed them in order of decreasing audit effort. Some of them are common with other international banks, and some are specific to HSBC. I have included at the end of this report an explanation of each item, why it was discussed and how the audit approach was tailored to address the concerns.

Going concern

The Directors have made a statement on page 277 regarding going concern. This statement is based on their belief that the Group and Parent Company intend to, and have sufficient resources to remain in business for 12 months from the date of this report. I am required to review this statement, and in doing so I have considered HSBC’s budgets, cash flows, capital plan and stress tests. I have nothing to report as a result of my review. I also have nothing material to add or draw attention to in relation to the statement.

Other reporting

The *Annual Report and Accounts* also contains a considerable amount of other information that is required by various regulators or standard setters. In respect of this information my responsibilities and my reporting are set out in the table below.

Area of the *Annual Report and Accounts 2015*	My responsibility	My reporting
Directors Remuneration Report on pages 285 to 321		
Those parts of which are clearly marked as audited.	Consider whether the information is properly prepared.	In my opinion, this information has been properly prepared in accordance with the Companies Act 2006.
Other remuneration report disclosures.	Consider whether certain other disclosures specified by the Companies Act have been made.	The other required disclosures have been made.
Other areas		
Strategic Report and the Directors' Report.	Consider whether they are consistent with the audited financial statements.	In my opinion, the information in these reports is consistent with the audited financial statements.
Viability statement on page 277 which considers the longer term sustainability of the Group's business model.	Review the statement in the light of the knowledge gathered during the audit.	I have nothing material to draw attention to or to add to the statement.
Directors' confirmation of their robust assessment of principal risks, and disclosures describing those risks and how they are managed or mitigated on page 278.	Review the confirmation and description in the light of the knowledge gathered during the audit.	I have nothing material to draw attention to or to add to the confirmation or description.
GAC Report on page 262.	Consider whether it deals appropriately with those matters that I reported to the GAC.	No exceptions to report.
Directors' statement (on page 322) that they consider the HSBC *Annual Report and Accounts 2015*, taken as a whole, to be fair, balanced and understandable and provides the information necessary for you to assess HSBC's performance, business model and strategy.	Consider whether any information found during the course of the audit would cause me to disagree.	No disagreements to report.
Corporate governance report (on pages 249 to 284).	Review the remaining 10 provisions of the UK Corporate Governance Code specified for our review by the UK Listing Rules.	Nothing to report following our review.
All other information in the *Annual Report* aside from the audited financial statements.	Consider whether it is materially inconsistent or materially incorrect based on the knowledge gained in my audit, or otherwise misleading. Consider whether it is materially inconsistent with the audited financial statements.	No exceptions to report.

In addition, I am required to report to you if:

- I have not received all of the information and explanations required for my audit;
- Adequate accounting records have not been kept by the Parent Company;
- Returns adequate for my audit have not been received from branches not visited by PwC;
- The Parent Company financial statements and the audited part of the Directors' Remuneration Report do not agree with the accounting records and returns.

I have no exceptions to report as a result of any of these responsibilities.

Use of this report

This report, including the opinions, has been prepared for and only for you, the Parent Company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006, and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come except where expressly agreed by our prior written consent.

Richard Oldfield *(Senior Statutory Auditor)*
for and on behalf of **PricewaterhouseCoopers LLP**
Chartered Accountants and Statutory Auditors
London, United Kingdom

22 February 2016

Appendix: Matters discussed with the Group Audit Committee (‘GAC’)

Those areas which presented the greatest risk of material misstatement in the financial statements are required to be discussed with the GAC. They had the greatest effect on the audit, including the allocation of resources and effort and are discussed below together with an explanation of how the audit was tailored to address these specific areas. The first table indicates which segments and businesses were impacted by the matters discussed.

This is not a complete list of all risks identified by the audit.

		Segments				Global businesses			
Matters discussed	**Group wide**	**Europe**	**Asia**	**North America**	**Latin America**	**RBWM**	**CMB**	**GB&M**	**GPB**
IT access management	✓								
Goodwill and intangible assets		✓		✓	✓			✓	✓
Application of hedge accounting		✓		✓				✓	
Impairment of loans and advances		✓		✓	✓	✓	✓		
Litigation and conduct		✓		✓		✓	✓	✓	✓
Investment in BoCom			✓				✓		
Impact of the DPA	✓								
Recoverability of deferred tax assets				✓	✓				

IT access management

Nature of the area of focus	Matters discussed with the GAC
Access rights to technology are provided to individuals in order to support their specific roles. These rights are important because they ensure that changes to applications and data are authorised and made in an appropriate manner. Ensuring staff only have appropriate access, and that the access is monitored, are key controls to mitigate the potential for fraud or error as a result of a change to an application or underlying data. During the year, it was identified that controls over access rights to operating systems, applications, and data used in the financial reporting process required improvement to ensure that access was sufficiently monitored, restricted or segregated. All banks are highly dependent on technology due to the significant number of transactions that are processed daily. The audit approach relies extensively on automated controls and therefore procedures are designed to test access and control over IT systems. As a consequence of the control findings, the assessed risk of a material misstatement arising from access to technology was changed to significant. The audit approach was modified, with the extent of testing increased substantially to obtain the necessary evidence that a material error or fraud remained undetected.	A specific pre-year end GAC meeting was held to discuss the control issues identified, and to agree a response. A revised audit approach and plan was presented along with examples of how the application and database findings impacted specific products transacted by HSBC. At the GAC meeting held prior to approving the *Annual Report and Accounts 2015,* a summary of the findings of the audit work was discussed, together with a consideration of the additional work performed by management to address the issues identified. This included the work undertaken to evidence that access was not used inappropriately, and also detective controls which operated at many levels within HSBC to prevent a material error or fraud remaining undetected.

Procedures performed to support our discussions and conclusions

Access rights were tested over the various aspects of technology relied upon for financial reporting. Specifically, the audit tested that:

- new access requests for joiners were properly reviewed and authorised;
- application user access rights were removed on a timely basis when an individual left or moved role; and
- access rights to applications were periodically monitored for appropriateness.

Other areas that were independently assessed included password policies, security configurations, controls over changes to applications and databases and that business users, developers and production support did not have access to change applications, the operating system or databases in the production environment.

As a consequence of the findings that were identified a range of other procedures were performed;

- Where possible, the extent of inappropriate access was identified and the changes made with this access assessed to determine that they were appropriate.
- Automated controls in applications impacted were considered as manual, and therefore tested on multiple occasions rather than once.
- Additional substantive testing was performed on the year-end balance sheet and income statement where this was deemed to be effective.
- Where possible, testing was performed on other compensating controls or processes not impacted by systems.
- A list of users with access to systems was obtained and manually compared to other access lists where segregation of duties was deemed to be of higher risk, for example within GB&M.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Effectiveness of internal controls, page 277.

Goodwill and intangible assets

Nature of the area of focus	Matters discussed with the GAC
Goodwill of $16.3bn has arisen from a number of historic acquisitions. The largest balances are in Europe, North America and Latin America. An assessment is required annually to establish whether this goodwill should continue to be recognised, or if any impairment is required. The assessment was performed for each global business within a region, which is the lowest level at which HSBC could allocate and assess goodwill, which is referred to as a cash generating unit ('CGU'). The impairment assessment relied on the calculation of a value-in-use for each of the CGUs. This calculation was based on estimated future cash flows for each CGU discounted at an appropriate cost of equity rate. HSBC used its Annual Operating Plan as the basis for the first 5 years of cash flows and then extrapolated returns into perpetuity using a terminal growth factor. Cost of equity discount rates were based on the investment rates used within the global business and approved by the Board of Directors. The estimation of future cash flows and the level to which they are discounted is inherently uncertain and requires significant judgement. The extent of judgement and the size of the goodwill, resulted in this matter being identified as an area of audit focus.	The judgements used by management were most important when the calculated value-in-use was close to the carrying value of the CGU. Reasonably possible alternative assumptions were considered to identify those CGU's which were most sensitive to a change in value in use. During the third quarter, goodwill for GB&M in North America, Latin America and Europe, together with the Global Private Bank in Europe were of most interest in the discussion with the GAC as these four CGUs have low levels of headroom as a proportion of carrying value. Subsequently, at 31 December the goodwill for Global Private Bank Europe and GB&M North America was retested as a result of indications of impairment being present. The discussion with the GAC focused on the key assumptions, both individually and when combined together. During these discussions, management confirmed their view that the forecasts for each CGU remained appropriate. As disclosed on page 410, a small deterioration in either performance or long term growth forecasts, or an increase in the discount rate may lead to impairment in one or more of the CGUs identified.

Procedures performed to support our discussions and conclusions

- PwC's independent valuation experts critically assessed the discount rate and terminal growth rates used in the discounted cashflow models. The critical challenge was focused on the methodology used to reconcile the discount rates used by each CGU to the overall calculated cost of capital for HSBC; and whether the use of the country GDP growth rates was the most appropriate in determining the terminal growth of cash flows for each CGU.
- The calculations used in the model were re-performed to check accuracy and the key inputs in the model were agreed to approved sources.
- Management's strategic cash flow forecasts used in the model were assessed by:
  - testing that the forecasts agreed to the 2015 Annual Operating Plan, which had been approved by the Board of Directors and considering how plans announced in HSBC's strategy update to investors on 9 June 2015 impacted that plan. For Global Private Banking Europe and GB&M North America flows in the forecasted 2016 Annual Operating Plan were agreed to the retest of impairment at 31 December;
  - considering current year performance against plan and the reasons for any deviation. This was discussed with management of the Global Businesses for each sensitive CGU; and
  - reviewing the historical achievement of the Annual Operating Plan. Given the uncertainties in forecasting, this identified that forecasts have been less accurate for prior periods, and we considered if this was appropriately factored into the discount rates used.
- Independent sensitivity analysis was performed, making adjustments to a number of modelled assumptions simultaneously to identify any further CGUs with a risk of impairment. This identified more CGU's requiring consideration than initially identified by management.
- The appropriateness of disclosures made in relation to goodwill was also reviewed.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Note 20: Goodwill and intangible assets, page 406.

Application of hedge accounting

Nature of the area of focus	Matters discussed with the GAC
To qualify for hedge accounting, certain criteria must be met including documenting the nature and purpose of the hedge and performing regular testing over its effectiveness. Due to the complex nature of the hedge accounting rules this is often an area of significant risk for banks. However, given the nature of HSBC's business we initially believed the risk to be lower. The audit testing identified a number of instances where hedge accounting was applied, but the accounting rules had not been adequately met. This led to the disqualification for hedge accounting purposes of some macro cash flow hedges in the UK, France and Canada. As a result of these findings, management instigated a full review of all hedge accounting relationships. The audit risk associated with hedge accounting was reassessed to be significant for certain hedges, and the extent of testing increased.	The disqualified hedges resulted in an immaterial adjustment to the income statement. A discussion was held with the GAC about whether the adjustment would have been more appropriate to 2014. Due to the size of the adjustment it was concluded that the adjustment should be recognised in 2015. The control implications of the findings were also discussed. A project team was established by management, which regularly reported progress and proposed a revised control structure be established.

Procedures performed to support our discussions and conclusions

- Material macro cash flow hedge documentation was examined and the relationships assessed to determine if the hedges had been appropriately designated. This included consideration of the hedge objectives and specific compliance with IFRS.
- A sample of all other hedging relationships was examined and the relationships assessed to determine if they had been appropriately designated. This included consideration of the hedge objectives and specific compliance with IFRS.
- Management's hedge effectiveness reviews, and the measurement and recording of hedge ineffectiveness, were tested for a sample of hedge relationships.
- Understood and tested controls over the documentation and review of the hedge relationships and their initial and ongoing effectiveness.
- Examined the output from management's review of hedge accounting relationships.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Note 16: Derivatives, page 394.

Impairment of loans and advances

Nature of the area of focus	Matters discussed with the GAC
Impairment allowances represent management's best estimate of the losses incurred within the loan portfolios at the balance sheet date. They are calculated on a collective basis for portfolios of loans of a similar nature and on an individual basis for significant loans. The calculation of both collective and individual impairment allowances is inherently judgemental for any bank. Collective impairment allowances are calculated using statistical models which approximate the impact of current economic and credit conditions on large portfolios of loans. The inputs to these models are subject to management judgement and model overlays are often required. For specific impairments, judgement is required to determine when an impairment event has occurred and then to estimate the expected future cash flows related to that loan. The audit was focused on impairment due to the materiality of the balances and the subjective nature of the calculation. The largest loan portfolios are in Europe and Asia. The most significant impairment allowances are in Europe, North America and Latin America.	The policies and methodologies used by HSBC were discussed with the GAC. The impairment policies and practices applied are consistent with the requirements of IFRS. The methodologies used to calculate collective impairment allowances are relatively standard which means that modelling risk is low but that changes in individual inputs can have a significant bearing on the impairment charge. The discussion covered positive observations around the governance supporting changes to model inputs and our observations on suggested enhancements to documentation. At each GAC and Group Risk Committee meeting there was a discussion on changes to risk factors and other inputs within the collective allowance models as well as discussions on individually significant loan impairments. In light of the further deterioration in the spot price of oil, a specific discussion on the exposures to the oil and gas sector was held with GAC at the year end. This discussion considered the appropriate treatment of the Group's exposure within the collective impairment calculation and the additional $0.2bn increase at the year-end.

Procedures performed to support our discussions and conclusions

- The controls management has established to support their collective and specific impairment calculations were tested.
- For collective impairment this included controls over the appropriateness of models used to calculate the charge, the process of determining key assumptions and the identification of loans to be included within the calculation.
- For specific impairment charges on individual loans this included controls over the compilation and review of the credit watch list, credit file review processes, approval of external collateral valuation vendors and review controls over the approval of significant individual impairments.
- For collective allowances the appropriateness of the modelling policy and methodology used for material portfolios was independently assessed by reference to the accounting standards and market practices and model calculations were tested through re-performance and code review.
- The appropriateness of management's judgements was also independently considered in respect of calculation methodologies and segmentation, economic factors and judgemental overlays, period of historical loss rates used, loss emergence periods, cure rates for impaired loans and the valuation of recovery assets and collateral.
- For specific allowances the appropriateness of provisioning methodologies and policies was independently assessed for a sample of loans across the portfolio selected on the basis of risk. An independent view was formed on the levels of provisions booked based on the detailed loan and counterparty information in the credit file. Calculations within a sample of discounted cash flow models were re-performed.

Relevant references in the *Annual Report and Accounts 2015*

Impaired loans, page 128.

Areas of special interest, page 116.

GAC Report, page 262.

Note 1 (j): Impairment of loans and advances, page 354.

Litigation and conduct

Nature of the area of focus	Matters discussed with the GAC
HSBC, like other global banking institutions, is exposed to a significant number of open legal cases and regulatory investigations in a number of its markets. Given the business is geographically dispersed, the same matter could be subject to investigation in multiple jurisdictions. Provisions of $4.5bn have been established to account for legal settlements, regulatory fines, customer redress payments and related operational costs. The most significant provisions relate to Payment Protection Insurance, *Jaffe vs Household Inc*, tax-related investigations and Foreign Exchange market manipulation. There is an inherent risk that conduct and legal exposures are not identified and considered for financial reporting purposes on a timely basis. Importantly, the decision to recognise a provision and the basis of measurement are judgemental.	Each material provision was discussed with the GAC when established or changed, including whether HSBC's policy had been applied in an appropriate manner. A number of other matters, for which provisions were not established, were discussed to ensure the appropriateness of that decision. Specifically: **Legal cases:** Group Legal provided to each GAC meeting an update on the status of legal cases. Material matters were discussed during the meeting and the need for changes to provisions considered. These discussions considered whether all related litigation or investigations about a specific matter had been identified. **Customer redress payments:** The most significant provision has been in relation to PPI. The change in approach to the provision as a result of the FCA consultation paper released in November 2015 was discussed, as well as the judgements made to reflect ongoing claim history.

Procedures performed to support our discussions and conclusions

- Controls designed to ensure the completeness and adequacy of current legal and regulatory provisions were tested. Regulatory correspondence from material markets was also read, and a sample of legal expenses were reviewed.
- Open legal cases were discussed with Group Legal and in certain instances we obtained and reviewed the relevant regulatory and litigation documents in order to assess the facts and circumstances.
- The range of reasonably possible outcomes was considered for material provisions to independently assess the appropriateness of the judgement made by HSBC.
- The disclosures of conduct and legal exposures and provisions were assessed for completeness and accuracy.
- For customer redress, the provisioning models and underlying assumptions used, were independently assessed. For example, for PPI the inputs examined included customer complaint volumes and response rates. For the material models testing was performed to check that the models were maintained appropriately and relevant calculations within the models were re-performed.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Note 29: Provisions, page 421.

Note 40: Legal proceedings and regulatory matters, page 445.

Investment in BoCom

Nature of the area of focus	Matters discussed with the GAC
HSBC holds 19.03% of the listed equity of BoCom. This investment is accounted for as an associate using the equity method, because of the significant influence that comes from the shareholding. At 31 December, the market value of the investment based on the share price ($9.9bn), was below the carrying value of the investment ($15.3bn). This is considered an indicator of potential impairment under IFRS. An impairment test was performed by HSBC using a value in use model to estimate the investment's value assuming the investment continues to be held rather than sold ($17.0bn). On this basis no impairment was required and the share of BoCom's profits has been recognised in the income statement. The many assumptions used in the model to estimate future profits attributable to HSBC are derived from a combination of analysts' forecasts and management's best estimates and are highly judgemental.	The critical assumptions used by HSBC in the model were discussed with the GAC. For each assumption an independent view was provided of the range of possible alternative inputs that could have been used. The discussion focussed on the long term loan impairment charge ratio and the long term growth rate. These are difficult to substantiate and require management to form a view on future growth in China as well as BoCom's potential future impairment charges.

Procedures performed to support our discussions and conclusions

- PwC's independent valuation experts reviewed the appropriateness of the model and the inputs selected to calculate the value in use. They independently recalculated the discount rate applied to the cash flows in the model.
- Inputs used in the determination of assumptions for the calculation of the value in use were agreed back to third-party sources, where available, including external data from analysts' reports.
- The controls in place over the model including security access and end user controls were tested.
- The mathematical accuracy of the model was tested.
- The quarterly meeting between senior BoCom executive management and HSBC held specifically to assess the current performance of the business was observed.
- Disclosures made in relation to BoCom were reviewed.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Note 19: Interests in associates and joint ventures, page 402.

Impact of the DPA

Nature of the area of focus	Matters discussed with the GAC
HSBC and HSBC Bank USA NA entered into a DPA with the US Department of Justice ('DoJ') and Financial Conduct Authority in 2012 regarding non-compliance with the US Bank Secrecy Act, anti-money laundering rules, and sanctions laws. The duration of the DPA is five years. If the DoJ concluded that a breach of the DPA had occurred, there are a number of potential penalties that could be imposed that could have a material adverse effect on HSBC's business. This could include loss of business and withdrawal of funding, restrictions on US dollar clearing functions through HSBC Bank USA or revocation of bank licences. The loss of this ability could have a significant adverse impact on the going concern status of HSBC and its individual subsidiaries in the future.	In considering going concern as the basis of preparation of the financial statements, a discussion was held with the GAC about the progress being made in responding to the requirements of the DPA. The conversation specifically considered the 2015 report of the Monitor. In the report he expressed significant concerns about the pace of progress, instances of potential financial crime and systems and controls deficiencies, whether HSBC is on track to meet its goal to the Monitor's satisfaction within the five-year period and, pending further review and discussion with HSBC, did not certify as to HSBC's implementation of, and adherence to, remedial measures specified in the DPA. Assurances were sought from the Directors that they were not aware of any information to suggest that the DoJ had concluded that the DPA had been breached.

Procedures performed to support our discussions and conclusions

- The likelihood of the DPA being breached and a restriction to US dollar clearing imposed was independently assessed through:
  - Inquiry with the Monitor, whose role is explained on page 116, to understand the status of his work, the outcome of his most recent country reviews, his assessment of management's progress against the requirements of the DPA and his reporting to the DoJ and FCA.
  - Reading the 2015 and 2014 Monitor reports and the 9 country reports issued during the year.
  - Reading the detailed reports produced by the compliance function that undertook testing of controls and processes related to the DPA, and an assessment of the findings.
- Each Group Risk Committee meeting was attended during the year. At each meeting a report was provided by Group Risk on the status of Global Standards Programme, which aims to address all of the DPA recommendations. The related discussion was observed.
- The papers supporting the Financial System Vulnerabilities Committee meeting at the year-end were reviewed. This meeting discussed the 2015 Monitor report and management's response.
- Compliance with the DPA was discussed with Group Legal and other members of senior management.

Relevant references in the *Annual Report and Accounts 2015*

Top and emerging risks, page 43.

Areas of special interest: the Monitor, page 116.

Financial System Vulnerabilities Committee, page 268.

Going concern and viability statements, page 277.

Note 40: Legal proceedings and regulatory matters, page 445.

Recoverability of deferred tax assets

Nature of the area of focus	Matters discussed with the GAC
HSBC has deferred tax assets of $6.1bn as at 31 December 2015, of which $4.5bn relates to the US. A further $1.2bn net deferred assets are included in Assets Held For Sale and relates to Brazil. These assets have arisen because of historic losses, deferred relief for impairment and other temporary differences. An assessment is required as to whether sufficient future taxable profits are likely to be generated to enable the assets to be realised. The estimation of future taxable profits is inherently judgemental, particularly when this extends beyond the normal planning cycle. In the case of Brazil, this is exacerbated by recent performance not being in accordance with plan.	The carrying value of deferred tax assets in Brazil and the US was discussed several times during the year. HSBC updated performance against forecasts to support the continued recognition of the assets and this was considered during GAC meetings. **Brazil**: In light of the disposal of the business discussed on page 416, the appropriate basis on which to assess future taxable profits was discussed. HSBC has considered both the internal strategic plan as well as profits implied by the agreed sales price using the Price/Earnings ratios considered appropriate for Brazilian banks. Whilst performance in 2015 has not been in line with the strategic plan, the implicit profit forecast derived from the sales price provides support for the expected profitability of the business. Sufficient taxable profits to support recognition are expected to be earned within 8 years in the best case scenario and within 13 years in the worst case scenario. **North America**: As at 1 January 2015, the recognition of the US deferred tax asset relied upon capital support from HSBC. Given improved performance and forecasts management considered that it was appropriate to recognise the asset on the basis of future taxable profits. This change led to the recognition of additional deferred tax assets. The change in the basis of recognition, and the increased assets recognised, were discussed with the GAC.

Procedures performed to support our discussions and conclusions

- The application of tax rules was examined to check they had been appropriately applied and that a loss or deductible temporary difference exists.
- Supporting calculations were tested to check that the valuation of the asset is appropriate based on the temporary differences identified and the tax rates applied.
- The basis for management's assessment of recoverability including the profit projections and underlying assumptions and the calculations performed to arrive at taxable profits from these projections, was challenged using our knowledge of the business, future strategy and past performance.
- The appropriateness and validity of tax planning strategies relied upon to support recognition where relevant was assessed.
- The range of reasonably possible alternative outcomes was assessed for the projections in each market.
- The calculation methodology used to determine the implied profits from the sales price achieved for the Brazilian subsidiary was evaluated.
- The completeness and accuracy of the disclosures was also assessed.

Relevant references in the *Annual Report and Accounts 2015*

GAC Report, page 262.

Note 8: Tax, page 369.

Note 23: Assets held for sale and liabilities of disposal groups held for sale, page 416.

Financial Statements

Notes on the Financial Statements

Consolidated income statement

for the year ended 31 December 2015

	Notes	2015 $m	2014 $m	2013 $m
Interest income		**47,189**	50,955	51,192
Interest expense		**(14,658)**	(16,250)	(15,653)
Net interest income		**32,531**	34,705	35,539
Fee income		**18,016**	19,545	19,973
Fee expense		**(3,311)**	(3,588)	(3,539)
Net fee income		**14,705**	15,957	16,434
Trading income excluding net interest income		**6,948**	4,853	6,643
Net interest income on trading activities		**1,775**	1,907	2,047
Net trading income		**8,723**	6,760	8,690
Changes in fair value of long-term debt issued and related derivatives		**863**	508	(1,228)
Net income from other financial instruments designated at fair value		**669**	1,965	1,996
Net income from financial instruments designated at fair value	2	**1,532**	2,473	768
Gains less losses from financial investments		**2,068**	1,335	2,012
Dividend income		**123**	311	322
Net insurance premium income	3	**10,355**	11,921	11,940
Other operating income		**1,055**	1,131	2,632
Total operating income		**71,092**	74,593	78,337
Net insurance claims and benefits paid and movement in liabilities to policyholders	4	**(11,292)**	(13,345)	(13,692)
Net operating income before loan impairment charges and other credit risk provisions		**59,800**	61,248	64,645
Loan impairment charges and other credit risk provisions	5	**(3,721)**	(3,851)	(5,849)
Net operating income		**56,079**	57,397	58,796
Employee compensation and benefits	6	**(19,900)**	(20,366)	(19,196)
General and administrative expenses		**(17,662)**	(18,565)	(17,065)
Depreciation and impairment of property, plant and equipment		**(1,269)**	(1,382)	(1,364)
Amortisation and impairment of intangible assets	20	**(937)**	(936)	(931)
Total operating expenses		**(39,768)**	(41,249)	(38,556)
Operating profit	5	**16,311**	16,148	20,240
Share of profit in associates and joint ventures	19	**2,556**	2,532	2,325
Profit before tax		**18,867**	18,680	22,565
Tax expense	8	**(3,771)**	(3,975)	(4,765)
Profit for the year		**15,096**	14,705	17,800
Profit attributable to shareholders of the parent company		**13,522**	13,688	16,204
Profit attributable to non-controlling interests		**1,574**	1,017	1,596
		$	$	$
Basic earnings per ordinary share	10	**0.65**	0.69	0.84
Diluted earnings per ordinary share	10	**0.64**	0.69	0.84

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnote, see page 346.

Consolidated statement of comprehensive income

for the year ended 31 December 2015

	2015 $m	2014 $m	2013 $m
Profit for the year	**15,096**	14,705	17,800
Other comprehensive income/(expense)			
Items that will be reclassified subsequently to profit or loss when specific conditions are met:			
Available-for-sale investments	**(3,072)**	2,972	(1,718)
– fair value gains/(losses)	**(1,231)**	4,794	(1,787)
– fair value gains reclassified to the income statement	**(2,437)**	(1,672)	(1,277)
– amounts reclassified to the income statement in respect of impairment losses	**127**	374	286
– income taxes	**469**	(524)	1,060
Cash flow hedges	**(24)**	188	(128)
– fair value gains	**704**	1,512	776
– fair value gains reclassified to the income statement	**(705)**	(1,244)	(894)
– income taxes	**(23)**	(80)	(10)
Share of other comprehensive income/(expense) of associates and joint ventures	**(9)**	80	(71)
– share for the year	**(9)**	78	(35)
– reclassified to income statement on disposal	**–**	2	(36)
Exchange differences	**(10,945)**	(8,903)	(1,372)
– foreign exchange gains reclassified to income statement on disposal of a foreign operation	**–**	(21)	(290)
– other exchange differences	**(11,112)**	(8,917)	(1,154)
– Income tax attributable to exchange differences	**167**	35	72
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement of defined benefit asset/liability	**101**	1,985	(458)
– before income taxes	**130**	2,419	(601)
– income taxes	**(29)**	(434)	143
Other comprehensive income for the year, net of tax	**(13,949)**	(3,678)	(3,747)
Total comprehensive income for the year	**1,147**	11,027	14,053
Attributable to:			
– shareholders of the parent company	**460**	9,245	12,644
– non-controlling interests	**687**	1,782	1,409
Total comprehensive income for the year	**1,147**	11,027	14,053

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnote, see page 346.

Consolidated balance sheet

at 31 December 2015

	Notes	2015 $m	2014 $m
Assets			
Cash and balances at central banks		**98,934**	129,957
Items in the course of collection from other banks		**5,768**	4,927
Hong Kong Government certificates of indebtedness		**28,410**	27,674
Trading assets	*12*	**224,837**	304,193
Financial assets designated at fair value	*15*	**23,852**	29,037
Derivatives	*16*	**288,476**	345,008
Loans and advances to banks		**90,401**	112,149
Loans and advances to customers		**924,454**	974,660
Reverse repurchase agreements – non-trading		**146,255**	161,713
Financial investments	*17*	**428,955**	415,467
Assets held for sale	*23*	**43,900**	7,647
Prepayments, accrued income and other assets	*22*	**54,398**	67,529
Current tax assets		**1,221**	1,309
Interests in associates and joint ventures	*19*	**19,139**	18,181
Goodwill and intangible assets	*20*	**24,605**	27,577
Deferred tax assets	*8*	**6,051**	7,111
Total assets at 31 December		**2,409,656**	2,634,139
Liabilities and equity			
Liabilities			
Hong Kong currency notes in circulation		**28,410**	27,674
Deposits by banks		**54,371**	77,426
Customer accounts		**1,289,586**	1,350,642
Repurchase agreements – non-trading		**80,400**	107,432
Items in the course of transmission to other banks		**5,638**	5,990
Trading liabilities	*24*	**141,614**	190,572
Financial liabilities designated at fair value	*25*	**66,408**	76,153
Derivatives	*16*	**281,071**	340,669
Debt securities in issue	*26*	**88,949**	95,947
Liabilities of disposal groups held for sale	*23*	**36,840**	6,934
Accruals, deferred income and other liabilities	*27*	**38,116**	46,462
Current tax liabilities		**783**	1,213
Liabilities under insurance contracts	*28*	**69,938**	73,861
Provisions	*29*	**5,552**	4,998
Deferred tax liabilities	*8*	**1,760**	1,524
Subordinated liabilities	*30*	**22,702**	26,664
Total liabilities at 31 December		**2,212,138**	2,434,161
Equity			
Called up share capital	*35*	**9,842**	9,609
Share premium account		**12,421**	11,918
Other equity instruments		**15,112**	11,532
Other reserves		**7,109**	20,244
Retained earnings		**143,976**	137,144
Total shareholders' equity		**188,460**	190,447
Non-controlling interests	*34*	**9,058**	9,531
Total equity at 31 December		**197,518**	199,978
Total liabilities and equity at 31 December		**2,409,656**	2,634,139

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnote, see page 346.

Douglas Flint, *Group Chairman*

Iain Mackay, *Group Finance Director*

Consolidated statement of cash flows

for the year ended 31 December 2015

	Notes	2015 $m	2014 $m	2013 $m
Cash flows from operating activities				
Profit before tax		**18,867**	18,680	22,565
Adjustments for:				
– net gain from investing activities		**(1,935)**	(1,928)	(1,458)
– share of profits in associates and joint ventures		**(2,556)**	(2,532)	(2,325)
– (gain)/loss on disposal of associates, joint ventures, subsidiaries and businesses		**–**	9	(1,173)
– other non-cash items included in profit before tax	*36*	**10,765**	11,262	11,995
– change in operating assets	*36*	**65,828**	25,877	(148,899)
– change in operating liabilities	*36*	**(106,762)**	(93,814)	164,757
– elimination of exchange differences[3]		**18,308**	24,571	4,479
– dividends received from associates		**879**	757	694
– contributions paid to defined benefit plans		**(664)**	(681)	(962)
– tax paid		**(3,852)**	(3,573)	(4,696)
Net cash generated from/(used in) operating activities		**(1,122)**	(21,372)	44,977
Cash flows from investing activities				
Purchase of financial investments		**(438,376)**	(384,199)	(363,979)
Proceeds from the sale and maturity of financial investments		**399,636**	382,837	342,539
Purchase of property, plant and equipment		**(1,352)**	(1,477)	(1,952)
Proceeds from the sale of property, plant and equipment		**103**	88	441
Net cash inflow/(outflow) from disposal of customer and loan portfolios		**2,023**	(1,035)	6,518
Net investment in intangible assets		**(954)**	(903)	(834)
Proceeds from disposal of Ping An		**–**	–	7,413
Net cash inflow/(outflow) from disposal of other subsidiaries, businesses, associates and joint ventures		**8**	(272)	3,269
Net cash generated from/(used in) investing activities		**(38,912)**	(4,961)	(6,585)
Cash flows from financing activities				
Issue of ordinary share capital		**147**	267	297
Net sales/(purchases) of own shares for market-making and investment purposes		**331**	(96)	(32)
Issue of other equity instruments		**3,580**	5,681	–
Redemption of preference shares and other equity instruments		**(463)**	(234)	–
Subordinated loan capital issued		**3,180**	3,500	1,989
Subordinated loan capital repaid		**(2,157)**	(3,163)	(1,662)
Dividends paid to shareholders of the parent company		**(6,548)**	(6,611)	(6,414)
Dividends paid to non-controlling interests		**(697)**	(639)	(586)
Dividends paid to holders of other equity instruments		**(950)**	(573)	(573)
Net cash used in financing activities		**(3,577)**	(1,868)	(6,981)
Net increase/(decrease) in cash and cash equivalents		**(43,611)**	(28,201)	31,411
Cash and cash equivalents at 1 January		**301,301**	346,281	315,308
Exchange differences in respect of cash and cash equivalents		**(13,827)**	(16,779)	(438)
Cash and cash equivalents at 31 December	*36*	**243,863**	301,301	346,281

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnotes, see page 346.

Consolidated statement of changes in equity

for the year ended 31 December 2015

	Called up share capital $m	Share premium $m	Other equity instru-ments[2] $m	Retained Earnings[4,6] $m	Other reserves: Available-for-sale fair value reserve[5] $m	Other reserves: Cash flow hedging reserve[5] $m	Other reserves: Foreign exchange reserve[5] $m	Other reserves: Merger reserve[6,7] $m	Total share-holders' equity $m	Non-controlling interests $m	Total equity $m
At 1 January 2015	**9,609**	**11,918**	**11,532**	**137,144**	**2,143**	**58**	**(9,265)**	**27,308**	**190,447**	**9,531**	**199,978**
Profit for the year	**–**	**–**	**–**	**13,522**	**–**	**–**	**–**	**–**	**13,522**	**1,574**	**15,096**
Other comprehensive income (net of tax)	**–**	**–**	**–**	**73**	**(2,332)**	**(24)**	**(10,779)**	**–**	**(13,062)**	**(887)**	**(13,949)**
– available-for-sale investments	**–**	**–**	**–**	**–**	**(2,332)**	**–**	**–**	**–**	**(2,332)**	**(740)**	**(3,072)**
– cash flow hedges	**–**	**–**	**–**	**–**	**–**	**(24)**	**–**	**–**	**(24)**	**–**	**(24)**
– remeasurement of defined benefit asset/liability	**–**	**–**	**–**	**82**	**–**	**–**	**–**	**–**	**82**	**19**	**101**
– share of other comprehensive income of associates and joint ventures	**–**	**–**	**–**	**(9)**	**–**	**–**	**–**	**–**	**(9)**	**–**	**(9)**
– exchange differences	**–**	**–**	**–**	**–**	**–**	**–**	**(10,779)**	**–**	**(10,779)**	**(166)**	**(10,945)**
Total comprehensive income for the year	**–**	**–**	**–**	**13,595**	**(2,332)**	**(24)**	**(10,779)**	**–**	**460**	**687**	**1,147**
Shares issued under employee remuneration and share plans	**45**	**691**	**–**	**(589)**	**–**	**–**	**–**	**–**	**147**	**–**	**147**
Shares issued in lieu of dividends and amounts arising thereon	**188**	**(188)**	**–**	**3,162**	**–**	**–**	**–**	**–**	**3,162**	**–**	**3,162**
Capital securities issued	**–**	**–**	**3,580**	**–**	**–**	**–**	**–**	**–**	**3,580**	**–**	**3,580**
Dividends to shareholders	**–**	**–**	**–**	**(10,660)**	**–**	**–**	**–**	**–**	**(10,660)**	**(697)**	**(11,357)**
Cost of share-based payment arrangements	**–**	**–**	**–**	**757**	**–**	**–**	**–**	**–**	**757**	**–**	**757**
Other movements	**–**	**–**	**–**	**567**	**–**	**–**	**–**	**–**	**567**	**(463)**	**104**
At 31 December 2015	**9,842**	**12,421**	**15,112**	**143,976**	**(189)**	**34**	**(20,044)**	**27,308**	**188,460**	**9,058**	**197,518**
At 1 January 2014	9,415	11,135	5,851	128,728	97	(121)	(542)	27,308	181,871	8,588	190,459
Profit for the year	–	–	–	13,688	–	–	–	–	13,688	1,017	14,705
Other comprehensive income (net of tax)	–	–	–	2,066	2,025	189	(8,723)	–	(4,443)	765	(3,678)
– available-for-sale investments	–	–	–	–	2,025	–	–	–	2,025	947	2,972
– cash flow hedges	–	–	–	–	–	189	–	–	189	(1)	188
– remeasurement of defined benefit asset/liability	–	–	–	1,986	–	–	–	–	1,986	(1)	1,985
– share of other comprehensive income of associates and joint ventures	–	–	–	80	–	–	–	–	80	–	80
– exchange differences	–	–	–	–	–	–	(8,723)	–	(8,723)	(180)	(8,903)
Total comprehensive income for the year	–	–	–	15,754	2,025	189	(8,723)	–	9,245	1,782	11,027
Shares issued under employee remuneration and share plans	60	917	–	(710)	–	–	–	–	267	–	267
Shares issued in lieu of dividends and amounts arising thereon	134	(134)	–	2,709	–	–	–	–	2,709	–	2,709
Capital securities issued	–	–	5,681	–	–	–	–	–	5,681	–	5,681
Dividends to shareholders	–	–	–	(9,893)	–	–	–	–	(9,893)	(712)	(10,605)
Cost of share-based payment arrangements	–	–	–	732	–	–	–	–	732	–	732
Other movements	–	–	–	(176)	21	(10)	–	–	(165)	(127)	(292)
At 31 December 2014	9,609	11,918	11,532	137,144	2,143	58	(9,265)	27,308	190,447	9,531	199,978

Consolidated statement of changes in equity (continued)

	Called up share capital $m	Share premium $m	Other equity instru-ments $m	Retained Earnings[4,6] $m	Other reserves: Available-for-sale fair value reserve $m	Other reserves: Cash flow hedging reserve $m	Other reserves: Foreign exchange reserve $m	Other reserves: Merger reserve[6,7] $m	Total share-holders' equity $m	Non-controlling interests $m	Total equity $m
At 1 January 2013	9,238	10,084	5,851	120,347	1,649	13	752	27,308	175,242	7,887	183,129
Profit for the year	–	–	–	16,204	–	–	–	–	16,204	1,596	17,800
Other comprehensive income (net of tax)	–	–	–	(561)	(1,577)	(128)	(1,294)	–	(3,560)	(187)	(3,747)
– available-for-sale investments	–	–	–	–	(1,577)	–	–	–	(1,577)	(141)	(1,718)
– cash flow hedges	–	–	–	–	–	(128)	–	–	(128)	–	(128)
– remeasurement of defined benefit asset/liability	–	–	–	(490)	–	–	–	–	(490)	32	(458)
– share of other comprehensive income of associates and joint ventures	–	–	–	(71)	–	–	–	–	(71)	–	(71)
– exchange differences	–	–	–	–	–	–	(1,294)	–	(1,294)	(78)	(1,372)
Total comprehensive income for the year	–	–	–	15,643	(1,577)	(128)	(1,294)	–	12,644	1,409	14,053
Shares issued under employee remuneration and share plans	60	1,168	–	(931)	–	–	–	–	297	–	297
Shares issued in lieu of dividends and amounts arising thereon	117	(117)	–	2,523	–	–	–	–	2,523	–	2,523
Dividends to shareholders	–	–	–	(9,510)	–	–	–	–	(9,510)	(718)	(10,228)
Cost of share-based payment arrangements	–	–	–	630	–	–	–	–	630	–	630
Other movements	–	–	–	26	25	(6)	–	–	45	10	55
At 31 December 2013	9,415	11,135	5,851	128,728	97	(121)	(542)	27,308	181,871	8,588	190,459

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnotes, see page 346.

HSBC Holdings balance sheet

at 31 December 2015

	Notes	2015 $m	2014 $m
Assets			
Cash at bank and in hand:			
– balances with HSBC undertakings		**242**	249
Derivatives	*16*	**2,467**	2,771
Loans and advances to HSBC undertakings		**44,350**	43,910
Financial investments in HSBC undertakings		**4,285**	4,073
Prepayments, accrued income and other assets		**265**	125
Current tax assets		**723**	472
Investments in subsidiaries	*21*	**97,770**	96,264
Intangible assets		**75**	–
Deferred tax assets		**17**	–
Total assets at 31 December		**150,194**	147,864
Liabilities and equity			
Liabilities			
Amounts owed to HSBC undertakings		**2,152**	2,892
Financial liabilities designated at fair value	*25*	**19,853**	18,679
Derivatives	*16*	**2,278**	1,169
Debt securities in issue	*26*	**960**	1,009
Accruals, deferred income and other liabilities		**1,642**	1,398
Deferred tax liabilities		**–**	17
Subordinated liabilities	*30*	**15,895**	17,255
Total liabilities		**42,780**	42,419
Equity			
Called up share capital	*35*	**9,842**	9,609
Share premium account		**12,421**	11,918
Other equity instruments		**15,020**	11,476
Other reserves		**37,907**	37,456
Retained earnings		**32,224**	34,986
Total equity		**107,414**	105,445
Total liabilities and equity at 31 December		**150,194**	147,864

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnote, see page 346.

Douglas Flint
Group Chairman

Iain Mackay
Group Finance Director

HSBC Holdings statement of cash flows

for the year ended 31 December 2015

	Notes	2015 $m	2014 $m
Cash flows from operating activities			
Profit before tax		**4,282**	6,228
Adjustments for:			
– non-cash items included in profit before tax	*36*	**114**	52
– change in operating assets	*36*	**543**	1,854
– change in operating liabilities	*36*	**(2,342)**	(9,914)
– tax received		**470**	133
Net cash generated from/(used in) operating activities		**3,067**	(1,647)
Cash flows from investing activities			
Net cash outflow from acquisition of or increase in stake of subsidiaries		**(2,118)**	(1,603)
Repayment of capital from subsidiaries		**790**	3,505
Net investment in intangible assets		**(79)**	–
Net cash generated from/(used in) investing activities		**(1,407)**	1,902
Cash flows from financing activities			
Issue of ordinary share capital		**678**	924
Issue of other equity instruments		**3,538**	5,635
Subordinated loan capital issued		**3,180**	3,500
Subordinated loan capital repaid		**(1,565)**	(1,654)
Debt securities repaid		**–**	(1,634)
Dividends paid on ordinary shares		**(6,548)**	(6,611)
Dividends paid to holders of other equity instruments		**(950)**	(573)
Net cash used in financing activities		**(1,667)**	(413)
Net decrease in cash and cash equivalents		**(7)**	(158)
Cash and cash equivalents at 1 January		**249**	407
Cash and cash equivalents at 31 December	*36*	**242**	249

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnote, see page 346.

HSBC Holdings statement of changes in equity

for the year ended 31 December 2015

	Called up share capital $m	Share premium $m	Other equity instru-ments $m	Retained earnings[8] $m	Other reserves: Available-for-sale fair value reserve $m	Other reserves: Other paid-in capital[9] $m	Other reserves: Merger and other reserves[7] $m	Total share-holders' equity $m
At 1 January 2015	**9,609**	**11,918**	**11,476**	**34,986**	**240**	**2,089**	**35,127**	**105,445**
Profit for the year	**–**	**–**	**–**	**4,853**	**–**	**–**	**–**	**4,853**
Other comprehensive income (net of tax)	**–**	**–**	**–**	**–**	**(57)**	**–**	**–**	**(57)**
– available-for-sale investments	**–**	**–**	**–**	**–**	**(77)**	**–**	**–**	**(77)**
– income tax	**–**	**–**	**–**	**–**	**20**	**–**	**–**	**20**
Total comprehensive income for the year	**–**	**–**	**–**	**4,853**	**(57)**	**–**	**–**	**4,796**
Shares issued under employee share plans	**45**	**691**	**–**	**(59)**	**–**	**–**	**–**	**677**
Shares issued in lieu of dividends and amounts arising thereon	**188**	**(188)**	**–**	**3,162**	**–**	**–**	**–**	**3,162**
Capital securities issued	**–**	**–**	**3,544**	**–**	**–**	**–**	**–**	**3,544**
Dividends to shareholders	**–**	**–**	**–**	**(10,660)**	**–**	**–**	**–**	**(10,660)**
Tax credit on distributions	**–**	**–**	**–**	**157**	**–**	**–**	**–**	**157**
Own shares adjustment	**–**	**–**	**–**	**180**	**–**	**–**	**–**	**180**
Exercise and lapse of share options	**–**	**–**	**–**	**(508)**	**–**	**508**	**–**	**–**
Cost of share-based payment arrangements	**–**	**–**	**–**	**86**	**–**	**–**	**–**	**86**
Income taxes on share-based payments	**–**	**–**	**–**	**1**	**–**	**–**	**–**	**1**
Equity investments granted to employees of subsidiaries under employee share plans	**–**	**–**	**–**	**26**	**–**	**–**	**–**	**26**
At 31 December 2015	**9,842**	**12,421**	**15,020**	**32,224**	**183**	**2,597**	**35,127**	**107,414**
At 1 January 2014	9,415	11,135	5,828	35,406	124	2,052	35,127	99,087
Profit for the year	–	–	–	6,527	–	–	–	6,527
Other comprehensive income (net of tax)	–	–	–	–	116	–	–	116
– available-for-sale investments	–	–	–	–	152	–	–	152
– income tax	–	–	–	–	(36)	–	–	(36)
Total comprehensive income for the year	–	–	–	6,527	116	–	–	6,643
Shares issued under employee share plans	60	917	–	(53)	–	–	–	924
Shares issued in lieu of dividends and amounts arising thereon	134	(134)	–	2,709	–	–	–	2,709
Capital securities issued	–	–	5,648	–	–	–	–	5,648
Dividends to shareholders	–	–	–	(9,893)	–	–	–	(9,893)
Tax credit on distributions	–	–	–	104	–	–	–	104
Own shares adjustment	–	–	–	103	–	–	–	103
Exercise and lapse of share options	–	–	–	(37)	–	37	–	–
Cost of share-based payment arrangements	–	–	–	74	–	–	–	74
Income taxes on share-based payments	–	–	–	(2)	–	–	–	(2)
Equity investments granted to employees of subsidiaries under employee share plans	–	–	–	48	–	–	–	48
At 31 December 2014	9,609	11,918	11,476	34,986	240	2,089	35,127	105,445

Dividends per ordinary share at 31 December 2015 were $0.50 (2014: $0.49; 2013: $0.48).

The accompanying notes on pages 347 to 469 form an integral part of these financial statements[1].

For footnotes, see page 346.

Footnotes to the Financial Statements

1 *The audited sections of 'Risk' on pages 101 to 226, the audited sections of 'Capital' on pages 227 to 248 and the audited sections of 'Directors' Remuneration Report' on pages 285 to 321 are also an integral part of these financial statements.*
2 *During 2015, HSBC Holdings issued $2,450m and €1,000 of Perpetual Subordinated Contingent Convertible Capital Securities, on which there were $12m of external issuance costs, $25m of intra-group issuance costs and $19m of tax. In 2014, HSBC Holdings issued $2,250m, $1,500m and €1,500m of Perpetual Subordinated Contingent Convertible Capital Securities, on which there were $13m of external issuance costs and $33m of intra-group issuance costs.Under IFRSs these issuance costs and tax benefits are classified as equity.*
3 *Adjustment to bring changes between opening and closing balance sheet amounts to average rates. This is not done on a line-by-line basis, as details cannot be determined without unreasonable expense.*
4 *Retained earnings include 81,580,180 ($1,604m) of own shares held within HSBC's Insurance business, retirement funds for the benefit of policyholders or beneficiaries within employee trusts for the settlement of shares expected to be delivered under employee share schemes or bonus plans, and the market-making activities in Markets (2014: 85,337,430 ($641m); 2013: 85,997,271 ($915m)).*
5 *At 31 December 2015, our operations in Brazil were classified as held for sale (see Note 23). The cumulative amount of other reserves attributable to these operations were as follows: available-for-sale fair value reserve debit of $176m, cash flow hedging reserve credit of $34m and foreign exchange reserve debit of $2.6bn.*
6 *Cumulative goodwill amounting to $5,138m has been charged against reserves in respect of acquisitions of subsidiaries prior to 1 January 1998, including $3,469m charged against the merger reserve arising on the acquisition of HSBC Bank plc. The balance of $1,669m has been charged against retained earnings.*
7 *Statutory share premium relief under Section 131 of the Companies Act 1985 (the 'Act') was taken in respect of the acquisition of HSBC Bank plc in 1992, HSBC France in 2000 and HSBC Finance Corporation in 2003 and the shares issued were recorded at their nominal value only. In HSBC's consolidated financial statements the fair value differences of $8,290m in respect of HSBC France and $12,768m in respect of HSBC Finance Corporation were recognised in the merger reserve. The merger reserve created on the acquisition of HSBC Finance Corporation subsequently became attached to HSBC Overseas Holdings (UK) Limited ('HOHU'), following a number of intra-group reorganisations. During 2009, pursuant to Section 131 of the Companies Act 1985, statutory share premium relief was taken in respect of the rights issue and $15,796m was recognised in the merger reserve. The merger reserve includes the deduction of $614m in respect of costs relating to the rights issue, of which $149m was subsequently transferred to the income statement. Of this $149m, $121m was a loss arising from accounting for the agreement with the underwriters as a contingent forward contract. The merger reserve excludes the loss of $344m on a forward foreign exchange contract associated with hedging the proceeds of the rights issue.*
8 *Retained earnings include 67,881 ($1m) (2014: 179,419 ($3m)) of own shares held to fund employee share plans.*
9 *Other paid-in capital arises from the exercise and lapse of share options granted to employees of HSBC Holdings subsidiaries.*

1 Basis of preparation and significant accounting policies

(a) Compliance with International Financial Reporting Standards

International Financial Reporting Standards ('IFRSs') comprise accounting standards issued or adopted by the International Accounting Standards Board ('IASB') and interpretations issued or adopted by the IFRS Interpretations Committee ('IFRS IC').

The consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings have been prepared in accordance with IFRSs as issued by the IASB and as endorsed by the European Union ('EU'). EU-endorsed IFRSs could differ from IFRSs as issued by the IASB if, at any point in time, new or amended IFRSs were not to be endorsed by the EU.

At 31 December 2015, there were no unendorsed standards effective for the year ended 31 December 2015 affecting these consolidated and separate financial statements, and there was no difference between IFRSs endorsed by the EU and IFRSs issued by the IASB in terms of their application to HSBC. Accordingly, HSBC's financial statements for the year ended 31 December 2015 are prepared in accordance with IFRSs as issued by the IASB.

Standards adopted during the year ended 31 December 2015

There were no new standards applied during the year ended 31 December 2015.

During 2015, HSBC adopted a number of interpretations and amendments to standards which had an insignificant effect on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

(b) Differences between IFRSs and Hong Kong Financial Reporting Standards

There are no significant differences between IFRSs and Hong Kong Financial Reporting Standards in terms of their application to HSBC and consequently there would be no significant differences had the financial statements been prepared in accordance with Hong Kong Financial Reporting Standards. The Notes on the Financial Statements, taken together with the Report of the Directors, include the aggregate of all disclosures necessary to satisfy IFRSs and Hong Kong reporting requirements.

(c) Future accounting developments

In addition to completing its projects on financial instrument accounting, revenue recognition and leasing, discussed below, the IASB is working on a project on insurance accounting which could represent significant changes to accounting requirements in the future.

Minor amendments to IFRSs

The IASB has published a number of minor amendments to IFRSs through the Annual Improvements to IFRSs 2012–2014 cycle and in a series of stand-alone amendments, one of which has not yet been endorsed for use in the EU. HSBC has not early applied any of the amendments effective after 31 December 2015 and it expects they will have an insignificant effect, when applied, on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

Major new IFRSs

The IASB has published IFRS 9 'Financial Instruments', IFRS 15 'Revenue from Contracts with Customers' and IFRS 16 'Leases'. None of these IFRSs have yet been endorsed for use in the EU.

IFRS 9 'Financial Instruments'

In July 2014, the IASB issued IFRS 9 'Financial Instruments', which is the comprehensive standard to replace IAS 39 'Financial Instruments: Recognition and Measurement', and includes requirements for classification and measurement of financial assets and liabilities, impairment of financial assets and hedge accounting.

Classification and measurement

The classification and measurement of financial assets will depend on how these are managed (the entity's business model) and their contractual cash flow characteristics. These factors determine whether the financial assets are measured at amortised cost, fair value through other comprehensive income ('FVOCI') or fair value through profit or loss ('FVPL'). In many instances, the classification and measurement outcomes will be similar to IAS 39, although differences will arise. For example, under IFRS 9, embedded derivatives are not separated from host financial assets and equity securities are measured at FVPL or, in limited circumstances, fair value movements will be shown in OCI. The combined effect of the application of the business model and the contractual cash flow characteristics tests may result in some differences in the population of financial assets measured at amortised cost or fair value compared with IAS 39. The classification of financial liabilities is essentially unchanged. For certain liabilities measured at fair value, gains or losses relating to changes in the entity's own credit risk are to be included in other comprehensive income.

HSBC conducted an assessment of potential classification and measurement changes to financial assets based on the composition of the balance sheet as at 31 December 2014. This may not be fully representative of the impact as at 1 January 2018 because IFRS 9 requires that business models be assessed based on the facts and circumstances from the date of initial application. In addition, the contractual terms and conditions of the financial assets assessed as at 31 December 2014 may not reflect the contractual terms and conditions of HSBC's financial assets at transition. However, based on the assessment of financial assets as at 31 December 2014 and expectations around changes to balance sheet composition, HSBC expects that generally:

- loans and advances to banks and to customers and non-trading reverse repurchase agreements that are classified as loans and receivables under IAS 39 will be measured at amortised cost under IFRS 9;
- financial assets designated at FVPL will remain at FVPL, because it is required under IFRS 9 or designation will continue;
- debt securities classified as available for sale will primarily be measured at amortised cost or FVOCI, with a small minority at FVPL either because of their contractual cash flow characteristics or the business model within which they are held;
- debt securities classified as held to maturity will be measured at amortised cost;
- Treasury and other eligible bills classified as available for sale will be measured at amortised cost or FVOCI depending upon the business model in which they are held; and
- all equity securities will remain measured at fair value. A significant majority will have fair value movements shown in profit or loss, while a minority will have fair value movements presented in other comprehensive income. The equity securities for which fair value movements will be shown in other comprehensive income are business facilitation and other similar investments where HSBC holds the investments other than to generate a capital return.

Impairment

The impairment requirements apply to financial assets measured at amortised cost and FVOCI, and lease receivables and certain loan commitments and financial guarantee contracts. At initial recognition, allowance (or provision in the case of commitments and guarantees) is required for expected credit losses ('ECL') resulting from default events that are possible within the next 12 months ('12-month ECL'). In the event of a significant increase in credit risk, allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit impaired are in 'stage 3'.

The assessment of whether credit risk has increased significantly since initial recognition is performed for each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument, rather than by considering an increase in ECL.

The assessment of credit risk and the estimation of ECL are required to be unbiased and probability-weighted, and should incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money. As a result, the recognition and measurement of impairment is intended to be more forward-looking than under IAS 39 and the resulting impairment charge will tend to be more volatile. It will also tend to result in an increase in the total level of impairment allowances, since all financial assets will be assessed for at least 12-month ECL and the population of financial assets to which lifetime ECL applies is likely to be larger than the population for which there is objective evidence of impairment in accordance with IAS 39.

Hedge accounting

The general hedge accounting requirements aim to simplify hedge accounting, creating a stronger link with risk management strategy and permitting hedge accounting to be applied to a greater variety of hedging instruments and risks. The standard does not explicitly address macro hedge accounting strategies, which are being considered in a separate project. To remove the risk of any conflict between existing macro hedge accounting practice and the new general hedge accounting requirements, IFRS 9 includes an accounting policy choice to remain with IAS 39 hedge accounting.

Based on the analysis performed to date, HSBC expects to exercise the accounting policy choice to continue IAS 39 hedge accounting and therefore is not currently planning to change hedge accounting, although it will implement the revised hedge accounting disclosures required by the related amendments to IFRS 7 'Financial Instruments: Disclosures'.

Transition

The classification and measurement and impairment requirements are applied retrospectively by adjusting the opening balance sheet at the date of initial application, with no requirement to restate comparative periods.

The mandatory application date for the standard as a whole is 1 January 2018, but it is possible to apply the revised presentation for certain liabilities measured at fair value from an earlier date. HSBC intends to revise the presentation of fair value gains and losses relating to the entity's own credit risk on certain liabilities as soon as permitted by EU law. If this presentation was applied at 31 December 2015, the effect would be to decrease profit before tax with the opposite effect on other comprehensive income based on the change in fair value attributable to changes in HSBC's credit risk for the year, with no effect on net assets. Further information on the change in fair value attributable to changes in credit risk, including HSBC's credit risk, is disclosed in Note 25.

HSBC is assessing the impact that the financial asset classification and impairment requirements will have on the financial statements.

IFRS 9 implementation programme

Within HSBC, a joint Global Risk and Global Finance IFRS 9 Implementation Programme ('the Programme') has been set up to prepare for implementation of IFRS 9 since 2012 and significant preparatory and design work has taken place. The Programme is sponsored by the Group Chief Risk Officer and Group Finance Director. A Steering Committee comprising senior management from Risk, Finance and HSBC Operations, Services and Technology has been established. In common with all significant change programmes in HSBC, the Programme is managed according to the Group's business transformation framework. Delivery of the required changes will be undertaken by individual workstreams, with Global Risk leading the work to calculate impairments and Global Finance leading the development of financial reporting systems and processes. Significant legal entities in the Group have established steering committees to manage implementation locally, within this global framework. Global businesses have been engaged but are not themselves responsible for the implementation activity.

To date, the Programme has been directed towards preliminary impact analysis, documenting Group accounting policy, developing the operating and system target operating models and developing risk modelling methodologies for the calculation of impairment. In addition, an impact assessment of the classification and measurement requirements was performed during 2015. The Programme's focus is now on the impairment models and processes which need to be developed by the end of 2016 as HSBC intends to perform a parallel run during 2017 to gain a better understanding of the potential effect of the new standard. The Programme has a defined governance framework to operate over the impairment process once it becomes live. The framework includes dedicated committees to review, challenge and sign off the assumptions used and the results in each significant legal entity, and second-line assurance capabilities for each key step in the process. An expert panel will be established to govern the setting of forward-looking economic assumptions used in the process. Governance over the impairment process is the responsibility of the Global Risk and Global Finance functions, operating within each member company of the Group. Global businesses are consulted but are not granted decision making power.

HSBC intends to quantify the potential impact of IFRS 9 once it is practicable to provide reliable estimates, which will be no later than in the *Annual Report and Accounts 2017*.

Until sufficient models have been developed and tested, HSBC will not have a reliable understanding of the potential impact on its financial statements and any consequential effects on regulatory capital requirements. In the absence of information on whether there will be any changes to the regulatory requirements, assumptions will have to be made about how the existing regulatory requirements will be interpreted when IFRS 9 is adopted. For example, the relationship between specific and general credit risk adjustments in accordance with Basel requirements and the IFRS 9 stages is unclear. The Basel Committee is considering the implications of the new accounting requirements for existing regulatory requirements.

Comparison of IAS 39 accounting policies with IFRS 9

The accounting policies and critical accounting estimates and judgements for the impairment of loans and advances and available-for-sale financial assets (in accordance with IAS 39 'Financial Instruments') are set out in Note 1(j). Their equivalents for financial assets at amortised cost and at FVOCI (in accordance with IFRS 9) are being developed, but the following similarities and differences are likely to be important to understanding the potential effect of the change in accounting policy resulting from the implementation of IFRS 9 'Financial Instruments':

- Amortised cost

The accounting policies in accordance with IAS 39 generally make a distinction between individually significant loans and homogeneous groups of loans which are assessed collectively. This distinction has less relevance in developing IFRS 9 accounting policies. However, under IFRS 9, whether the loans are managed through wholesale credit risk systems or retail credit risk systems becomes the more relevant distinction because of differences in the types of information available and the way credit risk is managed.

- Stage 3

Financial assets will be included in stage 3 when there is objective evidence that the loan is credit impaired. The objective evidence that is used is the same as the criteria used by HSBC to determine whether an individually significant loan is impaired in accordance with IAS 39 and is set out on page 355. Therefore, the population included in stage 3 is expected to be consistent with impaired loans under IAS 39 which are considered individually significant.

For wholesale loans, individual discounted cash flow calculations will continue to be performed and impairment losses determined as set out on page 355. Changes may be made to these calculations to ensure the measurement requirements of IFRS 9 are met. For example, the net realisable value of security will be adjusted for expected future changes in market prices.

In accordance with IAS 39, statistical methods are used to determine impairment losses on a collective basis for homogeneous groups of loans that are not considered individually significant using either roll rate methodologies or historical loss rate experience for loans. Under these methodologies, impairment allowances are recognised at a portfolio level. However, loans are classified as impaired for presentation purposes when they are more than 90 days past due or have been renegotiated for credit risk reasons. For retail loans, an exception is made for individual loans that are in arrears by more than 90 days but have been individually assessed to have no indications of impairment, and these are not classified as impaired. Under IFRS 9, HSBC expects to determine stage 3 for these populations by considering the relevant objective evidence, primarily whether contractual payments of either principal or interest are past due for more than 90 days, or a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition, or the loan is otherwise considered to be in default. HSBC does not expect to rebut the presumption in IFRS 9 that loans which are 90 days past due are in default for retail loans, even where regulatory rules permit default to be defined based on 180 days past due. The impairment allowance is expected to be determined by the same calculation used for stage 2, with the probability of default set to 1. The result may, therefore, not be the same as that determined by the current statistical methods and the population disclosed as stage 3 will not necessarily correspond with that disclosed as impaired in accordance with IAS 39.

Except for retail portfolios with regulatory default definitions of 180 days, HSBC's intention is to align the definition of default with the regulatory definition as far as possible and for stage 3 to represent all loans which are considered defaulted or otherwise credit impaired.

The policy on the write-off of loans and advances included on page 357 is expected to remain unchanged.

As described on page 197, the contractual terms of a loan may be modified for a number of reasons, which include forbearance. Only some of the forbearance strategies result in loans being 'renegotiated'. For such modifications, the current treatment as described on pages 197-198 and 357 will remain the same under IFRS 9, except for new loans recognised as a result of the original loan being derecognised following a renegotiation. These loans will be classified as originated credit-impaired and will retain this classification until derecognition. For all other modifications, the general policy on derecognition as described on page 401 will apply.

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit impaired or, in the case of renegotiated loans, 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, as described on page 198. These loans could be transferred to stages 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

- Stage 2

In accordance with IFRS 9, financial assets are considered to be in stage 2 when their credit risk has increased significantly since initial recognition so it is appropriate to recognise lifetime ECL. Since this is not a concept in IAS 39, it is likely to result in increased allowance as the result of the recognition of lifetime ECL for populations that are not considered to be credit impaired.

The analysis of credit risk is multifactor and the determination of whether a specific factor is relevant and its weight compared with other factors will depend on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk. Since the concept is relative and significance in part depends on the credit risk at initial recognition, credit quality disclosures that report credit grades as at the balance sheet date may not reflect the populations in stage 2 or those that are at risk of moving to stage 2.

For wholesale portfolios and significant retail portfolios, HSBC intends to consider whether credit risk has increased significantly since initial recognition using a combination of individual and collective information, and will reflect the increase in credit risk at the individual loan level to the extent practicable.

The main factor that will be considered is a lifetime probability of default ('PD') or a 12-month PD where this provides a reasonable approximation of changes in the lifetime risk of default, adjusted to be consistent with the current economic conditions and the expected future economic conditions which are expected to affect credit risk. The PD will be derived from the customer risk rating for wholesale portfolios and from the credit scores for retail portfolios. The PD for wholesale is determined on an obligor level and for retail at the level of the individual facility. In situations where a 12-month PD would not be appropriate, for example, where the financial instrument only has significant payment obligations beyond the next 12 months, additional factors will be considered or adjustments made to ensure that the lifetime credit risk is appropriately considered.

The PDs will also be adjusted to incorporate the effect of economic assumptions, such as interest rates, unemployment rates and GDP forecasts that can be statistically related to changes in PD which have an impact beyond the next 12 months. These statistical relationships are expected to be established through the processes developed for stress testing. In addition, other relevant factors which may not be adequately reflected in the information used to derive PDs, including past due status and whether the financial asset is subject to additional monitoring through the watch list process for wholesale portfolios, will be taken into account.

HSBC is in the process of calibrating and testing the thresholds or magnitude of change required and mechanisms for transfer from stage 1 to stage 2 (and vice versa) across different portfolios so it is not possible to provide further detail at this time. The aim is to establish the points where the change in credit risk is considered meaningful in risk management terms and to test these points against subsequent stage movements and defaults. Where less sophisticated default metrics are used or credit scores are not available, as tends to apply with the less significant retail portfolios, a consistent but simplified approach is expected to be used. In particular, for any retail portfolio, days past due will be considered in determining loans transferred to stage 2 and the more significant portfolios will supplement this information with additional mechanisms linked to PDs. HSBC expects to finalise the transfer criteria for the more significant portfolios during 2016.

- Stage 1

In accordance with IAS 39 (see page 356), incurred but not yet identified impairment is recognised on individually assessed loans for which no evidence of impairment has been specifically identified by estimating a collective allowance determined after taking into account factors including the estimated period between impairment occurring and the loss being identified. This is assessed empirically on a periodic basis and may vary over time. Similarly, for homogeneous groups of loans and advances which are assessed under IAS 39 on a collective basis, the inherent loss is determined using risk factors including the period of time between loss identification and write-off which is regularly benchmarked against actual outcomes. Under IFRS 9, financial assets which are not considered to have significantly increased in credit risk have loss allowances measured at an amount equal to 12 months ECL. This 12-month time horizon is likely to be equal to or longer than the period estimated under IAS 39 (typically between 6 and 12 months), which will tend to result in IFRS 9 allowances being larger. In the absence of models able to calculate IFRS 9 allowances, it is not possible to estimate the difference.

Methodologies applied to measure 12-month and lifetime expected credit losses

ECLs are calculated using three main components, i.e. a probability of default ('PD'), a loss given default ('LGD') and the exposure at default ('EAD'). For accounting purposes, the 12-month and lifetime PDs represent the probability of a default occurring over the next 12 months or the lifetime of the financial instruments, respectively, based on conditions existing at the balance sheet date and future economic conditions that affect credit risk. The LGD represents losses expected on default, taking into account the mitigating effect of collateral, its expected value when realised and the time value of money. The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdown of a committed facility.

12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD rather than the 12-month PD.

Credit loss modelling techniques

HSBC plans to base the ECL calculations on the systems used to calculate Basel expected losses ('EL's). This is considered to be most efficient given the similarities in the calculations. However, certain adjustments need to be made to the Basel risk components (PD, LGD, and EAD) to meet IFRS 9 requirements.

For wholesale portfolios and material residential mortgage and fixed-term loan portfolios, ECL will be calculated at the individual loan level. The main adjustments necessary to Basel risk components are explained in the table below:

Model	Regulatory capital	IFRS 9
PD	• Through the cycle (represents long-run average PD throughout a full economic cycle) • The definition of default includes a backstop of 90+ days past due, although this has been modified to 180+ days past due for some portfolios, particularly UK and US mortgages	• Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD) • Default backstop of 90+ days past due for all portfolios
EAD	• Cannot be lower than current balance	• Amortisation captured for term products
LGD	• Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn) • Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data • Discounted using cost of capital • All collection costs included	• Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as changes in value of collateral) • No floors • Discounted using the original effective interest rate of the loan • Only costs associated with obtaining/selling collateral included
Other		• Discounted back from point of default to balance sheet date

IFRS 9 PD and LGD estimates also have to be flexed to capture the effects of forward-looking macroeconomic variables. The aim is to use existing stress testing models to measure these effects. Transferring between stages will be applied at individual loan level and will also capture the effects of forward-looking macroeconomic variables.

For material non-term retail loans, transfer between stages will also be applied at individual loan level. However, loans will be aggregated into segments based on PD or other risk drivers for the purpose of ECL measurement, to make the calculations more efficient. For smaller portfolios where less information is available, simplified approaches will be applied which will result in more aggregated transfers between stages and ECL calculation. Such aggregation will affect the granularity of disclosure.

A new global committee, supported by Global Risk Strategy, internal economics experts and external economic forecasting services, will be established to consider and approve the forward-looking macroeconomic assumptions that should be applied, with the objective of developing unbiased internally coherent economic scenarios for each jurisdiction. This committee will also be charged with ensuring that ECL allowance meets the IFRS 9 measurement principle for unbiased and probability-weighted amounts derived by evaluating a range of possible outcomes. The calculation methodologies to meet this principle and review and challenge structures are in the process of being developed. In addition, local risk committees will review and challenge the impairment allowances recognised in the individual legal entity's financial statements.

Fair value through other comprehensive income

For financial assets measured at FVOCI, impairment determined in accordance with the policies and processes outlined above is recognised in profit or loss. The financial assets are recognised on the balance sheet at fair value so the amortised cost impairment allowance balance is disclosed as a memorandum item.

IFRS 15 'Revenue from Contracts with Customers'

In May 2014, the IASB issued IFRS 15 'Revenue from Contracts with Customers'. The original effective date of IFRS 15 has been delayed by one year and the standard is now effective for annual periods beginning on or after 1 January 2018 with early application permitted. IFRS 15 provides a principles-based approach for revenue recognition, and introduces the concept of recognising revenue for obligations as they are satisfied. The standard should be applied retrospectively, with certain practical expedients available. HSBC has assessed the impact of IFRS 15 and it expects that the standard will have no significant effect, when applied, on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

IFRS 16 'Leases'

In January 2016, the IASB issued IFRS 16 'Leases' with an effective date of annual periods beginning on or after 1 January 2019. IFRS 16 results in lessees accounting for most leases within the scope of the standard in a manner similar to the way in which finance leases are currently accounted for under IAS 17 'Leases'. Lessees will recognise a 'right of use' asset and a corresponding financial liability on the balance sheet. The asset will be amortised over the length of the lease and the financial liability measured at amortised cost. Lessor accounting remains substantially the same as in IAS 17. HSBC is currently assessing the impact of IFRS 16 and it is not practicable to quantify the effect as at the date of the publication of these financial statements.

(d) Presentation of information

Disclosures under IFRS 4 'Insurance Contracts' and IFRS 7 'Financial Instruments: Disclosures' concerning the nature and extent of risks relating to insurance contracts and financial instruments are included in the audited sections of the 'Report of the Directors: Risk' on pages 101 to 226.

Capital disclosures under IAS 1 'Presentation of Financial Statements' are included in the audited sections of 'Report of the Directors: Capital' on pages 227 to 248.

Disclosures relating to HSBC's securitisation activities and structured products are included in the audited section of 'Report of the Directors: Risk' on pages 101 to 226.

In accordance with HSBC's policy to provide disclosures that help investors and other stakeholders understand the Group's performance, financial position and changes thereto, the information provided in the Notes on the Financial Statements and the Report of the Directors goes beyond the minimum levels required by accounting standards, statutory and regulatory requirements and listing rules. In particular, HSBC provides additional disclosures having regard to the recommendations of the Enhanced Disclosures Task Force report 'Enhancing the Risk Disclosures of Banks' issued in October 2012 and 'Impact of Expected Credit Loss Approaches on Bank Risk Disclosures' issued in December 2015. The report aims to help financial institutions identify areas that investors had highlighted as needing better and more transparent information about banks' risks, and how these risks relate to performance measurement and reporting. In addition, HSBC follows the British Bankers' Association Code for Financial Reporting Disclosure ('the BBA Code'). The BBA Code aims to increase the quality and comparability of UK banks' disclosures and sets out five disclosure principles together with supporting guidance. In line with the principles of the BBA Code, HSBC assesses good practice recommendations issued from time to time by relevant regulators and standard setters and will assess the applicability and relevance of such guidance, enhancing disclosures where appropriate.

In publishing the parent company financial statements together with the Group financial statements, HSBC Holdings has taken advantage of the exemption in section 408(3) of the Companies Act 2006 not to present its individual income statement and related notes.

HSBC's consolidated financial statements are presented in US dollars because the US dollar and currencies linked to it form the major currency bloc in which HSBC transacts and funds its business. The US dollar is also HSBC Holdings' functional currency because the US dollar and currencies linked to it are the most significant currencies relevant to the underlying transactions, events and conditions of its subsidiaries, as well as representing a significant proportion of its funds generated from financing activities.

(e) Critical accounting estimates and judgements

The preparation of financial information requires the use of estimates and judgements about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items listed below, 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 conclusions from those reached by management for the purposes of the 2015 Financial Statements. Management's selection of HSBC's accounting policies which contain critical estimates and judgements is listed below; it reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved:

- Impairment of loans and advances: Note 1(j);
- Deferred tax assets: Note 8;
- Valuation of financial instruments: Note 13;
- Impairment of interests in associates: Note 19;
- Goodwill impairment: Note 20;
- Provisions: Note 29.

(f) Going concern

The financial statements are prepared on a going concern basis, as the Directors are satisfied that the Group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows and capital resources.

(g) Consolidation and related disclosures

HSBC controls and consequently consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Control is initially assessed based on consideration of all facts and circumstances, and is subsequently reassessed when there are significant changes to the initial setup.

Where an entity is governed by voting rights, HSBC would consolidate when it holds, directly or indirectly, the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power over relevant activities or holding the power as agent or principal.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured at the fair value of the consideration, including contingent consideration, given at the date of exchange. Acquisition-related costs are recognised as an expense in the income statement in the period in which they are incurred. The acquired identifiable assets, liabilities and contingent liabilities are generally measured at their fair values at the date of acquisition. Goodwill is measured as the excess of the aggregate of the consideration transferred, the amount of non-controlling interest and the fair value of HSBC's previously held equity interest, if any, over the net of the amounts of the identifiable assets acquired and the liabilities assumed. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. For acquisitions achieved in stages, the previously held equity interest is remeasured at the acquisition-date fair value with the resulting gain or loss recognised in the income statement.

All intra-HSBC transactions are eliminated on consolidation.

The consolidated financial statements of HSBC also include the attributable share of the results and reserves of joint ventures and associates, based on either financial statements made up to 31 December or pro-rated amounts adjusted for any material transactions or events occurring between the date of financial statements available and 31 December.

(h) Foreign currencies

Transactions in foreign currencies are recorded in the functional currency at the rate of exchange prevailing on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the rate of exchange at the balance sheet date. Any resulting exchange differences are included in the income statement. Non-monetary assets and liabilities that are measured at historical cost in a foreign currency are translated into the functional currency using the rate of exchange at the date of the initial transaction. Non-monetary assets and liabilities measured at fair value in a foreign currency are translated into the functional currency using the rate of exchange at the date the fair value was determined. Any foreign exchange component of a gain or loss on a non-monetary item is recognised either in other comprehensive income or in the income statement depending on where the gain or loss on the underlying non-monetary item is recognised.

In the consolidated financial statements, the assets and liabilities of branches, subsidiaries, joint ventures and associates whose functional currency is not US dollars are translated into the Group's presentation currency at the rate of exchange at the balance sheet date, while their results are translated into US dollars at the average rates of exchange for the reporting period. Exchange differences arising from the retranslation of opening foreign currency net assets, and the retranslation of the results for the reporting period from the average rate to the exchange rate at the period end, are recognised in other comprehensive income. Exchange differences on a monetary item that is part of a net investment in a foreign operation are recognised in the income statement of the separate financial statements and in other comprehensive income in consolidated financial statements. On disposal of a foreign operation, exchange differences previously recognised in other comprehensive income are reclassified to the income statement as a reclassification adjustment.

(i) Loans and advances to banks and customers

These include loans and advances originated by HSBC, not classified as held for trading or designated at fair value. They are recognised when cash is advanced to a borrower and are derecognised when either the borrower repays its obligations or the loans are sold or substantially all the risks and rewards of ownership are transferred. They are initially recorded at fair value plus any directly attributable transaction costs and are subsequently measured at amortised cost using the effective interest method, less impairment allowance.

Loans and advances are reclassified to 'Assets held for sale' when they meet the criteria presented in Note 23, though their measurement remains in accordance with this policy.

HSBC may commit to underwrite loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. On drawdown, the loan is classified as held for trading. When HSBC intends to hold the loan, a provision on the loan commitment is only recorded where it is probable that HSBC will incur a loss. On inception, the loan to be held is recorded at its fair value and subsequently measured at amortised cost. For certain transactions, such as leveraged finance and syndicated lending activities, the cash advanced may not be the best evidence of the fair value of the loan. For these loans, where the initial fair value is lower than the cash amount advanced, the difference is charged to the income statement in other operating income. The write-down is recovered over the life of the loan through the recognition of interest income, unless the loan becomes impaired.

(j) Impairment of loans and advances and available-for-sale financial assets

Critical accounting estimates and judgements

Impairment of loans and advances

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. See the 'Movement in impairment allowances by industry sector and by geographical region' table on page 134 for a breakdown of individual and collective impairment allowances.

Collective impairment allowances are subject to estimation uncertainty, in part because it is not practicable to identify losses on an individual loan basis due to 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 incurred losses is likely to be greater or less than 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.

For individually assessed loans, 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, including the consideration of whether payments are contractually past-due and the consideration of other 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.

HSBC might 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 or 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. Judgements are involved in differentiating the credit risk characteristics of forbearance cases, including those which return to performing status following renegotiation. Where collectively assessed loan portfolios include significant levels of loan forbearance, portfolios are segmented to reflect the different credit risk characteristics of forbearance cases, and estimates are made of the incurred losses inherent within each forbearance portfolio segment. 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.

Impairment of loans and advances

Losses for impaired loans are recognised when there is objective evidence that impairment of a loan or portfolio of loans has occurred. Impairment allowances that are calculated on individual loans or on groups of loans assessed collectively are recorded as charges to the income statement and are recorded against the carrying amount of impaired loans on the balance sheet. Losses which may arise from future events are not recognised.

Individually assessed loans and advances

The factors considered in determining whether a loan is individually significant for the purposes of assessing impairment include the size of the loan, the number of loans in the portfolio, the importance of the individual loan relationship and how this is managed. Loans that are determined to be individually significant based on the above and other relevant factors will be individually assessed for impairment, except when volumes of defaults and losses are sufficient to justify treatment under a collective methodology.

Loans considered as individually significant are typically to corporate and commercial customers, are for larger amounts and are managed on an individual basis. For these loans, HSBC considers on a case-by-case basis at each balance sheet date whether there is any objective evidence that a loan is impaired. The criteria used to make this assessment include:

- known cash flow difficulties experienced by the borrower;
- contractual payments of either principal or interest being past due for more than 90 days;
- the probability that the borrower will enter bankruptcy or other financial realisation;
- a concession granted to the borrower for economic or legal reasons relating to the borrower's financial difficulty that results in forgiveness or postponement of principal, interest or fees, where the concession is not insignificant; and
- there has been deterioration in the financial condition or outlook of the borrower such that its ability to repay is considered doubtful.

For loans where objective evidence of impairment exists, impairment losses are determined considering the following factors:

- HSBC's aggregate exposure to the customer;
- the viability of the customer's business model and its capacity to trade successfully out of financial difficulties and generate sufficient cash flow to service debt obligations;
- the amount and timing of expected receipts and recoveries;
- the likely dividend available on liquidation or bankruptcy;
- the extent of other creditors' commitments ranking ahead of, or *pari passu* with, HSBC and the likelihood of other creditors continuing to support the company;
- the complexity of determining the aggregate amount and ranking of all creditor claims and the extent to which legal and insurance uncertainties are evident;
- the realisable value of security (or other credit mitigants) and likelihood of successful repossession;
- the likely costs of obtaining and selling collateral as part of foreclosure;
- the ability of the borrower to obtain, and make payments in, the currency of the loan if not denominated in local currency; and
- when available, the secondary market price of the debt.

The determination of the realisable value of security is based on the most recently updated market value at the time the impairment assessment is performed. The value is not adjusted for expected future changes in market prices, though adjustments are made to reflect local conditions such as forced sale discounts.

Impairment losses are calculated by discounting the expected future cash flows of a loan, which include expected future receipts of contractual interest, at the loan's original effective interest rate or an approximation thereof, and comparing the resultant present value with the loan's current carrying amount. The impairment allowances on individually significant accounts are reviewed at least quarterly and more regularly when circumstances require.

Collectively assessed loans and advances

Impairment is assessed collectively to cover losses which have been incurred but have not yet been identified on loans subject to individual assessment or for homogeneous groups of loans that are not considered individually significant. Retail lending portfolios are generally assessed for impairment collectively as the portfolios are generally large homogeneous loan pools.

Incurred but not yet identified impairment

Individually assessed loans for which no evidence of impairment has been specifically identified on an individual basis are grouped together according to their credit risk characteristics for a collective impairment assessment. These credit risk characteristics may include country of origination, type of business involved, type of products offered, security obtained or other relevant factors. This assessment captures impairment losses that HSBC has incurred as a result of events occurring before the balance sheet date which HSBC is not able to identify on an individual loan basis, and that can be reliably estimated. When information becomes available which identifies losses on individual loans within a group, those loans are removed from the group and assessed individually.

The collective impairment allowance is determined after taking into account:

- historical loss experience in portfolios of similar credit risk characteristics (for example, by industry sector, loan grade or product);
- the estimated period between a loss occurring and the loss being identified and evidenced by the establishment of an appropriate allowance against the individual loan; and
- management's judgement as to whether current economic and credit conditions are such that the actual level of inherent losses at the balance sheet date is likely to be greater or less than that suggested by historical experience.

The period between a loss occurring and its identification is estimated by management for each identified portfolio based on economic and market conditions, customer behaviour, portfolio management information, credit management techniques and collection and recovery experiences in the market. As it is assessed empirically on a periodic basis, the estimated period may vary over time as these factors change.

Homogeneous groups of loans and advances

Statistical methods are used to determine collective impairment losses for homogeneous groups of loans not considered individually significant. The methods that are used to calculate collective allowances are:

- When appropriate empirical information is available, HSBC utilises roll-rate methodology, which employs statistical analyses of historical data and experience of delinquency and default to reliably estimate the amount of the loans that will eventually be written off as a result of the events occurring before the balance sheet date but which HSBC is not able to identify individually. Individual loans are grouped using ranges of past due days; statistical analysis is then used to estimate the likelihood that loans in each range will progress through the various stages of delinquency and become irrecoverable. Additionally, individual loans are segmented based on their credit characteristics as described above. In applying this methodology, adjustments are made to estimate the periods of time between a loss event occurring and its discovery, for example through a missed payment (known as the emergence period) and the period of time between discovery and write-off (known as the outcome period). Current economic conditions are also evaluated when calculating the appropriate level of allowance required to cover inherent loss. In certain highly-developed markets, sophisticated models also take into account behavioural and account management trends as revealed in, for example, bankruptcy and rescheduling statistics.
- When the portfolio size is small or when information is insufficient or not reliable enough to adopt a roll-rate methodology, HSBC adopts a basic formulaic approach based on historical loss rate experience, or a discounted cash flow model. Where a basic formulaic approach is undertaken, the period between a loss event occurring and its identification is explicitly estimated by local management, and is typically between six and twelve months.

The inherent loss within each portfolio is assessed on the basis of statistical models using historical data observations which are updated periodically to reflect recent portfolio and economic trends. When the most recent trends arising from changes in economic, regulatory or behavioural conditions are not fully reflected in the statistical models, they are taken into account by adjusting the impairment allowances derived from the statistical models to reflect these changes as at the balance sheet date.

Write-off of loans and advances

Loans (and the related impairment allowance accounts) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Reversals of impairment

If the amount of an impairment loss decreases in a subsequent period, and the decrease can be related objectively to an event occurring after the impairment was recognised, the excess is written back by reducing the loan impairment allowance account accordingly. The write-back is recognised in the income statement.

Assets acquired in exchange for loans

Non-financial assets acquired in exchange for loans as part of an orderly realisation are recorded as 'Assets held for sale' and reported in 'Other assets' if those assets are classified as held for sale. The asset acquired is recorded at the lower of its fair value less costs to sell and the carrying amount of the loan (net of impairment allowance) at the date of exchange. No depreciation is charged in respect of assets held for sale. Write-downs of the acquired asset to fair value less cost to sell and any reversals of previous write-downs are recognised in the income statement in 'Other operating income', together with any realised gains or losses on disposal.

Renegotiated loans

Loans subject to collective impairment assessment whose terms have been renegotiated are no longer considered past due, but are treated as up to date loans for measurement purposes once a minimum number of payments required have been received. Where collectively assessed loan portfolios include significant levels of renegotiated loans, these loans are segregated from other parts of the loan portfolio for the purposes of collective impairment assessment to reflect their risk profile. Loans subject to individual impairment assessment, whose terms have been renegotiated, are subject to ongoing review to determine whether they remain impaired. The carrying amounts of loans that have been classified as renegotiated retain this classification until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is substantially a different financial instrument. Any new loans that arise following derecognition events will continue to be disclosed as renegotiated loans and are assessed for impairment as above.

Impairment of available-for-sale financial assets

Available-for-sale financial assets are assessed at each balance sheet date for objective evidence of impairment. If such evidence exists as a result of one or more events that occurred after the initial recognition of the financial asset (a 'loss event'), and that loss event has an impact which can be reliably measured on the estimated future cash flows of the financial asset, an impairment loss is recognised.

If the available-for-sale financial asset is impaired, the difference between its acquisition cost (net of any principal repayments and amortisation) and its current fair value, less any previous impairment loss recognised in the income statement, is recognised in the income statement.

Impairment losses are recognised in the income statement within 'Loan impairment charges and other credit risk provisions' for debt instruments and within 'Gains less losses from financial investments' for equities. The impairment methodologies for available-for-sale financial assets are set out as follows:

- **Available-for-sale debt securities.** In assessing objective evidence of impairment at the reporting date, HSBC considers all available evidence, including observable data or information about events specifically relating to the securities which may result in a shortfall in the recovery of future cash flows. Financial difficulties of the issuer, as well as other factors such as information about the issuers' liquidity, business and financial risk exposures, levels of and trends in default for similar financial assets, national and local economic trends and conditions, and the fair value of collateral and guarantees may be considered individually, or in combination, to determine if there is objective evidence of impairment.

  In addition, the performance of underlying collateral and the extent and depth of market price declines is relevant when assessing objective evidence of impairment of available-for-sale ABSs. The primary indicators of potential impairment are considered to be adverse fair value movements and the disappearance of an active market for a security, while changes in credit ratings are of secondary importance.

- **Available-for-sale equity securities.** Objective evidence of impairment may include specific information about the issuer as detailed above, but may also include information about significant changes in technology, markets, economics or the law that provides evidence that the cost of the equity securities may not be recovered.

  A significant or prolonged decline in the fair value of the equity below its cost is also objective evidence of impairment. In assessing whether it is significant, the decline in fair value is evaluated against the original cost of the asset at initial recognition. In assessing whether it is prolonged, the decline is evaluated against the continuous period in which the fair value of the asset has been below its original cost at initial recognition.

Once an impairment loss has been recognised, the subsequent accounting treatment for changes in the fair value of that asset depends on the type of asset:

- for an available-for-sale debt security, a subsequent decline in the fair value of the instrument is recognised in the income statement when there is objective evidence of impairment as a result of further decreases in the estimated future cash flows of the financial asset. Where there is no further objective evidence of impairment, the decline in the fair value of the financial asset is recognised in other comprehensive income. If the fair value of a debt security increases in a subsequent period, and the increase can be objectively related to an event occurring after the impairment loss was recognised in the income statement, or the instrument is no longer impaired, the impairment loss is reversed through the income statement;

- for an available-for-sale equity security, all subsequent increases in the fair value of the instrument are treated as a revaluation and are recognised in other comprehensive income. Impairment losses recognised on the equity security are not reversed through the income statement. Subsequent decreases in the fair value of the available-for-sale equity security are recognised in the income statement to the extent that further cumulative impairment losses have been incurred.

(k) Non-trading reverse repurchase and repurchase agreements

When securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid.

Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

(l) Operating income

Interest income and expense

Interest income and expense for all financial instruments except for those classified as held for trading or designated at fair value (except for debt securities issued by HSBC and derivatives managed in conjunction with those debt securities) are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability.

Interest on impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Non-interest income and expense

Fee income is earned from a diverse range of services provided by HSBC to its customers. Fee income is accounted for as follows:

- income earned on the execution of a significant act is recognised as revenue when the act is completed (for example, fees arising from negotiating or participating in the negotiation of a transaction for a third party, such as an arrangement for the acquisition of shares or other securities);
- income earned from the provision of services is recognised as revenue as the services are provided (for example, asset management, portfolio and other management advisory and service fees); and
- income which forms an integral part of the effective interest rate of a financial instrument is recognised as an adjustment to the effective interest rate (for example, certain loan commitment fees) and recorded in 'Interest income'.

Net trading income comprises all gains and losses from changes in the fair value of financial assets and financial liabilities held for trading, together with the related interest income, expense and dividends.

Dividend income is recognised when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

The accounting policies for **net income/(expense) from financial instruments designated at fair value** and for **net insurance premium income** are disclosed in Note 2 and Note 3.

2 Net income from financial instruments designated at fair value

Accounting policy

Net income from financial instruments designated at fair value includes all gains and losses from changes in the fair value of financial assets and liabilities designated at fair value through profit or loss, including derivatives that are managed in conjunction with those financial assets and liabilities, and liabilities under investment contracts. Interest income, interest expense and dividend income in respect of those financial instruments are also included, except for interest arising from debt securities issued by HSBC and derivatives managed in conjunction with those debt securities, which is recognised in 'Interest expense'.

Net income from financial instruments designated at fair value

	2015 $m	2014 $m	2013 $m
Net income/(expense) arising on:			
– financial assets held to meet liabilities under insurance and investment contracts	**531**	2,300	3,170
– other financial assets designated at fair value	**89**	131	118
– derivatives managed in conjunction with other financial assets designated at fair value	**13**	(19)	(26)
	633	2,412	3,262
– liabilities to customers under investment contracts	**34**	(435)	(1,237)
– HSBC's long-term debt issued and related derivatives	**863**	508	(1,228)
– changes in own credit spread on long-term debt	**1,002**	417	(1,246)
– derivatives managed in conjunction with HSBC's issued debt securities	**(1,997)**	333	(3,743)
– other changes in fair value	**1,858**	(242)	3,761
– other financial liabilities designated at fair value	**3**	(23)	(39)
– derivatives managed in conjunction with other financial liabilities designated at fair value	**(1)**	11	10
	899	61	(2,494)
Year ended 31 December	**1,532**	2,473	768

HSBC Holdings

Net income/(expense) arising on HSBC Holdings long-term debt issued and related derivatives

	2015 $m	2014 $m	2013 $m
Net income/(expense) arising on:			
– changes in own credit spread on long-term debt	**348**	339	(695)
– derivatives managed in conjunction with HSBC Holdings issued debt securities	**(927)**	126	(1,558)
– other changes in fair value	**855**	(27)	1,213
Year ended 31 December	**276**	438	(1,040)

3 Net insurance premium income

Accounting policy

Premiums for life insurance contracts are accounted for when receivable, except in unit-linked insurance contracts where premiums are accounted for when liabilities are established.

Reinsurance premiums are accounted for in the same accounting period as the premiums for the direct insurance contracts to which they relate.

Net insurance premium income

	Non-linked insurance[1] $m	Linked life insurance $m	Investment contracts with DPF[2] $m	Total $m
Gross insurance premium income	7,506	1,409	2,097	11,012
Reinsurers' share of gross insurance premium income	(648)	(9)	–	(657)
Year ended 31 December 2015	**6,858**	**1,400**	**2,097**	**10,355**

Net insurance premium income (continued)

	Non-linked insurance[1] $m	Linked life insurance $m	Investment contracts with DPF[2] $m	Total $m
Gross insurance premium income	7,705	2,195	2,470	12,370
Reinsurers' share of gross insurance premium income	(441)	(8)	–	(449)
Year ended 31 December 2014	7,264	2,187	2,470	11,921
Gross insurance premium income	7,002	3,012	2,384	12,398
Reinsurers' share of gross insurance premium income	(450)	(8)	–	(458)
Year ended 31 December 2013	6,552	3,004	2,384	11,940

1 *Includes non-life insurance.*
2 *Discretionary participation features.*

4 Net insurance claims and benefits paid and movement in liabilities to policyholders

Accounting policy

Gross insurance claims for life insurance contracts reflect the total cost of claims arising during the year, including claim handling costs and any policyholder bonuses allocated in anticipation of a bonus declaration.

Maturity claims are recognised when due for payment. Surrenders are recognised when paid or at an earlier date on which, following notification, the policy ceases to be included within the calculation of the related insurance liabilities. Death claims are recognised when notified.

Reinsurance recoveries are accounted for in the same period as the related claim.

Net insurance claims and benefits paid and movement in liabilities to policyholders

	Non-linked insurance[1] $m	Linked life insurance $m	Investment contracts with DPF[2] $m	Total $m
Gross claims and benefits paid and movement in liabilities	7,746	1,398	2,728	11,872
– claims, benefits and surrenders paid	3,200	1,869	2,101	7,170
– movement in liabilities	4,546	(471)	627	4,702
Reinsurers' share of claims and benefits paid and movement in liabilities	(575)	(5)	–	(580)
– claims, benefits and surrenders paid	(153)	(64)	–	(217)
– movement in liabilities	(422)	59	–	(363)
Year ended 31 December 2015	**7,171**	**1,393**	**2,728**	**11,292**
Gross claims and benefits paid and movement in liabilities	7,770	2,765	3,188	13,723
– claims, benefits and surrenders paid	3,575	1,499	2,215	7,289
– movement in liabilities	4,195	1,266	973	6,434
Reinsurers' share of claims and benefits paid and movement in liabilities	(411)	33	–	(378)
– claims, benefits and surrenders paid	(176)	(88)	–	(264)
– movement in liabilities	(235)	121	–	(114)
Year ended 31 December 2014	7,359	2,798	3,188	13,345
Gross claims and benefits paid and movement in liabilities	6,892	3,379	3,677	13,948
– claims, benefits and surrenders paid	3,014	1,976	2,308	7,298
– movement in liabilities	3,878	1,403	1,369	6,650
Reinsurers' share of claims and benefits paid and movement in liabilities	(367)	111	–	(256)
– claims, benefits and surrenders paid	(164)	(426)	–	(590)
– movement in liabilities	(203)	537	–	334
Year ended 31 December 2013	6,525	3,490	3,677	13,692

1 *Includes non-life insurance.*
2 *Discretionary participation features.*

5 Operating profit

Operating profit is stated after the following items of income, expense, gains and losses, and loan impairment charges and other credit risk provisions:

	2015 $m	2014 $m	2013 $m
Income			
Interest recognised on impaired financial assets	**934**	1,137	1,261
Fees earned on financial assets or liabilities not held for trading nor designated at fair value, other than fees included in effective interest rate calculations on these types of assets and liabilities	**8,736**	9,438	9,799
Fees earned on trust and other fiduciary activities where HSBC holds or invests assets on behalf of its customers	**3,052**	3,253	3,176
Income from listed investments	**5,760**	6,726	5,432
Income from unlisted investments	**5,581**	5,874	6,860
Expense			
Interest on financial instruments, excluding interest on financial liabilities held for trading or designated at fair value	**(13,680)**	(15,322)	(14,610)
Fees payable on financial assets or liabilities not held for trading nor designated at fair value, other than fees included in effective interest rate calculations on these types of assets and liabilities	**(1,251)**	(1,427)	(1,396)
Fees payable relating to trust and other fiduciary activities where HSBC holds or invests assets on behalf of its customers	**(166)**	(185)	(171)
Payments under lease and sublease agreements	**(1,190)**	(1,548)	(1,425)
– minimum lease payments	**(1,058)**	(1,199)	(1,098)
– contingent rents and sublease payments	**(132)**	(349)	(327)
UK bank levy	**(1,421)**	(1,066)	(916)
Restructuring provisions	**(430)**	(147)	(179)
Gains/(losses)			
Impairment of available-for-sale equity securities	**(111)**	(373)	(175)
Gains/(losses) recognised on assets held for sale	**(244)**	220	(729)
Gains on the partial sale of shareholding in Industrial Bank	**1,372**	–	–
Gains/(losses) arising from dilution of interest in Industrial Bank and other associates and joint ventures	**–**	(32)	1,051
Gains on disposal of HSBC Bank (Panama) S.A.	**–**	–	1,107
Loan impairment charges and other credit risk provisions	**(3,721)**	(3,851)	(5,849)
– net impairment charge on loans and advances	**(3,592)**	(4,055)	(6,048)
– release of available-for-sale debt securities	**17**	319	211
– impairment in respect of other credit risk provisions	**(146)**	(115)	(12)

6 Employee compensation and benefits

	2015 $m	2014 $m	2013 $m
Wages and salaries	**17,245**	17,477	16,879
Social security costs	**1,600**	1,666	1,594
Post-employment benefits	**1,055**	1,223	723
Year ended 31 December	**19,900**	20,366	19,196

Average number of persons employed by HSBC during the year

	2015	2014	2013
Europe	**73,868**	74,024	75,334
Asia	**121,438**	116,492	114,216
Middle East and North Africa	**9,007**	8,616	9,181
North America	**21,506**	21,983	22,568
Latin America	**42,614**	43,652	47,496
Year ended 31 December	**268,433**	264,767	268,795

Reconciliation of total incentive awards granted to incentive awards in employee compensation and benefits

	2015 $m	2014 $m	2013 $m
Total incentive awards approved and granted for the current year[1]	**3,462**	3,660	3,920
Less: deferred bonuses awarded for the current year, expected to be recognised in future periods	**(387)**	(359)	(436)
Total incentives awarded and recognised in the current year	**3,075**	3,301	3,484
Current year charges for deferred bonuses from previous years	**483**	425	427
Other	**(40)**	(114)	(164)
Total incentive awards for the current year included in employee compensation and benefits	**3,518**	3,612	3,747

1 *This represents the amount of the Group variable pay pool that has been approved and granted. The total amount of Group variable pay pool approved by the Group Remuneration Committee is disclosed in the Directors' Remuneration Report on page 304.*

Income statement charge: deferred bonuses

	Current year bonus pool $m	Prior year bonus pools $m	Total $m
2015			
Charge recognised in 2015	**253**	**483**	**736**
– deferred share awards	**186**	**382**	**568**
– deferred cash awards	**67**	**101**	**168**
Charge expected to be recognised in 2016 or later	**387**	**346**	**733**
– deferred share awards	**260**	**279**	**539**
– deferred cash awards	**127**	**67**	**194**
2014			
Charge recognised in 2014	245	425	670
– deferred share awards	147	373	520
– deferred cash awards	98	52	150
Charge expected to be recognised in 2015 or later	359	381	740
– deferred share awards	250	334	584
– deferred cash awards	109	47	156
2013			
Charge recognised in 2013	269	427	696
– deferred share awards	188	354	542
– deferred cash awards	81	73	154
Charge expected to be recognised in 2014 or later	436	306	742
– deferred share awards	356	259	615
– deferred cash awards	80	47	127

Share-based payments

Accounting policy

HSBC enters into both equity-settled and cash-settled share-based payment arrangements with its employees as compensation for services provided by employees. The cost of equity-settled share-based payment arrangements with employees is measured by reference to the fair value of equity instruments on the date they are granted and recognised as an expense on a straight-line basis over the vesting period, with a corresponding credit to 'Retained earnings'.

For cash-settled share-based payment arrangements, the services acquired and liability incurred are measured at the fair value of the liability and recognised as the employees render service. Until settlement, the fair value of the liability is re-measured, with changes in fair value recognised in the income statement.

Fair value is determined by using appropriate valuation models. Vesting conditions include service conditions and performance conditions; any other features of the arrangement are non-vesting conditions. Market performance conditions and non-vesting conditions are taken into account when estimating the fair value of the award at the date of grant. Vesting conditions other than market performance conditions are not taken into account in the initial estimate of the fair value at the grant date. They are taken into account by adjusting the number of equity instruments included in the measurement of the transaction.

A cancellation that occurs during the vesting period is treated as an acceleration of vesting and is recognised immediately for the amount that would otherwise have been recognised for services over the vesting period.

Where HSBC Holdings enters into share-based payment arrangements involving employees of subsidiaries for which the subsidiaries are re-charged, the difference between the cost of the share-based payment arrangement and the fair value of the equity instruments expected to be issued to satisfy those arrangements is recognised as an adjustment to 'Investment in subsidiaries' over the vesting period.

'Wages and salaries' include the effect of share-based payments arrangements, of which $757m were equity settled (2014: $732m; 2013: $630m), as follows:

	2015 $m	2014 $m	2013 $m
Restricted share awards	**748**	738	599
Savings-related and other share award option plans	**43**	36	63
Year ended 31 December	**791**	774	662

HSBC share awards

Award	Policy	Purpose
Restricted share awards (including annual incentive awards delivered in shares) and GPSP	• An assessment of performance over the relevant period ending on 31 December is used to determine the amount of the award to be granted. • Deferred awards generally require employees to remain in employment over the vesting period and are not subject to performance conditions after the grant date. • Deferred share awards generally vest over a period of three years and GPSP awards vest after five years. • Vested shares may be subject to a retention requirement (restriction) post-vesting. GPSP awards are retained until cessation of employment. • Awards granted from 2010 onwards are subject to a malus provision prior to vesting. • Awards granted to Material Risk Takers from 2015 onwards are subject to clawback post vesting.	• To drive and reward performance consistent with strategy and align to shareholder interests. • Deferral provides an incentive for a longer-term commitment and the ability to apply malus.
International Employee Share Purchase Plan ('ShareMatch')	• The plan was first introduced in Hong Kong in 2013 and now includes employees based in 25 jurisdictions. • Shares are purchased in the market each quarter up to a maximum value of £750, or the equivalent in local currency. • Matching awards are added at a ratio of one free share for every three purchased. • Matching awards vest subject to continued employment and the retention of the purchased shares for a maximum period of two years and nine months.	• To align the interests of employees with the creation of shareholder value.

Movement on HSBC share awards

	2015 Number (000s)	2014 Number (000s)
Restricted share awards outstanding at 1 January	**116,483**	116,932
Additions during the year	**80,749**	82,871
Released in the year	**(75,235)**	(78,224)
Forfeited in the year	**(3,332)**	(5,096)
Restricted share awards outstanding at 31 December	**118,665**	116,483
Weighted average fair value of awards granted ($)	**9.67**	10.18

HSBC share option plans

Main plans	Policy	Purpose
Savings-related share option plans ('Sharesave')	• Two plans: the UK Plan and the International Plan. The last grant of options under the International Plan was in 2012. • From 2014, eligible employees can save up to £500 per month with the option to use the savings to acquire shares. • Exercisable within six months following either the third or fifth anniversaries of the commencement of a three-year or five-year contract, respectively. • The exercise price is set at a 20% (2014: 20%) discount to the market value immediately preceding the date of invitation.	• To align the interests of employees with the creation of shareholder value.
HSBC Holdings Group share option plan	• Plan ceased in May 2005. • Exercisable between the third and tenth anniversaries of the date of grant.	• Long-term incentive plan between 2000 and 2005 during which certain HSBC employees were awarded share options.

Calculation of fair values

The fair values of share options are calculated using a Black-Scholes model. The fair value of a share award is based on the share price at the date of the grant.

Movement on HSBC share option plans

	Savings-related share option plans		HSBC Holdings Group share option plan	
	Number (000s)	WAEP[1] £	Number (000s)	WAEP[1] £
Outstanding at 1 January 2015	**66,366**	**4.89**	**6,374**	**7.29**
Granted during the year[2]	**52,629**	**4.05**	**–**	**–**
Exercised during the year[3]	**(21,120)**	**4.45**	**–**	**–**
Expired during the year	**(23,100)**	**5.11**	**(6,374)**	**7.29**
Outstanding at 31 December 2015	**74,775**	**4.36**	**–**	**–**
Weighted average remaining contractual life (years)	**3.92**		**–**	
Outstanding at 1 January 2014	93,760	4.04	55,026	7.23
Granted during the year[2]	28,689	5.19	–	–
Exercised during the year[3]	(50,393)	3.48	(1)	7.22
Expired during the year	(5,690)	4.81	(48,651)	7.22
Outstanding at 31 December 2014	66,366	4.89	6,374	7.29
Weighted average remaining contractual life (years)	2.66		0.30	

1 *Weighted average exercise price.*
2 *The weighted average fair value of options granted during the year was $1.09 (2014: $1.90).*
3 *The weighted average share price at the date the options were exercised was $8.50 (2014: $9.91) and $0 (2014: $9.49) for the savings-related share option plans and HSBC Holdings Group share option plan, respectively.*

Post-employment benefit plans

Accounting policy

HSBC operates a number of pension and other post-employment benefit plans throughout the world. These plans include both defined benefit and defined contribution plans and various other post-employment benefits such as post-employment healthcare.

Payments to defined contribution plans and state-managed retirement benefit plans, where HSBC's obligations under the plans are equivalent to a defined contribution plan, are charged as an expense as the employees render service.

The defined benefit pension costs and the present value of defined benefit obligations are calculated at the reporting date by the schemes' actuaries using the projected unit credit method. The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability and is presented in operating expenses.

The past service cost, which is charged immediately to the income statement, is the change in the present value of the defined benefit obligation for employee service in prior periods resulting from a plan amendment (the introduction or withdrawal of, or changes to, a defined benefit plan) or curtailment (a significant reduction by the entity in the number of employees covered by a plan). A settlement is a transaction that eliminates all further legal and constructive obligations for part or all of the benefits provided under a defined benefit plan, other than a payment of benefits to, or on behalf of, employees that is set out in the terms of the plan and included in the actuarial assumptions.

Re-measurements of the net defined benefit asset or liability, which comprise actuarial gains and losses, return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income.

Actuarial gains and losses comprise experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred), as well as the effects of changes in actuarial assumptions.

The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets. Any net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

The cost of obligations arising from other post-employment defined benefit plans, such as defined benefit health-care plans, are accounted for on the same basis as defined benefit pension plans.

The Group operates 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'). The Pension Risk section on page 189 and the Appendix to Risk on page 225 contain details about the characteristics, risks and amount, timing and uncertainty of future cash flows and policies and practices associated with the principal plan.

Income statement charge

	2015 $m	2014 $m	2013 $m
Defined benefit pension plans	**256**	469	54
Defined contribution pension plans	**793**	687	597
Pension plans	**1,049**	1,156	651
Defined benefit and contribution healthcare plans	**6**	67	72
Year ended 31 December	**1,055**	1,223	723

Net assets/(liabilities) recognised on the balance sheet in respect of defined benefit plans

	Fair value of plan assets $m	Present value of defined benefit obligations $m	Effect of limit on plan surpluses $m	Total $m
Defined benefit pension plans	**41,424**	**(38,326)**	**(14)**	**3,084**
Defined benefit healthcare plans	**141**	**(762)**	**–**	**(621)**
At 31 December 2015	**41,565**	**(39,088)**	**(14)**	**2,463**
Total employee benefit liabilities (within 'Accruals, deferred income and other liabilities')				**(2,809)**
Total employee benefit assets (within 'Prepayments, accrued income and other assets')				**5,272**
Defined benefit pension plans	44,824	(42,062)	(17)	2,745
Defined benefit healthcare plans	179	(1,104)	–	(925)
At 31 December 2014	45,003	(43,166)	(17)	1,820
Total employee benefit liabilities (within 'Accruals, deferred income and other liabilities')				(3,208)
Total employee benefit assets (within 'Prepayments, accrued income and other assets')				5,028

Cumulative actuarial gains/(losses) recognised in other comprehensive income

	2015 $m	2014 $m	2013 $m
At 1 January	**(2,026)**	(4,445)	(3,844)
HSBC Bank (UK) Pension Scheme	**121**	2,764	(1,524)
Other plans	**(55)**	(274)	796
Healthcare plans	**94**	(88)	143
Change in the effect of limit on plan surpluses	**(30)**	17	(16)
Total actuarial gains/(losses) recognised in other comprehensive income	**130**	2,419	(601)
At 31 December	**(1,896)**	(2,026)	(4,445)

HSBC pension plans

	2015 %	2014 %	2013 %
Percentage of HSBC employees:			
– enrolled in defined contribution plans	**66**	66	64
– enrolled in defined benefit plans	**22**	22	23
– covered by HSBC pension plans	**88**	88	87

Defined benefit pension plans

Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets		Present value of defined benefit obligations		Effect of the asset ceiling		Net defined benefit asset/(liability)	
	The principal plan $m	Other plans $m	The principal plan $m	Other plans $m	The principal plan $m	Other plans $m	The principal plan $m	Other plans $m
At 1 January 2015	**35,244**	**9,580**	**(30,480)**	**(11,582)**	**–**	**(17)**	**4,764**	**(2,019)**
Current service cost	**–**	**–**	**(129)**	**(268)**	**–**	**–**	**(129)**	**(268)**
Past service cost and gains/(losses) from settlements	**–**	**(3)**	**(53)**	**71**	**–**	**–**	**(53)**	**68**
Service cost	**–**	**(3)**	**(182)**	**(197)**	**–**	**–**	**(182)**	**(200)**
Net interest income/(cost) on the net defined benefit asset/(liability)	**1,265**	**322**	**(1,088)**	**(371)**	**–**	**(2)**	**177**	**(51)**
Re-measurement effects recognised in other comprehensive income	**(1,521)**	**(394)**	**1,642**	**339**	**–**	**(30)**	**121**	**(85)**
– return on plan assets (excluding interest income)	**(1,521)**	**(394)**	**–**	**–**	**–**	**–**	**(1,521)**	**(394)**
– actuarial gains/(losses)	**–**	**–**	**1,392**	**339**	**–**	**(30)**	**1,392**	**309**
– other changes	**–**	**–**	**250**	**–**	**–**	**–**	**250**	**–**
Exchange differences	**(1,704)**	**(458)**	**1,443**	**529**	**–**	**35**	**(261)**	**106**
Contributions by HSBC	**376**	**279**	**–**	**–**	**–**	**–**	**376**	**279**
– normal	**159**	**227**	**–**	**–**	**–**	**–**	**159**	**227**
– special	**217**	**52**	**–**	**–**	**–**	**–**	**217**	**52**
Contributions by employees	**17**	**35**	**(17)**	**(35)**	**–**	**–**	**–**	**–**
Benefits paid	**(970)**	**(590)**	**970**	**649**	**–**	**–**	**–**	**59**
Administrative costs and taxes paid by plan	**(37)**	**(17)**	**37**	**17**	**–**	**–**	**–**	**–**
At 31 December 2015	**32,670**	**8,754**	**(27,675)**	**(10,651)**	**–**	**(14)**	**4,995**	**(1,911)**
Present value of defined benefit obligation relating to:								
– actives			**(6,310)**	**(5,350)**				
– deferreds			**(7,919)**	**(2,239)**				
– pensioners			**(13,446)**	**(3,062)**				
At 1 January 2014	31,665	8,957	(29,629)	(10,838)	–	(30)	2,036	(1,911)
Current service cost	–	–	(228)	(257)	–	–	(228)	(257)
Past service cost and gains/(losses) from settlements	–	(5)	(26)	11	–	–	(26)	6
Service cost	–	(5)	(254)	(246)	–	–	(254)	(251)
Net interest income/(cost) on the net defined benefit asset/(liability)	1,386	370	(1,291)	(425)	–	(4)	95	(59)
Re-measurement effects recognised in other comprehensive income	4,864	845	(2,100)	(1,034)	–	17	2,764	(172)
– return on plan assets (excluding interest income)	4,864	845	–	–	–	–	4,864	845
– actuarial losses	–	–	(2,317)	(987)	–	–	(2,317)	(987)
– other changes	–	–	217	(47)	–	17	217	(30)
Exchange differences	(2,112)	(316)	1,838	357	–	–	(274)	41
Contributions by HSBC	397	278	–	–	–	–	397	278
– normal	265	239	–	–	–	–	265	239
– special	132	39	–	–	–	–	132	39
Contributions by employees	38	17	(38)	(17)	–	–	–	–
Benefits paid	(954)	(543)	954	598	–	–	–	55
Administrative costs and taxes paid by plan	(40)	(23)	40	23	–	–	–	–
At 31 December 2014	35,244	9,580	(30,480)	(11,582)	–	(17)	4,764	(2,019)
Present value of defined benefit obligation relating to:								
– actives			(9,782)	(5,605)				
– deferreds			(8,799)	(2,498)				
– pensioners			(11,899)	(3,479)				

HSBC expects to make $458m of contributions to defined benefit pension plans during 2016. Benefits expected to be paid from the plans to retirees over each of the next five years, and in aggregate for the five years thereafter, are as follows:

Benefits expected to be paid from plans

	2016 $m	2017 $m	2018 $m	2019 $m	2020 $m	2021-2025 $m
The principal plan[1]	1,006	1,040	1,075	1,109	1,204	6,425
Other plans[1]	482	466	476	511	530	2,692

1 *The duration of the defined benefit obligation is 17.0 years for the principal plan under the disclosure assumptions adopted (2014: 19.8 years) and 13.9 years for all other plans combined (2014: 14.2 years).*

Fair value of plan assets by asset classes

	31 December 2015				31 December 2014			
	Value $m	**Quoted market price in active market $m**	**No quoted market price in active market $m**	**Thereof HSBC[1] $m**	Value $m	Quoted market price in active market $m	No quoted market price in active market $m	Thereof HSBC[1] $m
The principal plan								
Fair value of plan assets	**32,670**	**29,370**	**3,300**	**513**	35,244	31,355	3,889	930
– equities	**5,730**	**4,990**	**740**	**–**	5,502	4,557	945	–
– bonds	**22,704**	**22,704**	**–**	**–**	22,965	22,965	–	–
– derivatives	**1,011**	**–**	**1,011**	**513**	1,369	52	1,317	930
– other	**3,225**	**1,676**	**1,549**	**–**	5,408	3,781	1,627	–
Other plans								
Fair value of plan assets	**8,754**	**7,882**	**872**	**148**	9,580	6,390	3,190	(13)
– equities	**2,434**	**1,900**	**534**	**1**	2,534	1,778	756	11
– bonds	**5,719**	**5,458**	**261**	**2**	6,376	4,109	2,267	7
– derivatives	**7**	**–**	**7**	**1**	(100)	(8)	(92)	(107)
– other	**594**	**524**	**70**	**144**	770	511	259	76

1 *The fair value of plan assets includes derivatives entered into with HSBC Bank plc as detailed in Note 41.*

Post-employment defined benefit plans' principal actuarial financial assumptions

HSBC determines the discount rates to be applied to its obligations in consultation with the plans' local actuaries, on the basis of current average yields of high quality (AA-rated or equivalent) debt instruments with maturities consistent with those of the defined benefit obligations.

Key actuarial assumptions for the principal plan

	Discount rate %	**Inflation rate %**	**Rate of increase for pensions %**	**Rate of pay increase %**	**Interest credit rate %**
UK					
At 31 December 2015	**3.70**	**3.20**	**3.00**	**3.70**	**n/a**
At 31 December 2014	3.70	3.20	3.00	3.70	n/a
At 31 December 2013	4.45	3.60	3.30	4.10	n/a

Mortality tables and average life expectancy at age 65 for the principal plan

	Mortality table	**Life expectancy at age 65 for a male member currently:**		**Life expectancy at age 65 for a female member currently:**	
		Aged 65	**Aged 45**	**Aged 65**	**Aged 45**
UK					
At 31 December 2015	**SAPS S1[1]**	**23.6**	**25.0**	**24.9**	**26.7**
At 31 December 2014	SAPS S1[1]	23.6	25.2	25.0	26.9

1 *Self-administered Pension Scheme ('SAPS') Light Table with a multiplier of 1.01 for male pensioners and 1.02 for female pensioners. Improvements are projected in accordance with Continuous Mortality Investigation ('CMI') core projection model 2015 (2014: CMI 2014) with a long-term rate of improvement of 1.25% pa.*

Actuarial assumption sensitivities

The effect of changes in key assumptions on the principal plan

	HSBC Bank (UK) Pension Scheme	
	2015	2014
	$m	$m
Discount rate		
Change in pension obligation at year-end from a 25bps increase	**(1,107)**	(1,420)
Change in pension obligation at year-end from a 25bps decrease	**1,180**	1,523
Change in 2016 pension cost from a 25bps increase	**(58)**	(75)
Change in 2016 pension cost from a 25bps decrease	**55**	73
Rate of inflation		
Change in pension obligation at year-end from a 25bps increase	**747**	1,026
Change in pension obligation at year-end from a 25bps decrease	**(855)**	(1,184)
Change in 2016 pension cost from a 25bps increase	**28**	44
Change in 2016 pension cost from a 25bps decrease	**(31)**	(48)
Rate of increase for pensions in payment and deferred pensions		
Change in pension obligation at year-end from a 25bps increase	**990**	1,188
Change in pension obligation at year-end from a 25bps decrease	**(937)**	(1,127)
Change in 2016 pension cost from a 25bps increase	**37**	50
Change in 2016 pension cost from a 25bps decrease	**(34)**	(45)
Rate of pay increase		
Change in pension obligation at year-end from a 25bps increase	**119**	237
Change in pension obligation at year-end from a 25bps decrease	**(119)**	(232)
Change in 2016 pension cost from a 25bps increase	**4**	12
Change in 2016 pension cost from a 25bps decrease	**(4)**	(11)
Mortality		
Change in pension obligation from each additional year of longevity assumed	**670**	768

HSBC Holdings

Employee compensation and benefit expense in respect of HSBC Holdings' employees in 2015 amounted to $908m (2014: $681m). The average number of persons employed during 2015 was 2,656 (2014: 2,070). Employees who are members of defined benefit pension plans are principally members of either the HSBC Bank (UK) Pension Scheme or the HSBC International Staff Retirement Benefits Scheme. HSBC Holdings pays contributions to such plans for its own employees in accordance with the schedules of contributions determined by the trustees of the plans and recognises these contributions as an expense as they fall due. During 2015, most employees were transferred to the ServCo group (see page 242). Their remuneration and numbers have been included in the narrative above as they have been seconded back to HSBC Holdings on an interim basis.

Directors' emoluments

Details of directors' emoluments, pensions and their interests are disclosed in the Director' Remuneration Report on page 318.

7 Auditors' remuneration

	2015	2014	2013
	$m	$m	$m
Audit fees payable to PwC/KPMG[1]	**62.0**	40.6	43.4
Other audit fees payable	**1.2**	1.2	1.1
Year ended 31 December	**63.2**	41.8	44.5

1 *PwC became the Group's principal auditor in 2015. KPMG was the principal auditor during 2014.*

The following fees were payable by HSBC to the Group's principal auditor:

Fees payable by HSBC to PwC/KPMG[1]

	2015	2014	2013
	$m	$m	$m
Fees for HSBC Holdings' statutory audit[2]	**13.1**	13.4	12.9
– relating to current year	**13.1**	13.4	12.6
– relating to prior year	**–**	–	0.3
Fees for other services provided to HSBC	**85.1**	62.5	67.5
Audit of HSBC's subsidiaries[3]	**48.9**	27.2	30.5
Audit-related assurance services[4]	**16.6**	22.6	27.4
Taxation-related services:			
– taxation compliance services	**1.0**	1.5	1.3
– taxation advisory services	**0.9**	0.8	1.3
Other assurance services[5]	**2.8**	0.7	0.5
Other non-audit services[5]	**14.9**	9.7	6.5
Year ended 31 December	**98.2**	75.9	80.4

1 *PwC became the Group's principal auditor in 2015. KPMG was the principal auditor during 2014.*

2 *Fees payable to KPMG and PwC for the statutory audit of the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings. They include amounts payable for services relating to the consolidation returns of HSBC Holdings' subsidiaries which are clearly identifiable as being in support of the Group audit opinion. Excluded from fees are those payable to KPMG related to the transition of the audit to PwC of $1.2m.*
3 *Fees payable for the statutory audit of the financial statements of HSBC's subsidiaries, including the 2015 changes in scope and additional procedures performed due to the technology systems and data access controls matter as described on page 328.*
4 *Including services for assurance and other services that relate to statutory and regulatory filings, including comfort letters and interim reviews.*
5 *Including other permitted services relating to advisory, corporate finance transactions, etc.*

No fees were payable by HSBC to PwC or KPMG as principal auditor for the following types of services: internal audit services and services related to litigation, recruitment and remuneration.

Fees payable by HSBC's associated pension schemes to PwC/KPMG[1]

	2015 $000	2014 $000	2013 $000
Audit of HSBC's associated pension schemes	**352**	322	379
Audit related assurance services	**5**	5	5
Year ended 31 December	**357**	327	384

1 *PwC became the Group's principal auditor in 2015. KPMG was the principal auditor during 2014.*

No fees were payable by HSBC's associated pension schemes to PwC or KPMG as principal auditor for the following types of services: audit-related assurance services, internal audit services, other assurance services, services related to corporate finance transactions, valuation and actuarial services, litigation, recruitment and remuneration, and information technology.

In addition to the above, the estimated fees paid to PwC by third parties other than HSBC amount to $2.4m (KPMG 2014: $3.6m; KPMG 2013: $5.3m). In these cases, HSBC is connected with the contracting party and may therefore be involved in appointing PwC. These fees arise from services such as auditing mutual funds managed by HSBC and reviewing the financial position of corporate concerns which borrow from HSBC.

Fees payable for non-audit services for HSBC Holdings are not disclosed separately because such fees are disclosed on a consolidated basis for the HSBC Group.

8 Tax

Accounting policy

Income tax comprises current tax and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is recognised in the same statement in which the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year, calculated using tax rates enacted or substantively enacted by the balance sheet date, and any adjustment to tax payable in respect of previous years. HSBC provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities. Current tax assets and liabilities are offset when HSBC intends to settle on a net basis and the legal right to offset exists.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the balance sheet and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilised.

Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled, based on tax rates and laws enacted, or substantively enacted, by the balance sheet date. Deferred tax assets and liabilities are offset when they arise in the same tax reporting group and relate to income taxes levied by the same taxation authority, and when HSBC has a legal right to offset.

Deferred tax relating to actuarial gains and losses on post-employment benefits is recognised in other comprehensive income. Deferred tax relating to share-based payment transactions is recognised directly in equity to the extent that the amount of the estimated future tax deduction exceeds the amount of the related cumulative remuneration expense. Deferred tax relating to fair value re-measurements of available-for-sale investments and cash flow hedging instruments is charged or credited directly to other comprehensive income and is subsequently recognised in the income statement when the deferred fair value gain or loss is recognised in the income statement.

Critical accounting estimates and judgements

Deferred tax assets

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. In the absence of a history of taxable profits, the most significant judgements relate to expected future profitability and to the applicability of tax planning strategies, including corporate reorganisations.

In previous years the US deferred tax recognition relied on capital support from HSBC Holdings plc due to significant losses in the past. The US has been profitable in recent years and the improved performance is expected to continue, so the US deferred tax recognition is now based on projections of future business profits.

Tax expense

	2015 $m	2014 $m	2013 $m
Current tax			
– for this year	**3,882**	4,477	4,050
– adjustments in respect of prior years	**(85)**	(527)	(109)
	3,797	3,950	3,941
Deferred tax	**(26)**	25	824
– origination and reversal of temporary differences	**(153)**	(477)	739
– effect of changes in tax rates	**110**	83	93
– adjustments in respect of prior years	**17**	419	(8)
Year ended 31 December	**3,771**	3,975	4,765

1 *Current tax included Hong Kong profits tax of $1,294m (2014: $1,135m; 2013: $1,133m). The Hong Kong tax rate applying to the profits of subsidiaries assessable in Hong Kong was 16.5% (2014: 16.5%; 2013: 16.5%). Other overseas subsidiaries and overseas branches provided for taxation at the appropriate rates in the countries in which they operated.*

Tax reconciliation

The tax charged to the income statement differs from the tax charge that would apply if all profits had been taxed at the UK corporation tax rate as follows:

	2015		2014		2013	
	$m	%	$m	%	$m	%
Profit before tax	**18,867**		18,680		22,565	
Tax expense						
Tax at 20.25% (2014: 21.5%; 2013: 23.25%)	**3,821**	**20.25**	4,016	21.5	5,246	23.25
Effect of differently taxed overseas profits	**71**	**0.4**	33	0.2	(177)	(0.8)
Adjustments in respect of prior period liabilities	**(68)**	**(0.4)**	(108)	(0.6)	(117)	(0.5)
Deferred tax temporary differences not recognised/ (previously not recognised)	**(205)**	**(1.1)**	(154)	(0.8)	332	1.5
Effect of profits in associates and joint ventures	**(508)**	**(2.7)**	(547)	(2.9)	(543)	(2.4)
Tax effect of disposal of Ping An	**–**	**–**	–	–	(111)	(0.5)
Tax effect of reclassification of Industrial Bank	**–**	**–**	–	–	(317)	(1.4)
Non-taxable income and gains	**(728)**	**(3.9)**	(668)	(3.5)	(871)	(3.9)
Permanent disallowables	**978**	**5.2**	969	5.1	647	2.9
Change in tax rates	**110**	**0.6**	22	0.1	93	0.4
Local taxes and overseas withholding taxes	**416**	**2.2**	434	2.3	551	2.4
Other items	**(116)**	**(0.6)**	(22)	(0.1)	32	0.1
Year ended 31 December	**3,771**	**20.0**	3,975	21.3	4,765	21.1

The Group's profits are taxed at different rates depending on the country in which the profits arise. The key applicable tax rates include Hong Kong (16.5%), USA (35%) and UK (20.25%). If the Group's profits were taxed at the statutory rates of the countries in which the profits arise then the tax rate for the year would have been 20.65%. The effective tax rate for the year was 20.0% (2014: 21.3%) and is in line with expectations. We expect the effective tax rate to increase due to the introduction of the 8% surcharge on UK banking profits in 2016.

Accounting for taxes involves some estimation because the tax law is uncertain and the application requires a degree of judgement, which authorities may dispute. Liabilities are recognised based on best estimates of the probable outcome, taking into account external advice where appropriate. We do not expect significant liabilities to arise in excess of the amounts provided. HSBC only recognises current and deferred tax assets where recovery is probable.

Movement of deferred tax assets and liabilities

	Loan impairment provisions $m	Unused tax losses and tax credits $m	Derivatives, FVOD[1] and other investments $m	Insurance business $m	Expense provisions $m	Other $m	Total $m
Assets	**2,264**	**1,332**	**1,764**	**–**	**1,244**	**836**	**7,440**
Liabilities	**–**	**–**	**(233)**	**(861)**	**–**	**(759)**	**(1,853)**
At 1 January 2015	**2,264**	**1,332**	**1,531**	**(861)**	**1,244**	**77**	**5,587**
Income statement	**45**	**379**	**(557)**	**(143)**	**418**	**(116)**	**26**
Other comprehensive income			**22**		**156**	**321**	**499**
Equity						**4**	**4**
Reclassification to Assets Held for Sale	**(673)**	**(186)**	**76**	**87**	**(386)**	**(136)**	**(1,218)**
Foreign exchange and other adjustments	**(285)**	**(137)**	**98**	**(139)**	**(161)**	**17**	**(607)**
At 31 December 2015	**1,351**	**1,388**	**1,170**	**(1,056)**	**1,271**	**167**	**4,291**
Assets	**1,351**	**1,388**	**1,400**	**–**	**1,271**	**1,050**	**6,460[2]**
Liabilities	**–**	**–**	**(230)**	**(1,056)**	**–**	**(883)**	**(2,169)[2]**
Assets	2,837	978	1,383	–	1,398	1,748	8,344
Liabilities	–	–	(213)	(840)	–	(745)	(1,798)
At 1 January 2014	2,837	978	1,170	(840)	1,398	1,003	6,546
Income statement	(408)	396	361	(76)	(86)	(212)	(25)
Other comprehensive income	–	–	(12)	–	–	(680)	(692)
Equity	–	–	–	–	–	(20)	(20)
Foreign exchange and other adjustments	(165)	(42)	12	55	(68)	(14)	(222)
At 31 December 2014	2,264	1,332	1,531	(861)	1,244	77	5,587
Assets	2,264	1,332	1,764	–	1,244	836	7,440[2]
Liabilities	–	–	(233)	(861)	–	(759)	(1,853)[2]

1 *Fair value of own debt.*
2 *After netting off balances within countries, the balances as disclosed in the accounts are as follows: deferred tax assets $6,051m (2014: $7,111m); and deferred tax liabilities $1,760m (2014:$1,524m).*

The net deferred tax asset of $4.3bn (2014: $5.6bn) includes $4.5bn (2014: $4.1bn) deferred tax assets relating to the US. In applying judgement in recognising deferred tax assets, management has critically assessed all available information, including future business profit projections and the track record of meeting forecasts. On the basis of this assessment, management expects substantially all the US deferred tax assets to be utilised by 2021. The fall in net deferred tax assets since 31 December 2014 is mainly attributable to the reclassification of $1.2bn Brazilian net deferred tax balances to assets held for sale.

Unrecognised deferred tax

The amount of temporary differences, unused tax losses and tax credits for which no deferred tax asset is recognised in the balance sheet was $15.5bn (2014: $22.6bn). These amounts included unused state losses arising in the Group's US operations of $11.3bn (2014: $14.1bn). Of the total amounts unrecognised, $3.1bn (2014: $4.2bn) had no expiry date, $0.9bn (2014: $0.9bn) was scheduled to expire within 10 years and the remaining is expected to expire after 10 years.

Deferred tax is not recognised in respect of the Group's investments in subsidiaries and branches where HSBC is able to control the timing of remittance or other realisation and where remittance or realisation is not probable in the foreseeable future. The aggregate temporary differences relating to unrecognised deferred tax liabilities arising on investments in subsidiaries and branches is $9.1bn – the corresponding unrecognised deferred tax liability is $0.6bn.

9 Dividends

Dividends to shareholders of the parent company

	2015			2014			2013		
	Per share $	Total $m	Settled in scrip $m	Per share $	Total $m	Settled in scrip $m	Per share $	Total $m	Settled in scrip $m
Dividends paid on ordinary shares									
In respect of previous year:									
– fourth interim dividend	**0.20**	**3,845**	**2,011**	0.19	3,582	1,827	0.18	3,339	540
In respect of current year:									
– first interim dividend	**0.10**	**1,951**	**231**	0.10	1,906	284	0.10	1,861	167
– second interim dividend	**0.10**	**1,956**	**160**	0.10	1,914	372	0.10	1,864	952
– third interim dividend	**0.10**	**1,958**	**760**	0.10	1,918	226	0.10	1,873	864
Total	**0.50**	**9,710**	**3,162**	0.49	9,320	2,709	0.48	8,937	2,523
Total dividends on preference shares classified as equity (paid quarterly)	**62.00**	**90**		62.00	90		62.00	90	

Total coupons on capital securities classified as equity

		2015		2014	2013
	First call date	Per security	Total $m	Total $m	Total $m
Perpetual subordinated capital securities[1,3]					
– $2,200m	Apr 2013	$2.032	179	179	179
– $3,800m	Dec 2015	$2.000	304	304	304
Perpetual subordinated contingent convertible securities[2,3]					
– $2,250m	Sep 2024	$63.750	143	–	–
– $1,500m	Jan 2020	$56.250	70	–	–
– €1,500m	Sep 2022	€52.500	86	–	–
– $2,450m	Mar 2025	$63.750	78	–	–
Total			**860**	483	483

1 *Discretionary coupons are paid quarterly on the perpetual subordinated capital securities, in denominations of $25 per security.*
2 *Discretionary coupons are paid semi-annually on the perpetual subordinated contingent convertible securities, in denominations of 1,000 per security.*
3 *Further details of these securities can be found in Note 35.*

The Directors declared after the end of the year a fourth interim dividend in respect of the financial year ended 31 December 2015 of $0.21 per ordinary share, a distribution of approximately $4,134m. The fourth interim dividend will be payable on 20 April 2016 to holders of record on 4 March 2016 on the Principal Register in the UK, the Hong Kong or the Bermuda Overseas Branch registers. No liability was recorded in the financial statements in respect of the fourth interim dividend for 2015.

On 15 January 2016, HSBC paid a coupon on the $2,200m subordinated capital securities of $0.508 per security, a distribution of $45m. On 19 January 2016, HSBC paid a coupon on the $1,500m subordinated contingent convertible securities of $28.125 per security, a distribution of $42m. No liability was recorded in the balance sheet at 31 December 2015 in respect of these coupon payments.

In September 2015, HSBC issued a €1,000m subordinated contingent convertible securities as set out in Note 35 which is classified as equity under IFRSs. Coupons are paid semi-annually and to date no payments have fallen due.

10 Earnings per share

'Basic earnings per ordinary share' is calculated by dividing the profit attributable to ordinary shareholders of the parent company by the weighted average number of ordinary shares outstanding, excluding own shares held. 'Diluted earnings per ordinary share' is calculated by dividing the basic earnings, which require no adjustment for the effects of dilutive potential ordinary shares, by the weighted average number of ordinary shares outstanding, excluding own shares held, plus the weighted average number of ordinary shares that would be issued on conversion of dilutive potential ordinary shares.

Profit attributable to the ordinary shareholders of the parent company

	2015 $m	2014 $m	2013 $m
Profit attributable to shareholders of the parent company	**13,522**	13,688	16,204
Dividend payable on preference shares classified as equity	**(90)**	(90)	(90)
Coupon payable on capital securities classified as equity	**(860)**	(483)	(483)
Year ended 31 December	**12,572**	13,115	15,631

Basic and diluted earnings per share

	2015			2014			2013		
	Profit $m	Number of shares (millions)	Per share $	Profit $m	Number of shares (millions)	Per share $	Profit $m	Number of shares (millions)	Per Share $
Basic[1]	**12,572**	**19,380**	**0.65**	13,115	18,960	0.69	15,631	18,530	0.84
Effect of dilutive potential ordinary shares	**–**	**137**	**–**	–	96	–	–	124	–
Diluted[1]	**12,572**	**19,517**	**0.64**	13,115	19,056	0.69	15,631	18,654	0.84

1 *Weighted average number of ordinary shares outstanding (basic) or assuming dilution (diluted).*

The weighted average number of dilutive potential ordinary shares excluded 7m employee share options that were anti-dilutive (2014: 6m; 2013: 60m).

11 Segmental analysis

Accounting policy

HSBC has a matrix management structure. HSBC's chief operating decision-maker is the Group Management Board ('GMB') which operates as a general management committee under the direct authority of the Board. The GMB regularly reviews operating activity on a number of bases, including by geographical region and by global business. HSBC considers that geographical operating segments represent the most appropriate information for the users of the financial statements to best evaluate the nature and financial effects of the business activities in which HSBC engages, and the economic environments in which it operates. This reflects the importance of geographical factors on business strategy and performance, the allocation of capital resources, and the role of geographical regional management in executing strategy. As a result, HSBC's operating segments are considered to be geographical regions.

Geographical information is classified by the location of the principal operations of the subsidiary or, for The Hongkong and Shanghai Banking Corporation, HSBC Bank plc, HSBC Bank Middle East and HSBC Bank USA, by the location of the branch responsible for reporting the results or providing funding.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the Group's accounting policies. Segmental income and expenses include transfers between segments and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made. The expense of the UK bank levy is included in the Europe geographical region as HSBC regards the levy as a cost of carrying on business and being headquartered in the UK.

Products and services

HSBC provides a comprehensive range of banking and related financial services to its customers in its five geographical regions. HSBC's operating segments are Europe, Asia, Middle East and North Africa, North America and Latin America. The products and services offered to customers are organised by global business.

- Retail Banking and Wealth Management ('RBWM') offers a broad range of products and services to meet the personal banking and wealth management needs of individual customers. Typically, customer offerings include personal banking products (current and savings accounts, mortgages and personal loans, credit cards, debit cards and local and international payment services) and wealth management services (insurance and investment products, global asset management services and financial planning services).
- Commercial Banking ('CMB') offers a broad range of products and services to serve the needs of our commercial customers, including small and medium-sized enterprises, mid-market enterprises and corporates. These include credit and lending, international trade and receivables finance, treasury management and liquidity solutions (payments and cash management and commercial cards), commercial insurance and investments. CMB also offers its customers access to products and services offered by other global businesses, for example Global Banking and Markets ('GB&M'), which include foreign exchange products, raising capital on debt and equity markets and advisory services.
- GB&M provides tailored financial solutions to major government, corporate and institutional clients and private investors worldwide. The client-focused business lines deliver a full range of banking capabilities including financing, advisory and transaction services, a markets business that provides services in credit, rates, foreign exchange, equities, money markets and securities services, and principal investment activities.
- Global Private Banking ('GPB') provides a range of services to high net worth individuals and families with complex and international needs within the Group's priority markets.

Profit/(loss) for the year

	Europe $m	Asia $m	MENA $m	North America $m	Latin America $m	Intra-HSBC items $m	Total $m
2015							
Net interest income	**10,005**	**12,184**	**1,531**	**4,532**	**4,318**	**(39)**	**32,531**
Net fee income	**4,891**	**6,032**	**633**	**2,018**	**1,131**	**–**	**14,705**
Net trading income	**4,060**	**3,090**	**325**	**545**	**664**	**39**	**8,723**
Other income	**2,102**	**3,997**	**76**	**562**	**479**	**(3,375)**	**3,841**
Net operating income[1]	**21,058**	**25,303**	**2,565**	**7,657**	**6,592**	**(3,375)**	**59,800**
Loan impairment (charges)/recoveries and other credit risk provisions	**(690)**	**(693)**	**(299)**	**(544)**	**(1,495)**	**–**	**(3,721)**
Net operating income	**20,368**	**24,610**	**2,266**	**7,113**	**5,097**	**(3,375)**	**56,079**
Employee compensation and benefits	**(7,872)**	**(6,105)**	**(718)**	**(3,113)**	**(2,092)**	**–**	**(19,900)**
General and administrative expenses	**(10,849)**	**(4,164)**	**(478)**	**(3,168)**	**(2,378)**	**3,375**	**(17,662)**
Depreciation and impairment of property, plant and equipment	**(552)**	**(410)**	**(26)**	**(165)**	**(116)**	**–**	**(1,269)**
Amortisation and impairment of intangible assets	**(460)**	**(210)**	**(12)**	**(55)**	**(200)**	**–**	**(937)**
Total operating expenses	**(19,733)**	**(10,889)**	**(1,234)**	**(6,501)**	**(4,786)**	**3,375**	**(39,768)**
Operating profit	**635**	**13,721**	**1,032**	**612**	**311**	**–**	**16,311**
Share of profit in associates and joint ventures	**8**	**2,042**	**505**	**2**	**(1)**	**–**	**2,556**
Profit before tax	**643**	**15,763**	**1,537**	**614**	**310**	**–**	**18,867**
Tax expense	**(1,095)**	**(2,346)**	**(336)**	**80**	**(74)**	**–**	**(3,771)**
Profit/(loss) for the year	**(452)**	**13,417**	**1,201**	**694**	**236**	**–**	**15,096**
2014							
Net interest income	10,611	12,273	1,519	5,015	5,310	(23)	34,705
Net fee income	6,042	5,910	650	1,940	1,415	–	15,957
Net trading income	2,534	2,622	314	411	856	23	6,760
Other income	2,384	2,872	65	786	691	(2,972)	3,826
Net operating income[1]	21,571	23,677	2,548	8,152	8,272	(2,972)	61,248
Loan impairment (charges)/recoveries and other credit risk provisions	(764)	(647)	6	(322)	(2,124)	–	(3,851)
Net operating income	20,807	23,030	2,554	7,830	6,148	(2,972)	57,397
Employee compensation and benefits	(8,191)	(5,862)	(676)	(3,072)	(2,565)	–	(20,366)
General and administrative expenses	(11,076)	(3,959)	(500)	(3,108)	(2,894)	2,972	(18,565)
Depreciation and impairment of property, plant and equipment	(543)	(389)	(28)	(180)	(242)	–	(1,382)
Amortisation and impairment of intangible assets	(407)	(217)	(12)	(69)	(231)	–	(936)
Total operating expenses	(20,217)	(10,427)	(1,216)	(6,429)	(5,932)	2,972	(41,249)
Operating profit	590	12,603	1,338	1,401	216	–	16,148
Share of profit in associates and joint ventures	6	2,022	488	16	–	–	2,532
Profit before tax	596	14,625	1,826	1,417	216	–	18,680
Tax expense	(853)	(2,542)	(339)	(195)	(46)	–	(3,975)
Profit/(loss) for the year	(257)	12,083	1,487	1,222	170	–	14,705

Profit/(loss) for the year (continued)

	Europe $m	Asia $m	MENA $m	North America $m	Latin America $m	Intra-HSBC items $m	Total $m
2013							
Net interest income	10,693	11,432	1,486	5,742	6,186	–	35,539
Net fee income	6,032	5,936	622	2,143	1,701	–	16,434
Net trading income	4,423	2,026	357	948	936	–	8,690
Other income/(expense)	(181)	5,038	38	(30)	1,745	(2,628)	3,982
Net operating income[1]	20,967	24,432	2,503	8,803	10,568	(2,628)	64,645
Loan impairment (charges)/recoveries and other credit risk provisions	(1,530)	(498)	42	(1,197)	(2,666)	–	(5,849)
Net operating income	19,437	23,934	2,545	7,606	7,902	(2,628)	58,796
Employee compensation and benefits	(7,175)	(5,666)	(634)	(3,098)	(2,623)	–	(19,196)
General and administrative expenses	(9,479)	(3,660)	(607)	(3,051)	(2,896)	2,628	(17,065)
Depreciation and impairment of property, plant and equipment	(559)	(392)	(35)	(176)	(202)	–	(1,364)
Amortisation and impairment of intangible assets	(400)	(218)	(13)	(91)	(209)	–	(931)
Total operating expenses	(17,613)	(9,936)	(1,289)	(6,416)	(5,930)	2,628	(38,556)
Operating profit	1,824	13,998	1,256	1,190	1,972	–	20,240
Share of profit in associates and joint ventures	1	1,855	438	31	–	–	2,325
Profit before tax	1,825	15,853	1,694	1,221	1,972	–	22,565
Tax expense	(1,279)	(2,170)	(328)	(313)	(675)	–	(4,765)
Profit for the year	546	13,683	1,366	908	1,297	–	17,800

1 *Net operating income before loan impairment charges and other credit risk provisions, also referred to as revenue.*

Other information about the profit/(loss) for the year

	Europe $m	**Asia $m**	**MENA $m**	**North America $m**	**Latin America $m**	**Intra-HSBC items $m**	**Total $m**
2015							
Net operating income[1]	**21,058**	**25,303**	**2,565**	**7,657**	**6,592**	**(3,375)**	**59,800**
– external	**19,778**	**23,477**	**2,559**	**7,386**	**6,600**	**–**	**59,800**
– inter-segment	**1,280**	**1,826**	**6**	**271**	**(8)**	**(3,375)**	**–**
Profit for the year includes the following significant non-cash items:							
Depreciation, amortisation and impairment	**1,013**	**620**	**38**	**195**	**315**	**–**	**2,181**
Loan impairment losses gross of recoveries and other credit risk provisions	**1,082**	**858**	**331**	**618**	**1,641**	**–**	**4,530**
Changes in fair value of long-term debt and related derivatives	**671**	**5**	**6**	**181**	**–**	**–**	**863**
2014							
Net operating income[1]	21,571	23,677	2,548	8,152	8,272	(2,972)	61,248
– external	20,450	22,071	2,524	7,937	8,266	–	61,248
– inter-segment	1,121	1,606	24	215	6	(2,972)	–
Profit for the year includes the following significant non-cash items:							
Depreciation, amortisation and impairment	950	606	40	182	473	–	2,251
Loan impairment losses gross of recoveries and other credit risk provisions	1,066	800	37	437	2,466	–	4,806
Changes in fair value of long-term debt and related derivatives	614	(4)	(3)	(99)	–	–	508
2013							
Net operating income[1]	20,967	24,432	2,503	8,803	10,568	(2,628)	64,645
– external	20,108	22,853	2,497	8,569	10,618	–	64,645
– inter-segment	859	1,579	6	234	(50)	(2,628)	–
Profit for the year includes the following significant non-cash items:							
Depreciation, amortisation and impairment	957	610	48	303	412	–	2,330
Loan impairment losses gross of recoveries and other credit risk provisions	2,165	665	45	1,321	2,949	–	7,145
Changes in fair value of long-term debt and related derivatives	(936)	(1)	(3)	(288)	–	–	(1,228)

1 *Net operating income before loan impairment charges and other credit risk provisions, also referred to as revenue.*

Balance sheet information

	Europe $m	Asia $m	MENA $m	North America $m	Latin America $m	Intra-HSBC items $m	Total $m
At 31 December 2015							
Loans and advances to customers	**392,041**	**356,375**	**29,894**	**128,851**	**17,293**	**–**	**924,454**
Interests in associates and joint ventures	**198**	**15,720**	**3,176**	**45**	**–**	**–**	**19,139**
Total assets	**1,129,365**	**889,747**	**59,236**	**393,960**	**86,262**	**(148,914)**	**2,409,656**
Customer accounts	**497,876**	**598,620**	**36,468**	**135,152**	**21,470**	**–**	**1,289,586**
Total liabilities	**1,067,127**	**813,466**	**49,126**	**355,506**	**75,827**	**(148,914)**	**2,212,138**
Capital expenditure incurred[1]	**1,182**	**725**	**34**	**198**	**187**	**-**	**2,326**
At 31 December 2014							
Loans and advances to customers	409,733	362,955	29,063	129,787	43,122	–	974,660
Interests in associates and joint ventures	175	14,958	2,955	83	10	–	18,181
Total assets	1,290,926	878,723	62,417	436,859	115,354	(150,140)	2,634,139
Customer accounts	545,959	577,491	39,720	138,884	48,588	–	1,350,642
Total liabilities	1,223,371	807,998	52,569	398,356	102,007	(150,140)	2,434,161
Capital expenditure incurred[1]	1,168	637	25	208	348	–	2,386
At 31 December 2013							
Loans and advances to customers	456,110	336,897	27,211	127,953	43,918	–	992,089
Interests in associates and joint ventures	169	13,822	2,575	74	–	–	16,640
Total assets	1,392,959	831,791	60,810	432,035	113,999	(160,276)	2,671,318
Customer accounts	581,933	548,483	38,683	140,809	51,389	–	1,361,297
Total liabilities	1,326,537	770,938	50,706	393,635	99,319	(160,276)	2,480,859
Capital expenditure incurred[1]	907	1,236	32	265	385	–	2,825

1 *Expenditure incurred on property, plant and equipment and other intangible assets. Excludes assets acquired as part of business combinations and goodwill.*

Other financial information

Net operating income by global business

	RBWM[3] $m	CMB[3] $m	GB&M $m	GPB $m	Other[1] $m	Intra-HSBC items $m	Total $m
2015							
Net operating income[2]	**23,516**	**14,870**	**18,233**	**2,172**	**7,604**	**(6,595)**	**59,800**
– external	**20,941**	**15,021**	**20,994**	**1,888**	**956**	**–**	**59,800**
– internal	**2,575**	**(151)**	**(2,761)**	**284**	**6,648**	**(6,595)**	**–**
2014							
Net operating income[2]	25,149	15,748	17,778	2,377	6,365	(6,169)	61,248
– external	23,202	16,369	20,055	1,980	(358)	–	61,248
– internal	1,947	(621)	(2,277)	397	6,723	(6,169)	–
2013							
Net operating income[2]	27,453	15,652	19,176	2,439	5,651	(5,726)	64,645
– external	25,702	16,577	20,767	1,955	(356)	–	64,645
– internal	1,751	(925)	(1,591)	484	6,007	(5,726)	–

Information by country

	2015		2014		2013	
	External net operating income[2,4] $m	**Non-current assets[5] $m**	External net operating income[2,4] $m	Non-current assets[5] $m	External net operating income[2,4] $m	Non-current assets[5] $m
UK	**14,132**	**7,581**	14,392	8,671	13,347	17,481
Hong Kong	**14,447**	**10,979**	12,656	12,376	12,031	12,170
USA	**5,541**	**4,066**	5,736	5,685	6,121	4,189
France	**2,706**	**9,326**	2,538	10,301	3,111	11,565
Brazil	**3,546**	**28**	4,817	1,403	5,364	1,715
Other countries	**19,428**	**27,503**	21,109	28,273	24,671	27,879
Year ended/at 31 December	**59,800**	**59,483**	61,248	66,709	64,645	74,999

1 *The main items reported in 'Other' are certain property activities, unallocated investment activities, centrally held investment companies, movements in fair value of own debt and HSBC's holding company and financing operations. 'Other' also includes gains and losses on the disposal of certain significant subsidiaries or business units.*
2 *Net operating income before loan impairment charges and other credit risk provisions, also referred to as revenue.*
3 *In the first half of 2015, a portfolio of customers was transferred from CMB to RBWM in Latin America in order to better align the combined banking needs of the customers with our established global businesses. Comparative data have been re-presented accordingly.*
4 *External net operating income is attributed to countries on the basis of the location of the branch responsible for reporting the results or advancing the funds.*
5 *Non-current assets consist of property, plant and equipment, goodwill, other intangible assets, interests in associates and joint ventures and certain other assets expected to be recovered more than 12 months after the reporting period.*

12 Trading assets

Accounting policy

Financial assets are classified as held for trading if they have been acquired principally for the purpose of selling 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. They are recognised on trade date, when HSBC enters into contractual arrangements with counterparties, and are normally derecognised when sold. They are initially measured at fair value, with transaction costs taken to the income statement. Subsequent changes in their fair values and interest are recognised in the income statement in 'Net trading income'.

Trading assets

	2015 $m	2014 $m
Trading assets:		
– not subject to repledge or resale by counterparties	**192,204**	247,586
– which may be repledged or resold by counterparties	**32,633**	56,607
At 31 December	**224,837**	304,193
Treasury and other eligible bills	**7,829**	16,170
Debt securities	**99,038**	141,532
Equity securities	**66,491**	75,249
Trading securities at fair value	**173,358**	232,951
Loans and advances to banks[1]	**22,303**	27,581
Loans and advances to customers[1]	**29,176**	43,661
At 31 December	**224,837**	304,193

1 *Loans and advances to banks and customers include settlement accounts, stock borrowing, reverse repos and other amounts.*

Trading securities valued at fair value[1]

	2015 $m	2014 $m
US Treasury and US Government agencies[2]	**14,833**	25,880
UK Government	**10,177**	9,280
Hong Kong Government	**6,495**	6,946
Other government	**48,567**	78,774
Asset-backed securities[3]	**3,135**	3,494
Corporate debt and other securities	**23,660**	33,328
Equity securities	**66,491**	75,249
At 31 December	**173,358**	232,951

1 *Included within these figures are debt securities issued by banks and other financial institutions of $16,403m (2014: $22,399m), of which $1,034m (2014: $2,949m) are guaranteed by various governments.*
2 *Includes securities that are supported by an explicit guarantee issued by the US Government.*
3 *Excludes asset-backed securities included under US Treasury and US Government agencies.*

Trading securities listed on a recognised exchange and unlisted

	Treasury and other eligible bills $m	Debt securities $m	Equity securities $m	Total $m
Fair value				
Listed[1]	**295**	**71,184**	**66,152**	**137,631**
Unlisted[2]	**7,534**	**27,854**	**339**	**35,727**
At 31 December 2015	**7,829**	**99,038**	**66,491**	**173,358**
Fair value				
Listed[1]	1,311	98,028	74,542	173,881
Unlisted[2]	14,859	43,504	707	59,070
At 31 December 2014	16,170	141,532	75,249	232,951

1 *Included within listed investments are $5,722m (2014: $5,956m) of securities listed in Hong Kong.*
2 *Unlisted treasury and other eligible bills primarily comprise treasury bills not listed on an exchange but for which there is a liquid market.*

13 Fair values of financial instruments carried at fair value

Accounting policy

All financial instruments are recognised initially at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, sometimes the fair value will be based on other observable current market transactions in the same instrument, without modification or repackaging, or on a valuation technique whose variables include only data from observable markets, such as interest rate yield curves, option volatilities and currency rates. When such evidence exists, HSBC recognises a trading gain or loss at inception ('day 1 gain or loss'), being the difference between the transaction price and the fair value. When significant unobservable parameters are used, the entire day 1 gain or loss is deferred and is recognised in the income statement over the life of the transaction until the transaction matures or is closed out, the valuation inputs become observable or HSBC enters into an offsetting transaction.

The fair value of financial instruments is generally measured on an individual basis. However, in cases where HSBC manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the financial statements, unless they satisfy the IFRSs offsetting criteria as described in Note 32.

Critical accounting estimates and judgements

Valuation of financial instruments

The best evidence of fair value is a quoted price in an actively traded principal market. The fair values of financial instruments that are quoted in active markets are based on bid prices for assets held and offer prices for liabilities issued. When a financial instrument has a quoted price in an active market, the fair value of the total holding of the financial instrument is calculated as the product of the number of units and the quoted price. The judgement as to whether a market is active may include, but is not restricted to, consideration of factors such as the magnitude and frequency of trading activity, the availability of prices and the size of bid/offer spreads. The bid/offer spread represents the difference in prices at which a market participant would be willing to buy compared with the price at which they would be willing to sell. Valuation techniques may incorporate assumptions about factors that other market participants would use in their valuations, including:

- the likelihood and expected timing of future cash flows on the instrument. Judgement may be required to assess the counterparty's ability to service the instrument in accordance with its contractual terms. Future cash flows may be sensitive to changes in market rates;
- selecting an appropriate discount rate for the instrument. Judgement is required to assess what a market participant would regard as the appropriate spread of the rate for an 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.

A range of valuation techniques is employed, dependent on the instrument type and available market data. Most valuation techniques are based upon discounted cash flow analyses, in which expected future cash flows are calculated and discounted to present value using a discounting curve. Prior to considering credit risk, the expected future cash flows may be known, as would be the case for the fixed leg of an interest rate swap, or may be uncertain and require projection, as would be the case for the floating leg of an interest rate swap. 'Projection' utilises market forward curves, if available. In option models, the probability of different potential future outcomes must be considered. In addition, the value of some products is dependent on more than one market factor, and in these cases it will typically be necessary to consider how movements in one market factor may affect the other market factors. The model inputs necessary to perform such calculations include interest rate yield curves, exchange rates, volatilities, correlations and prepayment and default rates. For interest rate derivatives with collateralised counterparties and in significant currencies, HSBC uses a discounting curve that reflects the overnight interest rate.

The majority of valuation techniques employ only observable market data. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, and for them the measurement of fair value is more judgemental. An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's inception profit or greater than 5% of the instrument's valuation is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).

Control framework

Fair values are subject to a control framework designed to ensure that they are either determined or validated by a function independent of the risk taker.

For all financial instruments where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is utilised. In inactive markets HSBC will source alternative market information to validate the financial instrument's fair value, with greater weight given to information that is considered to be more relevant and reliable. The factors that are considered in this regard are, *inter alia*:

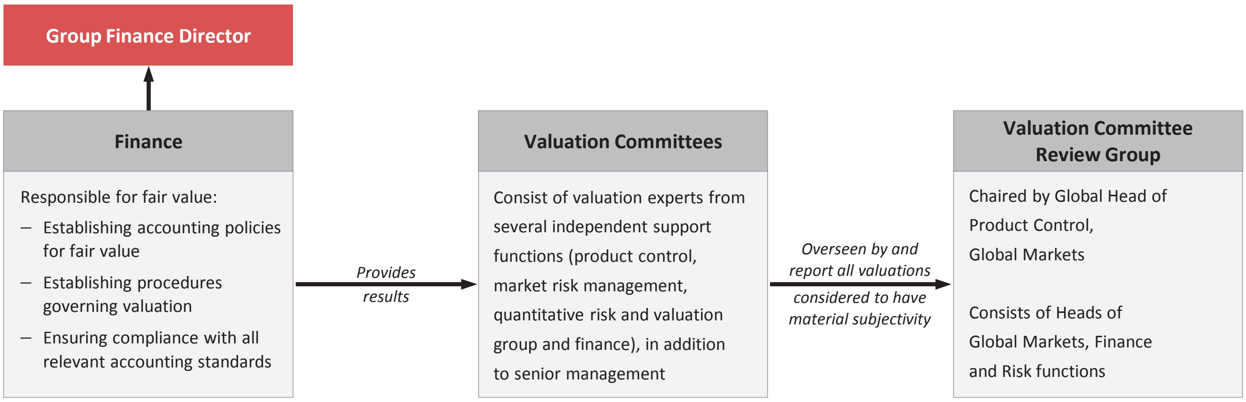
- the extent to which prices may be expected to represent genuine traded or tradeable prices;
- the degree of similarity between financial instruments;
- the degree of consistency between different sources;
- the process followed by the pricing provider to derive the data;
- the elapsed time between the date to which the market data relates and the balance sheet date; and

- the manner in which the data was sourced.

For fair values determined using valuation models, the control framework may include, as applicable, development or validation by independent support functions of (i) the logic within valuation models; (ii) the inputs to these models; (iii) any adjustments required outside the valuation models; and (iv) where possible, model outputs. Valuation models are subject to a process of due diligence and calibration before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process. This process disaggregates changes in fair value into three high level categories; (i) portfolio changes, such as new transactions or maturing transactions, (ii) market movements, such as changes in foreign exchange rates or equity prices, and (iii) other, such as changes in fair value adjustments (see further below).

The majority of financial instruments measured at fair value are in GB&M. GB&M's fair value governance structure is illustrated below as an example:



Financial liabilities measured at fair value

In certain circumstances, HSBC records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument concerned, where available. An example of this is where own debt in issue is hedged with interest rate derivatives. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based upon quoted prices in an inactive market for the instrument or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread which is appropriate to HSBC's liabilities. The change in fair value of issued debt securities attributable to the Group's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using a Libor-based discount curve. The difference in the valuations is attributable to the Group's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instrument liabilities are included within trading liabilities and are measured at fair value. The credit spread applied to these instruments is derived from the spreads at which HSBC issues structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by HSBC reverse over the contractual life of the debt, provided that the debt is not repaid at a premium or a discount.

Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- *Level 1 – valuation technique using quoted market price:* financial instruments with quoted prices for identical instruments in active markets that HSBC can access at the measurement date.
- *Level 2 – valuation technique using observable inputs:* financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- *Level 3 – valuation technique with significant unobservable inputs:* financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

The following table sets out the financial instruments by fair value hierarchy.

Financial instruments carried at fair value and bases of valuation

	Quoted market price Level 1 $m	Valuation techniques: Using observable inputs Level 2 $m	Valuation techniques: With significant unobservable inputs Level 3 $m	Total $m
Recurring fair value measurements at 31 December 2015				
Assets				
Trading assets	**133,095**	**84,886**	**6,856**	**224,837**
Financial assets designated at fair value	**18,947**	**4,431**	**474**	**23,852**
Derivatives	**1,922**	**284,292**	**2,262**	**288,476**
Financial investments: available for sale	**262,929**	**117,197**	**4,727**	**384,853**
Liabilities				
Trading liabilities	**41,462**	**95,867**	**4,285**	**141,614**
Financial liabilities designated at fair value	**5,260**	**61,145**	**3**	**66,408**
Derivatives	**2,243**	**277,618**	**1,210**	**281,071**
Recurring fair value measurements at 31 December 2014				
Assets				
Trading assets	180,446	117,279	6,468	304,193
Financial assets designated at fair value	23,697	4,614	726	29,037
Derivatives	4,366	337,718	2,924	345,008
Financial investments: available for sale	241,464	131,264	4,988	377,716
Liabilities				
Trading liabilities	62,385	122,048	6,139	190,572
Financial liabilities designated at fair value	3,792	72,361	–	76,153
Derivatives	4,649	334,113	1,907	340,669

The decrease in Level 1 and Level 2 trading assets and liabilities during the period reflects a decrease in inventory across a wide range of securities. The decrease in Level 2 derivative assets and liabilities is driven by participation in 'portfolio compression' exercises and market movement.

Transfers between Level 1 and Level 2 fair values

	Assets				Liabilities		
	Available for sale $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m
At 31 December 2015							
Transfers from Level 1 to Level 2	**–**	**67**	**–**	**56**	**1,563**	**857**	**100**
Transfers from Level 2 to Level 1	**–**	**487**	**–**	**2**	**515**	**2**	**–**
At 31 December 2014							
Transfers from Level 1 to Level 2	2,702	18,149	–	–	22,964	–	–
Transfers from Level 2 to Level 1	–	–	–	–	–	–	–

Fair value adjustments

Fair value adjustments are adopted when HSBC considers that there are additional factors that would be considered by a market participant which are not incorporated within the valuation model. HSBC classifies fair value adjustments as either 'risk-related' or 'model-related'. The majority of these adjustments relate to GB&M.

Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement. For example, as models are enhanced, fair value adjustments may no longer be required. Similarly, fair value adjustments will decrease when the related positions are unwound, but this may not result in profit or loss.

Global Banking and Markets fair value adjustments

	2015 $m	2014 $m
Type of adjustment		
Risk-related	**1,402**	1,958
– bid-offer	**477**	539
– uncertainty	**95**	357
– credit valuation adjustment	**853**	871
– debit valuation adjustment	**(465)**	(270)
– funding fair value adjustment	**442**	460
– other	**0**	1
Model-related	**97**	57
– model limitation	**92**	52
– other	**5**	5
Inception profit (Day 1 P&L reserves) (Note 16)	**97**	114
At 31 December	**1,596**	2,129

Fair value adjustments declined by $533m during the year. The most significant movement was a decline of $262m in respect of the uncertainty category, driven by the reclassification to model limitation of an adjustment relating to derivative discounting assumptions. This adjustment reduced significantly following contract renegotiations with certain counterparties. The debit valuation adjustment increased by $195m as a result of the widening of HSBC's credit spreads.

Risk-related adjustments

Bid-offer

IFRS 13 'Fair value measurement' requires use of the price within the bid-offer spread that is most representative of fair value. Valuation models will typically generate mid-market values. The bid-offer adjustment reflects the extent to which bid-offer costs would be incurred if substantially all residual net portfolio market risks were closed using available hedging instruments or by disposing of or unwinding the position.

Uncertainty

Certain model inputs may be less readily determinable from market data, and/or the choice of model itself may be more subjective. In these circumstances, there exists a range of possible values that the financial instrument or market parameter may assume and an adjustment may be necessary to reflect the likelihood that in estimating the fair value of the financial instrument, market participants would adopt more conservative values for uncertain parameters and/or model assumptions than those used in the valuation model.

Credit valuation adjustment

The CVA is an adjustment to the valuation of over-the-counter ('OTC') derivative contracts to reflect within fair value the possibility that the counterparty may default and that HSBC may not receive the full market value of the transactions (see below).

Debit valuation adjustment

The DVA is an adjustment to the valuation of OTC derivative contracts to reflect within fair value the possibility that HSBC may default, and that HSBC may not pay full market value of the transactions (see below).

Funding fair value adjustment

The funding fair value adjustment ('FFVA') is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. This includes the uncollateralised component of collateralised derivatives in addition to derivatives that are fully uncollateralised. The expected future funding exposure is calculated by a simulation methodology, where available. The expected future funding exposure is adjusted for events that may terminate the exposure such as the default of HSBC or the counterparty. The FFVA and DVA are calculated independently.

Model-related adjustments

Model limitation

Models used for portfolio valuation purposes may be based upon a simplifying set of assumptions that do not capture all material market characteristics. Additionally, markets evolve, and models that were adequate in the past may require development to capture all material market characteristics in current market conditions. In these circumstances, model limitation adjustments are adopted. As model development progresses, model limitations are addressed within the valuation models and a model limitation adjustment is no longer needed.

Inception profit (Day 1 P&L reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs. The accounting for inception profit adjustments is discussed on page 378.

Credit valuation adjustment/debit valuation adjustment methodology

HSBC calculates a separate CVA and DVA for each HSBC legal entity, and within each entity for each counterparty to which the entity has exposure. HSBC calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of HSBC, to HSBC's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, HSBC calculates the DVA by applying the PD of HSBC, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to HSBC and multiplying the result by the loss expected in the event of default. Both calculations are performed over the life of the potential exposure.

For most products HSBC uses a simulation methodology to calculate the expected positive exposure to a counterparty. This incorporates a range of potential exposures across the portfolio of transactions with the counterparty over the life of the portfolio. The simulation methodology includes credit mitigants such as counterparty netting agreements and collateral agreements with the counterparty.

For certain types of exotic derivatives where the products are not currently supported by the simulation, or for derivative exposures in smaller trading locations where the simulation tool is not yet available, HSBC adopts alternative methodologies.

The methodologies do not, in general, account for 'wrong-way risk'. Wrong-way risk arises when the underlying value of the derivative prior to any CVA is positively correlated to the probability of default by the counterparty. When there is significant wrong-way risk, a trade-specific approach is applied to reflect the wrong-way risk within the valuation.

With the exception of certain central clearing parties, we include all third-party counterparties in the CVA and DVA calculations and do not net these adjustments across Group entities. We review and refine the CVA and DVA methodologies on an ongoing basis.

Fair value valuation bases

Financial instruments measured at fair value using a valuation technique with significant unobservable inputs – Level 3

	Assets					Liabilities			
	Available for sale $m	Held for trading $m	At fair value[1] $m	Derivatives $m	Total $m	Held for trading $m	At fair value[1] $m	Derivatives $m	Total $m
Private equity including strategic investments	**3,443**	**55**	**453**	**–**	**3,951**	**35**	**–**	**–**	**35**
Asset-backed securities	**1,053**	**531**	**–**	**–**	**1,584**	**–**	**–**	**–**	**–**
Loans held for securitisation	**–**	**30**	**–**	**–**	**30**	**–**	**–**	**–**	**–**
Structured notes	**–**	**4**	**–**	**–**	**4**	**4,250**	**–**	**–**	**4,250**
Derivatives with monolines	**–**	**–**	**–**	**196**	**196**	**–**	**–**	**–**	**–**
Other derivatives	**–**	**–**	**–**	**2,066**	**2,066**	**–**	**–**	**1,210**	**1,210**
Other portfolios	**231**	**6,236**	**21**	**–**	**6,488**	**–**	**3**	**–**	**3**
At 31 December 2015	**4,727**	**6,856**	**474**	**2,262**	**14,319**	**4,285**	**3**	**1,210**	**5,498**
Private equity including strategic investments	3,120	164	432	–	3,716	47	–	–	47
Asset-backed securities	1,462	616	–	–	2,078	–	–	–	–
Loans held for securitisation	–	39	–	–	39	–	–	–	–
Structured notes	–	2	–	–	2	6,092	–	–	6,092
Derivatives with monolines	–	–	–	239	239	–	–	1	1
Other derivatives	–	–	–	2,685	2,685	–	–	1,906	1,906
Other portfolios	406	5,647	294	–	6,347	–	–	–	–
At 31 December 2014	4,988	6,468	726	2,924	15,106	6,139	–	1,907	8,046

1 *Designated at fair value through profit or loss.*

Level 3 instruments are present in both ongoing and legacy businesses. Loans held for securitisation, derivatives with monolines, certain 'other derivatives' and predominantly all Level 3 ABSs are legacy positions. HSBC has the capability to hold these positions.

Private equity including strategic investments

HSBC's private equity and strategic investments are generally classified as available for sale and are not traded in active markets. In the absence of an active market, an investment's fair value is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors, as well as by reference to market valuations for similar entities quoted in an active market, or the price at which similar companies have changed ownership.

Asset-backed securities

While quoted market prices are generally used to determine the fair value of these securities, valuation models are used to substantiate the reliability of the limited market data available and to identify whether any adjustments to quoted market prices are required. For ABSs including residential mortgage-backed securities, the valuation uses an industry standard model and the assumptions relating to prepayment speeds, default rates and loss severity based on collateral type, and performance, as appropriate. The valuations output is benchmarked for consistency against observable data for securities of a similar nature.

Loans, including leveraged finance and loans held for securitisation

Loans held at fair value are valued from broker quotes and/or market data consensus providers when available. In the absence of an observable market, the fair value is determined using alternative valuation techniques. These techniques include discounted cash flow models, which incorporate assumptions regarding an appropriate credit spread for the loan, derived from other market instruments issued by the same or comparable entities.

Structured notes

The fair value of structured notes valued using a valuation technique with significant unobservable inputs is derived from the fair value of the underlying debt security, and the fair value of the embedded derivative is determined as described in the paragraph below on derivatives.

Level 3 structured notes principally comprise equity-linked notes which are issued by HSBC and provide the counterparty with a return that is linked to the performance of certain equity securities, and other portfolios. The notes are classified as Level 3 due to the unobservability of parameters such as long-dated equity volatilities and correlations between equity prices, between equity prices and interest rates and between interest rates and foreign exchange rates.

Derivatives

OTC (i.e. non-exchange traded) derivatives are valued using valuation models. Valuation models calculate the present value of expected future cash flows, based upon 'no-arbitrage' principles. For many vanilla derivative products, such as interest rate swaps and European options, the modelling approaches used are standard across the industry. For more complex derivative products, there may be some differences in market practice. Inputs to valuation models are determined from observable market data wherever possible, including prices available from exchanges, dealers, brokers or providers of consensus pricing. Certain inputs may not be observable in the market directly, but can be determined from observable prices via model calibration procedures or estimated from historical data or other sources. Examples of inputs that may be unobservable include volatility surfaces, in whole or in part, for less commonly traded option products, and correlations between market factors such as foreign exchange rates, interest rates and equity prices.

Derivative products valued using valuation techniques with significant unobservable inputs include certain types of correlation products, such as foreign exchange basket options, equity basket options, foreign exchange interest rate hybrid transactions and long-dated option transactions. Examples of the latter are equity options, interest rate and foreign exchange options and certain credit derivatives. Credit derivatives include certain tranched CDS transactions.

Reconciliation of fair value measurements in Level 3 of the fair value hierarchy

The following table provides a reconciliation of the movement between opening and closing balances of Level 3 financial instruments, measured at fair value using a valuation technique with significant unobservable inputs:

Movement in Level 3 financial instruments

	Assets				Liabilities		
	Available for sale $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m
At 1 January 2015	4,988	6,468	726	2,924	6,139	–	1,907
Total gains/(losses) recognised in profit or loss	(34)	109	30	95	(573)	(1)	(209)
– trading income/(expense) excluding net interest income	–	109	–	95	(573)	–	(209)
– net income from other financial instruments designated at fair value	–	–	30	–	–	(1)	–
– gains less losses from financial investments	(269)	–	–	–	–	–	–
– loan impairment charges and other credit risk provisions	235	–	–	–	–	–	–
Total gains/(losses) recognised in other comprehensive income[1]	226	(192)	(11)	(126)	(118)	(1)	(64)
– available-for-sale investments: fair value gains	393	–	–	–	–	–	–
– cash flow hedges: fair value gains/(losses)	–	–	–	(4)	–	–	–
– exchange differences	(167)	(192)	(11)	(122)	(118)	(1)	(64)
Purchases	594	1,745	250	–	2	9	–
New issuances	–	–	–	–	1,471	–	–
Sales	(757)	(1,206)	(50)	–	(66)	(4)	–
Settlements	(32)	(146)	(135)	(38)	(1,260)	–	(241)
Transfers out	(1,471)	(206)	(336)	(1,015)	(1,743)	–	(283)
Transfers in	1,213	284	–	422	433	–	100
At 31 December 2015	**4,727**	**6,856**	**474**	**2,262**	**4,285**	**3**	**1,210**
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 December 2015	235	(9)	12	89	384	(1)	267
– trading income/(expense) excluding net interest income	–	(9)	–	89	384	–	267
– net income/(expense) from other financial instruments designated at fair value	–	–	12	–	–	(1)	–
– loan impairment charges and other credit risk provisions	235	–	–	–	–	–	–

	Assets				Liabilities		
	Available for sale $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m	Held for trading $m	Designated at fair value through profit or loss $m	Derivatives $m
At 1 January 2014	7,245	5,347	608	2,502	7,514	–	2,335
Total gains/(losses) recognised in profit or loss	174	194	56	959	(25)	–	(5)
– trading income/(expense) excluding net interest income	–	194	–	959	(25)	–	(5)
– net income from other financial instruments designated at fair value	–	–	56	–	–	–	–
– gains less losses from financial investments	198						
– loan impairment charges and other credit risk provisions	(24)						
Total gains/(losses) recognised in other comprehensive income[1]	126	(178)	(16)	(126)	(123)	–	54
– available-for-sale investments: fair value gains/(losses)	208	–	–	–	–	–	–
– cash flow hedges: fair value gains/(losses)	–	–	–	(9)	–	–	34
– exchange differences	(82)	(178)	(16)	(117)	(123)	–	20
Purchases	1,505	705	273	–	(31)	–	–
New issuances	–	–	–	–	2,067	–	–
Sales	(1,237)	(481)	(149)	–	–	–	–
Settlements	(1,255)	(49)	(78)	27	(1,655)	–	(69)
Transfers out	(3,027)	(112)	–	(544)	(1,918)	–	(527)
Transfers in	1,457	1,042	32	106	310	–	119
At 31 December 2014	4,988	6,468	726	2,924	6,139	–	1,907
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 December 2014	(24)	1	46	946	(122)	–	134
– trading income/(expense) excluding net interest income	–	1	–	946	(122)	–	134
– net income from other financial instruments designated at fair value	–	–	46	–	–	–	–
– loan impairment charges and other credit risk provisions	(24)	–	–	–	–	–	–

1 *Included in 'Available-for-sale investments: fair value gains/(losses)' and 'Exchange differences' in the consolidated statement of comprehensive income.*

In 2015 movement of Level 3 available-for-sale assets are driven by ABS activity, predominantly in the securities investment conduits. Transfers out of Level 3 available-for-sale assets demonstrates increased confidence in pricing and price coverage, and transfers in reflect limited availability of third-party prices. Increase in Level 3 held for trading assets is driven by an increase in recently-issued syndicated loans. The decline in Level 3 held for trading liabilities reflects a decline in the outstanding balance of Level 3 equity-linked notes, both as a result of market movement and reduced issuance. The decline in Level 3 derivative assets and liabilities reflects market movement.

Effect of changes in significant unobservable assumptions to reasonably possible alternatives

Sensitivity of Level 3 fair values to reasonably possible alternative assumptions

	Reflected in profit or loss		Reflected in other comprehensive income	
	Favourable changes $m	Unfavourable changes $m	Favourable changes $m	Unfavourable changes $m
Derivatives, trading assets and trading liabilities[1]	**335**	**(215)**	**–**	**–**
Financial assets and liabilities designated at fair value	**24**	**(24)**	**–**	**–**
Financial investments: available for sale	**35**	**(30)**	**230**	**(243)**
At 31 December 2015	**394**	**(269)**	**230**	**(243)**
Derivatives, trading assets and trading liabilities[1]	296	(276)	–	–
Financial assets and liabilities designated at fair value	37	(47)	–	–
Financial investments: available for sale	51	(67)	270	(350)
At 31 December 2014	384	(390)	270	(350)

1 *Derivatives, trading assets and trading liabilities are presented as one category to reflect the manner in which these financial instruments are risk managed.*

The effect of favourable changes is broadly unchanged over the period. The decrease in the effect of unfavourable changes reflects increased price certainty in respect of private equity and certain legacy funding structures, offset by greater syndicated loan uncertainty as a result of the increased Level 3 balance.

Sensitivity of fair values to reasonably possible alternative assumptions by Level 3 instrument type

	Reflected in profit or loss		Reflected in other comprehensive income	
	Favourable changes $m	Unfavourable changes $m	Favourable changes $m	Unfavourable changes $m
Private equity including strategic investments	**54**	**(53)**	**152**	**(171)**
Asset-backed securities	**18**	**(12)**	**57**	**(51)**
Loans held for securitisation	**1**	**(1)**	**–**	**–**
Structured notes	**15**	**(11)**	**–**	**–**
Derivatives with monolines	**11**	**(11)**	**–**	**–**
Other derivatives	**179**	**(87)**	**–**	**–**
Other portfolios	**116**	**(94)**	**21**	**(21)**
At 31 December 2015	**394**	**(269)**	**230**	**(243)**
Private equity including strategic investments	77	(110)	172	(255)
Asset-backed securities	49	(22)	60	(55)
Loans held for securitisation	1	(1)	–	–
Structured notes	14	(9)	–	–
Derivatives with monolines	11	(11)	–	–
Other derivatives	129	(155)	–	–
Other portfolios	103	(82)	38	(40)
At 31 December 2014	384	(390)	270	(350)

Favourable and unfavourable changes are determined on the basis of sensitivity analysis. The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval. Methodologies take account of the nature of the valuation technique employed, as well as the availability and reliability of observable proxy and historical data. When the available data is not amenable to statistical analysis, the quantification of uncertainty is judgemental, but remains guided by the 95% confidence interval.

When the fair value of a financial instrument is affected by more than one unobservable assumption, the above table reflects the most favourable or the most unfavourable change from varying the assumptions individually.

Key unobservable inputs to Level 3 financial instruments

The table below lists key unobservable inputs to Level 3 financial instruments, and provides the range of those inputs as at 31 December 2015. The core range of inputs is the estimated range within which 90% of the inputs fall. A further description of the categories of key unobservable inputs is given below.

Quantitative information about significant unobservable inputs in Level 3 valuations

	Fair value		Valuation technique	Key unobservable inputs	Full range of inputs		Core range of inputs	
	Assets	Liabilities			Lower	Higher	Lower	Higher
	$m	$m						
Private equity including strategic investments	3,951	35	See notes on page 389	See notes on page 389	n/a	n/a	n/a	n/a
Asset-backed securities	1,584	–						
– CLO/CDO[1]	511	–	Model – Discounted cash flow	Prepayment rate	1%	6%	1%	6%
			Market proxy	Bid quotes	3	147	54	117
Other ABSs	1,073	–						
Loans held for securitisation	30	–						
Structured notes	4	4,250						
– equity-linked notes	–	3,719	Model – Option model	Equity volatility	12%	72%	19%	43%
			Model – Option model	Equity correlation	35%	93%	43%	79%
– fund-linked notes	–	13	Model – Option model	Fund volatility	6%	8%	6%	8%
– FX-linked notes	–	166	Model – Option model	FX volatility	5%	35%	5%	20%
– other	4	352						
Derivatives with monolines	196	–	Model – Discounted cash flow	Credit spread	4%	4%	4%	4%
Other derivatives	2,066	1,210						
Interest rate derivatives:								
– securitisation swaps	250	455	Model – Discounted cash flow	Prepayment rate	0%	90%	14%	71%
– long-dated swaptions	1,237	119	Model – Option model	IR volatility	3%	66%	20%	41%
– other	176	65						
FX derivatives:								
– FX options	180	186	Model – Option model	FX volatility	0.5%	35%	5%	14%
– other	10	5						
Equity derivatives:								
– long-dated single stock options	135	191	Model – Option model	Equity volatility	8%	104%	18%	44%
– other	39	170						
Credit derivatives:								
– other	39	19						
Other portfolios	6,488	3						
– structured certificates	4,434	–	Model – Discounted cash flow	Credit volatility	2%	4%	2%	4%
– EM corporate debt	210	–						
			Market proxy	Bid quotes	70	124	100	123
– other[2]	1,844	3						
At 31 December 2015	14,319	5,498						

Quantitative information about significant unobservable inputs in Level 3 valuations (continued)

	Fair value		Valuation technique	Key unobservable inputs	Full range of inputs		Core range of inputs	
	Assets	Liabilities			Lower	Higher	Lower	Higher
	$m	$m						
Private equity including strategic investments	3,716	47	See notes on page 389	See notes on page 389	n/a	n/a	n/a	n/a
Asset-backed securities	2,078	–						
– CLO/CDO[1]	1,122	–	Model – Discounted cash flow	Prepayment rate	1%	6%	1%	6%
			Market proxy	Bid quotes	0	100	54	85
Other ABSs	956	–						
Loans held for securitisation	39	–						
Structured notes	2	6,092						
– equity-linked notes	–	4,744	Model – Option model	Equity volatility	0.2%	65%	18%	38%
			Model – Option model	Equity correlation	27%	92%	44%	79%
– fund-linked notes	–	562	Model – Option model	Fund volatility	6%	8%	6%	8%
– FX-linked notes	2	477	Model – Option model	FX volatility	2%	70%	4%	16%
– other	–	309						
Derivatives with monolines	239	1	Model – Discounted cash flow	Credit spread	3%	5%	4%	4%
Other derivatives	2,685	1,906						
Interest rate derivatives:								
– securitisation swaps	449	1,023	Model – Discounted cash flow	Prepayment rate	0%	50%	6%	18%
– long-dated swaptions	1,044	152	Model – Option model	IR volatility	2%	59%	16%	36%
– other	755	151						
FX derivatives:								
– FX options	89	95	Model – Option model	FX volatility	0.1%	70%	4%	14%
– other	7	7						
Equity derivatives:								
– long-dated single stock options	192	256	Model – Option model	Equity volatility	9%	65%	16%	40%
– other	34	162						
Credit derivatives:								
– other	115	60						
Other portfolios	6,347	–						
– structured certificates	4,420	–	Model – Discounted cash flow	Credit volatility	0.8%	3%	0.8%	3%
– EM corporate debt	372	–	Market proxy	Credit spread	1%	4%	1%	3%
			Market proxy	Bid quotes	58	131	106	130
– other[2]	1,555	–						
At 31 December 2014	15,106	8,046						

1 *Collateralised loan obligation/collateralised debt obligation.*
2 *Includes a range of smaller asset holdings.*

Private equity including strategic investments

Given the bespoke nature of the analysis in respect of each holding, it is not practical to quote a range of key unobservable inputs.

Prepayment rates

Prepayment rates are a measure of the anticipated future speed at which a loan portfolio will be repaid in advance of the due date. They are an important input into modelled values of ABSs. A modelled price may be used where insufficient observable market prices exist to enable a market price to be determined directly. Prepayment rates are also an important input into the valuation of derivatives linked to securitisations. They vary according to the nature of the loan portfolio and expectations of future market conditions, and may be estimated using a variety of evidence, such as prepayment rates implied from proxy observable security prices, current or historical prepayment rates and macroeconomic modelling.

Market proxy

Market proxy pricing may be used for an instrument for which specific market pricing is not available, but evidence is available in respect of instruments that have some characteristics in common. In some cases it might be possible to identify a specific proxy, but more generally evidence across a wider range of instruments will be used to understand the factors that influence current market pricing and the manner of that influence.

The range of prices used as inputs into a market proxy pricing methodology may therefore be wide. This range is not indicative of the uncertainty associated with the price derived for an individual security.

Volatility

Volatility is a measure of the anticipated future variability of a market price, tending to increase in stressed market conditions and decrease in calmer market conditions. It is an important input in the pricing of options. In general, the higher the volatility, the more expensive the option will be. This reflects both the higher probability of an increased return from the option and the potentially higher costs that HSBC may incur in hedging the risks associated with the option. If option prices become more expensive, this increases the value of HSBC's long option positions (i.e. the positions in which HSBC has purchased options), while HSBC's short option positions (i.e. the positions in which HSBC has sold options) suffer losses.

Volatility varies by underlying reference market price, and by strike and maturity of the option. Volatility also varies over time. As a result, it is difficult to make general statements regarding volatility levels.

Certain volatilities, typically those of a longer-dated nature, are unobservable. The unobservable volatility is then estimated from observable data. The range of unobservable volatilities quoted in the table on page 387 reflects the wide variation in volatility inputs by reference market price. The core range is significantly narrower than the full range because these examples with extreme volatilities occur relatively rarely within the HSBC portfolio. For any single unobservable volatility, the uncertainty in the volatility determination is significantly less than the range quoted above.

Correlation

Correlation is a measure of the inter-relationship between two market prices and is expressed as a number between minus one and one. A positive correlation implies that the two market prices tend to move in the same direction, with a correlation of one implying that they always move in the same direction. A negative correlation implies that the two market prices tend to move in opposite directions, with a correlation of minus one implying that the two market prices always move in opposite directions. Correlation is used to value more complex instruments where the payout is dependent upon more than one market price. There is a wide range of instruments for which correlation is an input, and consequently a wide range of both same-asset correlations (e.g. equity-equity correlation) and cross-asset correlations (e.g. foreign exchange rate-interest rate correlation) is used. In general, the range of same-asset correlations will be narrower than the range of cross-asset correlations.

Correlation may be unobservable. Unobservable correlations may be estimated based upon a range of evidence, including consensus pricing services, HSBC trade prices, proxy correlations and examination of historical price relationships.

The range of unobservable correlations quoted in the table reflects the wide variation in correlation inputs by market price pair. For any single unobservable correlation, the uncertainty in the correlation determination is likely to be less than the range quoted above.

Credit spread

Credit spread is the premium over a benchmark interest rate required by the market to accept lower credit quality. In a discounted cash flow model, the credit spread increases the discount factors applied to future cash flows, thereby reducing the value of an asset. Credit spreads may be implied from market prices. Credit spreads may not be observable in more illiquid markets.

Inter-relationships between key unobservable inputs

Key unobservable inputs to Level 3 financial instruments may not be independent of each other. As described above, market variables may be correlated. This correlation typically reflects the manner in which different markets tend to react to macroeconomic or other events. Furthermore, the effect of changing market variables upon the HSBC portfolio will depend on HSBC's net risk position in respect of each variable.

HSBC Holdings

The following table provides an analysis of the basis for valuing financial assets and financial liabilities measured at fair value in the financial statements:

Basis of valuing HSBC Holdings' financial assets and liabilities measured at fair value

	2015 $m	2014 $m
Valuation technique using observable inputs: Level 2		
Assets at 31 December		
Derivatives	**2,467**	2,771
Available for sale	**4,285**	4,073
Liabilities at 31 December		
Designated at fair value	**19,853**	18,679
Derivatives	**2,278**	1,169

14 Fair values of financial instruments not carried at fair value

Fair values of financial instruments not carried at fair value and bases of valuation

		Fair value			
			Valuation techniques		
	Carrying amount $m	Quoted market price Level 1 $m	Using observable inputs Level 2 $m	With significant unobservable inputs Level 3 $m	Total $m
Assets and liabilities not held for sale at 31 December 2015					
Assets					
Loans and advances to banks	**90,401**	**–**	**88,156**	**2,255**	**90,411**
Loans and advances to customers	**924,454**	**–**	**12,412**	**910,057**	**922,469**
Reverse repurchase agreements – non-trading	**146,255**	**–**	**145,307**	**959**	**146,266**
Financial investments: debt securities	**44,102**	**1,163**	**44,076**	**19**	**45,258**
Liabilities					
Deposits by banks	**54,371**	**–**	**54,295**	**76**	**54,371**
Customer accounts	**1,289,586**	**–**	**1,280,368**	**9,421**	**1,289,789**
Repurchase agreements – non-trading	**80,400**	**–**	**80,400**	**–**	**80,400**
Debt securities in issue	**88,949**	**–**	**89,023**	**–**	**89,023**
Subordinated liabilities	**22,702**	**–**	**24,344**	**649**	**24,993**
Assets and liabilities not held for sale at 31 December 2014					
Assets					
Loans and advances to banks	112,149	–	109,087	3,046	112,133
Loans and advances to customers	974,660	–	13,598	959,239	972,837
Reverse repurchase agreements – non-trading	161,713	–	160,600	1,123	161,723
Financial investments: debt securities	37,751	1,418	37,671	74	39,163
Liabilities					
Deposits by banks	77,426	–	77,300	98	77,398
Customer accounts	1,350,642	–	1,336,865	13,730	1,350,595
Repurchase agreements – non-trading	107,432	–	107,432	–	107,432
Debt securities in issue	95,947	146	94,325	1,932	96,403
Subordinated liabilities	26,664	–	28,806	1,248	30,054

Fair values are determined according to the hierarchy set out in Note 13.

Other financial instruments not carried at fair value are typically short-term in nature and re-price to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. This includes cash and balances at central banks, items in the course of collection from and transmission to other banks, Hong Kong Government certificates of indebtedness and Hong Kong currency notes in circulation, all of which are measured at amortised cost.

Carrying amount and fair value of loans and advances to customers by industry sector

	Carrying amount at 31 December		
	Not impaired $m	Impaired $m	Total $m
2015			
Loans and advances to customers	**907,698**	**16,756**	**924,454**
– personal	**361,716**	**9,487**	**371,203**
– corporate and commercial	**485,933**	**7,145**	**493,078**
– financial	**60,049**	**124**	**60,173**
2014			
Loans and advances to customers	954,710	19,950	974,660
– personal	377,154	11,800	388,954
– corporate and commercial	527,168	8,016	535,184
– financial	50,388	134	50,522

	Fair value at 31 December		
	Not impaired $m	Impaired $m	Total $m
2015			
Loans and advances to customers	**906,696**	**15,773**	**922,469**
– personal	**359,559**	**9,024**	**368,583**
– corporate and commercial	**487,196**	**6,592**	**493,788**
– financial	**59,941**	**157**	**60,098**
2014			
Loans and advances to customers	954,347	18,490	972,837
– personal	375,615	10,721	386,336
– corporate and commercial	528,361	7,642	536,003
– financial	50,371	127	50,498

Loans and advances to customers are classified as not impaired or impaired in accordance with the criteria described on page 128.

Analysis of loans and advances to customers by geographical segment

	2015		2014	
	Carrying amount $m	Fair value $m	Carrying amount $m	Fair value $m
Loans and advances to customers				
Europe	**392,041**	**392,540**	409,733	413,373
Asia	**356,375**	**355,249**	362,955	361,412
Middle East and North Africa	**29,894**	**29,614**	29,063	28,658
North America	**128,851**	**127,532**	129,787	126,232
Latin America	**17,293**	**17,534**	43,122	43,162
At 31 December	**924,454**	**922,469**	974,660	972,837

Valuation

The fair value measurement is HSBC's estimate of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It does not reflect the economic benefits and costs that HSBC expects to flow from the instruments' cash flows over their expected future lives. Other reporting entities may use different valuation methodologies and assumptions in determining fair values for which no observable market prices are available.

Fair values of the following assets and liabilities are estimated for the purpose of disclosure as described below:

Loans and advances to banks and customers

The fair value of loans and advances is based on observable market transactions, where available. In the absence of observable market transactions, fair value is estimated using valuation models that incorporate a range of input assumptions. These assumptions may include value estimates from third-party brokers which reflect over-the-counter trading activity, forward looking discounted cash flow models using assumptions which HSBC believes are consistent with those which would be used by market participants in valuing such loans, and trading inputs from other market participants which include observed primary and secondary trades.

Loans are grouped, as far as possible, into homogeneous groups and stratified by loans with similar characteristics to improve the accuracy of estimated valuation outputs. The stratification of a loan book considers all material factors including vintage, origination period, estimates of future interest rates, prepayment speeds, delinquency rates, loan-to-value ratios, the quality of collateral, default probability, and internal credit risk ratings.

The fair value of a loan reflects both loan impairments at the balance sheet date and estimates of market participants' expectations of credit losses over the life of the loans, and the fair value effect of re-pricing between origination and the balance sheet date.

The fair value of loans and advances to customers in North America was lower than the carrying amount, primarily in the US, reflecting the market conditions at the balance sheet date. This was due to the challenging economic conditions during the past number of years, including house price depreciation, rising unemployment, changes in consumer behaviour, changes in discount rates and the lack of financing options available to support the purchase of loans and advances. The relative fair values increased during 2015, largely due to improved conditions in the housing industry driven by increased property values and, to a lesser extent, lower required market yields and increased investor demand for these types of loans and advances.

The fair value of loans and advances to customers in Europe is now broadly in line with carrying value, as new business from both new and existing customers reflects the current low interest rate environment.

Financial investments

The fair values of listed financial investments are determined using bid market prices. The fair values of unlisted financial investments are determined using valuation techniques that take into consideration the prices and future earnings streams of equivalent quoted securities.

Deposits by banks and customer accounts

Fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities. The fair value of a deposit repayable on demand is approximated by its carrying value.

Debt securities in issue and subordinated liabilities

Fair values are determined using quoted market prices at the balance sheet date where available, or by reference to quoted market prices for similar instruments.

Repurchase and reverse repurchase agreements – non-trading

Fair values are estimated by using discounted cash flows, applying current rates. Fair values approximate carrying amounts as their balances are generally short dated.

HSBC Holdings

The methods used by HSBC Holdings to determine fair values of financial instruments for the purpose of measurement and disclosure are described above.

Fair values of HSBC Holdings' financial instruments not carried at fair value on the balance sheet

	2015		2014	
	Carrying amount $m	**Fair value[1] $m**	Carrying amount $m	Fair value[1] $m
Assets at 31 December				
Loans and advances to HSBC undertakings	**44,350**	**45,180**	43,910	45,091
Liabilities at 31 December				
Amounts owed to HSBC undertakings	**2,152**	**2,152**	2,892	2,906
Debt securities in issue	**960**	**1,224**	1,009	1,357
Subordinated liabilities	**15,895**	**18,297**	17,255	20,501

1 *Fair values were determined using valuation techniques with observable inputs (Level 2).*

15 Financial assets designated at fair value

Accounting policy

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below, and are so designated irrevocably at inception. HSBC may designate financial instruments at fair value when the designation:

- eliminates or significantly reduces measurement or recognition inconsistencies that would otherwise arise from measuring financial instruments or recognising gains and losses on different bases from related positions. Under this criterion, the main class of financial assets designated by HSBC are financial assets under unit-linked insurance and unit-linked investment contracts. Liabilities to customers under linked contracts are determined based on the fair value of the assets held in the linked funds. If no fair value designation was made for the related assets, the assets would be classified as available for sale, with changes in fair value recorded in other comprehensive income. The related financial assets and liabilities are managed and reported to management on a fair value basis. Designation at fair value of the financial assets and related liabilities allows the changes in fair values to be recorded in the income statement and presented in the same line;
- applies to groups of financial instruments that are managed, and their performance evaluated, on a fair value basis in accordance with a documented risk management or investment strategy, and where information about the groups of financial instruments is reported to management on that basis. For example, certain financial assets are held to meet liabilities under non-linked insurance contracts. HSBC has documented risk management and investment strategies designed to manage and monitor the market risk of those assets on a net basis, after considering non-linked liabilities. Fair value measurement is also consistent with the regulatory reporting requirements under the appropriate regulations for those insurance operations; and
- relates to financial instruments containing one or more non-closely related embedded derivatives.

Designated financial assets are recognised at fair value when HSBC enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when sold. Subsequent changes in fair values are recognised in the income statement in 'Net income from financial instruments designated at fair value'.

Financial assets designated at fair value

	2015 $m	2014 $m
Financial assets designated at fair value:		
– not subject to repledge or resale by counterparties	**23,852**	28,357
– which may be repledged or resold by counterparties	**–**	680
At 31 December	**23,852**	29,037
Treasury and other eligible bills	**396**	56
Debt securities	**4,341**	8,891
Equity securities	**18,995**	20,006
Securities designated at fair value	**23,732**	28,953
Loans and advances to banks and customers	**120**	84
At 31 December	**23,852**	29,037

Securities designated at fair value[1]

	2015 $m	2014 $m
US Treasury and US Government agencies[2]	**145**	8
UK Government	**103**	140
Hong Kong Government	**33**	40
Other government	**1,020**	4,088
Asset-backed securities[3]	**25**	18
Corporate debt and other securities	**3,411**	4,653
Equities	**18,995**	20,006
At 31 December	**23,732**	28,953

1 *Included within these figures are debt securities issued by banks and other financial institutions of $1,536m (2014: $1,388m), of which $35m (2014: $24m) are guaranteed by various governments.*
2 *Includes securities that are supported by an explicit guarantee issued by the US Government.*
3 *Excludes asset-backed securities included under US Treasury and US Government agencies.*

Securities listed on a recognised exchange and unlisted

	Treasury and other eligible bills $m	Debt securities $m	Equity securities $m	Total $m
Fair value				
Listed[1]	–	2,458	11,690	14,148
Unlisted	396	1,883	7,305	9,584
At 31 December 2015	**396**	**4,341**	**18,995**	**23,732**

Securities listed on a recognised exchange and unlisted *(continued)*

	Treasury and other eligible bills $m	Debt securities $m	Equity securities $m	Total $m
Fair value				
Listed[1]	5	2,731	13,837	16,573
Unlisted	51	6,160	6,169	12,380
At 31 December 2014	56	8,891	20,006	28,953

1 *Included within listed investments are $1,181m of investments listed on a recognised exchange in Hong Kong (2014: $1,361m).*

16 Derivatives

Accounting policy

Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, bonds, interest rates, foreign exchange, credit spreads, commodities and equity or other indices. Derivatives are recognised initially, and are subsequently measured, at fair value. Fair values of derivatives are obtained either from quoted market prices or by using valuation techniques. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative.

Embedded derivatives are bifurcated from the host contract when their economic characteristics and risks are not clearly and closely related to those of the host non-derivative contract, their terms would otherwise meet the definition of a stand-alone derivative and the combined contract is not held for trading or designated at fair value. The bifurcated embedded derivatives are measured at fair value with changes therein recognised in the income statement.

Derivative assets and liabilities arising from different transactions are only offset for accounting purposes if the offsetting criteria presented in Note 32 are met.

Gains and losses from changes in the fair value of derivatives, that do not qualify for hedge accounting are reported in 'Net trading income'. Gains and losses on derivatives managed in conjunction with financial instruments designated at fair value are reported in 'Net income from financial instruments designated at fair value' together with the gains and losses on the economically hedged items. Where the derivatives are managed with debt securities issued by HSBC that are designated at fair value, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

Hedge accounting

When derivatives are designated in hedge relationships, HSBC classifies them as either: (i) hedges of the change in fair value of recognised assets or liabilities or firm commitments ('fair value hedges'); (ii) hedges of the variability in highly probable future cash flows attributable to a recognised asset or liability, or a forecast transaction ('cash flow hedges'); or (iii) a hedge of a net investment in a foreign operation ('net investment hedges').

HSBC formally designates and documents each hedge relationship from inception, setting out the risk management objective and strategy for undertaking the hedge along with the specifically identified hedging instrument, hedged item or transaction, the nature of the risk being hedged and the method for assessing hedge effectiveness. The method selected to assess hedge effectiveness will depend on the risk management strategy.

To qualify for hedge accounting, HSBC requires that a hedge must be expected to be highly effective at inception and on an ongoing basis for the duration of the hedge relationship with each hedge relationship subject to an ongoing retrospective and prospective hedge effectiveness assessment.

Fair value hedge

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, along with changes in the fair value of the hedged assets or liabilities attributable to the hedged risk.

If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued; the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate over the residual period to maturity, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income; the ineffective portion of the change in fair value is recognised immediately in the income statement within 'Net trading income'.

The accumulated gains and losses recognised in other comprehensive income are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. In hedges of forecast transactions that result in recognition of a non-financial asset or liability, previous gains and losses recognised in other comprehensive income are included in the initial measurement of the asset or liability.

When a hedge relationship is discontinued, any cumulative gain or loss recognised in other comprehensive income remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in other comprehensive income is immediately reclassified to the income statement.

Net investment hedge

Hedges of net investments in foreign operations are accounted for in a similar way to cash flow hedges. A gain or loss on the effective portion of the hedging instrument is recognised in other comprehensive income; the residual change in fair value is recognised immediately in the income statement. Gains and losses previously recognised in other comprehensive income are reclassified to the income statement on the disposal, or part disposal, of the foreign operation.

Derivatives that do not qualify for hedge accounting

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

Fair values of derivatives by product contract type held by HSBC

	Assets			Liabilities		
	Trading $m	Hedging $m	Total $m	Trading $m	Hedging $m	Total $m
Foreign exchange	**95,201**	**1,140**	**96,341**	**94,843**	**755**	**95,598**
Interest rate	**277,496**	**1,658**	**279,154**	**267,609**	**3,758**	**271,367**
Equities	**8,732**	**–**	**8,732**	**10,383**	**–**	**10,383**
Credit	**6,961**	**–**	**6,961**	**6,884**	**–**	**6,884**
Commodity and other	**3,148**	**–**	**3,148**	**2,699**	**–**	**2,699**
Gross total fair values	**391,538**	**2,798**	**394,336**	**382,418**	**4,513**	**386,931**
Offset (Note 32)			**(105,860)**			**(105,860)**
At 31 December 2015			**288,476**			**281,071**
Foreign exchange	95,584	1,728	97,312	95,187	572	95,759
Interest rate	471,379	1,864	473,243	463,456	4,696	468,152
Equities	11,694	–	11,694	13,654	–	13,654
Credit	9,340	–	9,340	10,061	–	10,061
Commodity and other	3,884	–	3,884	3,508	–	3,508
Gross total fair values	591,881	3,592	595,473	585,866	5,268	591,134
Offset (Note 32)			(250,465)			(250,465)
At 31 December 2014			345,008			340,669

Derivative assets and liabilities decreased during 2015, primarily driven by ‘portfolio compression’ exercises, with a corresponding decrease in the offset amount.

Fair values of derivatives by product contract type held by HSBC Holdings with subsidiaries

	Assets			Liabilities		
	Trading $m	Hedging $m	Total $m	Trading $m	Hedging $m	Total $m
Foreign exchange	**390**	**–**	**390**	**2,065**	**213**	**2,278**
Interest rate	**1,600**	**477**	**2,077**	**–**	**–**	**–**
At 31 December 2015	**1,990**	**477**	**2,467**	**2,065**	**213**	**2,278**
Foreign exchange	680	–	680	1,066	103	1,169
Interest rate	1,607	484	2,091	–	–	–
At 31 December 2014	2,287	484	2,771	1,066	103	1,169

Use of derivatives

For details regarding use of derivatives, see page 171 under Market Risk.

Trading derivatives

Most of HSBC’s derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making and risk management. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenues based on spread and volume. Risk management activity is undertaken to manage the risk arising from client transactions, with the principal purpose of retaining client margin. Other derivatives classified as held for trading include non-qualifying hedging derivatives.

Substantially all of HSBC Holdings’ derivatives entered into with subsidiaries are managed in conjunction with financial liabilities designated at fair value.

The notional contract amounts of derivatives held for trading purposes indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.

Notional contract amounts of derivatives held for trading purposes by product type

	HSBC		HSBC Holdings	
	2015	2014	**2015**	2014
	$m	$m	**$m**	$m
Foreign exchange	**5,658,030**	5,548,075	**19,036**	15,595
Interest rate	**14,462,113**	22,047,278	**10,150**	8,650
Equities	**501,834**	568,932	**–**	–
Credit	**463,344**	550,197	**–**	–
Commodity and other	**51,683**	77,565	**–**	–
At 31 December	**21,137,004**	28,792,047	**29,186**	24,245

Credit derivatives

HSBC trades credit derivatives through its principal dealing operations and acts as a principal counterparty to a broad range of users, structuring transactions to produce risk management products for its customers or making markets in certain products. Risk is typically controlled through entering into offsetting credit derivative contracts with other counterparties.

HSBC manages the credit risk arising on buying and selling credit derivative protection by including the related credit exposures within its overall credit limit structure for the relevant counterparty. Trading of credit derivatives is restricted to a small number of offices within the major centres which have the control infrastructure and market skills to manage effectively the credit risk inherent in the products.

Credit derivatives are also deployed to a limited extent for the risk management of the Group's loan portfolios. The notional contract amount of credit derivatives of $463bn (2014: $550bn) consisted of protection bought of $237bn (2014: $272bn) and protection sold of $226bn (2014: $278bn). The credit derivative business operates within the market risk management framework described on page 211.

Derivatives valued using models with unobservable inputs

The difference between the fair value at initial recognition (the transaction price) and the value that would have been derived had valuation techniques used for subsequent measurement been applied at initial recognition, less subsequent releases, is as follows:

Unamortised balance of derivatives valued using models with significant unobservable inputs

	2015	2014
	$m	$m
Unamortised balance at 1 January	**114**	167
Deferral on new transactions	**196**	177
Recognised in the income statement during the year:	**(207)**	(234)
– amortisation	**(121)**	(114)
– subsequent to unobservable inputs becoming observable	**(2)**	(13)
– maturity, termination or offsetting derivative	**(84)**	(107)
– risk hedged	**–**	–
Exchange differences	**(6)**	4
Unamortised balance at 31 December[1]	**97**	114

1 *This amount is yet to be recognised in the consolidated income statement.*

Hedge accounting derivatives

HSBC uses derivatives (principally interest rate swaps) for hedging purposes in the management of its asset and liability portfolios and structural positions. This enables HSBC to optimise the overall cost to the Group of accessing debt capital markets, and to mitigate the market risk which would otherwise arise from structural imbalances in the maturity and other profiles of its assets and liabilities.

The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.

Notional contract amounts of derivatives designated in qualifying hedge accounting relationships by product type

	HSBC				HSBC Holdings	
	2015		2014		2015	2014
	Cash flow hedge $m	Fair value hedge $m	Cash flow hedge $m	Fair value hedge $m	Fair value hedge $m	Fair value hedge $m
Foreign exchange	32,128	196	25,340	–	1,120	1,120
Interest rate	107,796	105,127	190,902	90,338	5,132	5,477
At 31 December	139,924	105,323	216,242	90,338	6,252	6,597

Fair value hedges

HSBC's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate long-term financial instruments due to movements in market interest rates.

Fair values of derivatives designated as fair value hedges

	2015		2014	
	Assets $m	Liabilities $m	Assets $m	Liabilities $m
HSBC				
Foreign exchange	2	–	–	–
Interest rate	672	3,395	387	4,012
At 31 December	674	3,395	387	4,012
HSBC Holdings				
Foreign exchange	–	213	–	103
Interest rate	477	–	484	–
At 31 December	477	213	484	103

Gains or losses arising from fair value hedges

	2015 $m	2014 $m	2013 $m
HSBC			
Gains/(losses):			
– on hedging instruments	40	(2,542)	1,997
– on the hedged items attributable to the hedged risk	(51)	2,561	(1,932)
Year ended 31 December	(11)	19	65
HSBC Holdings			
Gains/(losses):			
– on hedging instruments	(4)	423	14
– on the hedged items attributable to the hedged risk	6	(422)	(21)
Year ended 31 December	2	1	(7)

Cash flow hedges

HSBC's cash flow hedges consist principally of interest rate swaps, futures and cross-currency swaps that are used to protect against exposures to variability in future interest cash flows on non-trading assets and liabilities which bear interest at variable rates or which are expected to be re-funded or reinvested in the future. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying gains and losses on the effective portions of derivatives designated as cash flow hedges of forecast transactions.

Fair values of derivatives designated as cash flow hedges

	2015		2014	
	Assets $m	Liabilities $m	Assets $m	Liabilities $m
Foreign exchange	1,027	748	1,673	572
Interest rate	986	363	1,477	684
At 31 December	2,013	1,111	3,150	1,256

Forecast principal balances on which interest cash flows are expected to arise

	3 months or less $m	More than 3 months but less than 1 year $m	5 years or less but more than 1 year $m	More than 5 years $m
Net cash inflows/(outflows) exposure				
Assets	**94,256**	**93,528**	**62,664**	**971**
Liabilities	**(16,241)**	**(17,179)**	**(11,681)**	**(3,326)**
At 31 December 2015	**78,015**	**76,349**	**50,983**	**(2,355)**
Net cash inflows/(outflows) exposure				
Assets	131,694	122,728	79,529	959
Liabilities	(60,814)	(46,582)	(36,371)	(8,169)
At 31 December 2014	70,880	76,146	43,158	(7,210)

This table reflects the interest rate repricing profile of the underlying hedged items.

During the year to 31 December 2015 a gain of $15m (2014: gain of $34m; 2013: gain of $22m) was recognised due to hedge ineffectiveness.

Hedges of net investments in foreign operations

The Group applies hedge accounting in respect of certain consolidated net investments. Hedging is undertaken using forward foreign exchange contracts or by financing with foreign currency borrowings.

At 31 December 2015, the fair values of outstanding financial instruments designated as hedges of net investments in foreign operations were assets of $111m (2014: $55m), liabilities of $12m (2014: $1m) and notional contract values of $4,210m (2014: $3,525m).

Ineffectiveness recognised in 'Net trading income' in the year ended 31 December 2015 was nil (2014 and 2013: nil).

17 Financial investments

Accounting policy

Treasury bills, debt securities and equity securities intended to be held on a continuing basis, other than those designated at fair value, are classified as available for sale or held to maturity. They are recognised on the trade date when HSBC enters into contractual arrangements to purchase those instruments, and are normally derecognised when either the securities are sold or redeemed.

(i) Available-for-sale financial assets are initially measured at fair value plus direct and incremental transaction costs. They are subsequently remeasured at fair value, and changes therein are recognised in other comprehensive income until the assets are either sold or become impaired. When available-for-sale financial assets are sold, cumulative gains or losses previously recognised in other comprehensive income are recognised in the income statement as 'Gains less losses from financial investments'.

Interest income is recognised over a debt security's expected life. Premiums and/or discounts arising on the purchase of dated debt securities are included in the interest recognised. Dividends from equity assets are recognised in the income statement when the right to receive payment is established.

(ii) Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that HSBC positively intends and is able to hold to maturity. Held-to-maturity investments are initially recorded at fair value plus any directly attributable transaction costs, and are subsequently measured at amortised cost, less any impairment losses.

The accounting policy relating to impairments of available-for-sale securities is presented in Note 1.

Available-for-sale financial assets are reclassified to held to maturity if there is a change in intention or ability to hold those assets to maturity due to a change in the way they are managed. The fair value on reclassification becomes the new amortised cost and the assets are subsequently carried at amortised cost rather than fair value.

Financial investments

	2015 $m	2014 $m
Financial investments:		
– not subject to repledge or resale by counterparties	**420,905**	380,419
– which may be repledged or resold by counterparties	**8,050**	35,048
At 31 December	**428,955**	415,467

Carrying amount and fair value of financial investments

	2015		2014	
	Carrying amount $m	Fair value $m	Carrying amount $m	Fair value $m
Treasury and other eligible bills	**104,551**	**104,551**	81,517	81,517
– available for sale	**104,551**	**104,551**	81,517	81,517
Debt securities	**318,569**	**319,725**	323,256	324,668
– available for sale	**274,467**	**274,467**	285,505	285,505
– held to maturity	**44,102**	**45,258**	37,751	39,163
Equity securities	**5,835**	**5,835**	10,694	10,694
– available for sale	**5,835**	**5,835**	10,694	10,694
At 31 December	**428,955**	**430,111**	415,467	416,879

Financial investments at amortised cost and fair value

	Amortised cost[1] $m	Fair value[2] $m
US Treasury	**61,585**	**61,779**
US Government agencies[3]	**22,910**	**22,843**
US Government sponsored entities[3]	**10,365**	**10,627**
UK Government	**27,250**	**27,316**
Hong Kong Government	**53,676**	**53,674**
Other government	**141,329**	**143,370**
Asset-backed securities[4]	**14,239**	**13,375**
Corporate debt and other securities	**89,860**	**91,292**
Equities	**4,057**	**5,835**
At 31 December 2015	**425,271**	**430,111**
US Treasury	33,931	34,745
US Government agencies[3]	18,326	18,516
US Government sponsored entities[3]	9,339	9,761
UK Government	28,680	29,758
Hong Kong Government	43,573	43,574
Other government	159,846	163,402
Asset-backed securities[4]	20,911	19,177
Corporate debt and other securities	84,387	87,252
Equities	7,421	10,694
At 31 December 2014	406,414	416,879
US Treasury	50,369	50,421
US Government agencies[3]	19,211	18,771
US Government sponsored entities[3]	5,263	5,445
UK Government	23,565	23,580
Hong Kong Government	49,570	49,579
Other government	153,619	156,208
Asset-backed securities[4]	25,961	24,115
Corporate debt and other securities	87,469	88,999
Equities	8,081	9,140
At 31 December 2013	423,108	426,258

1 *Represents the amortised cost or cost basis of the financial investment.*
2 *Included within 'Fair value' figures are debt securities issued by banks and other financial institutions of $61bn (2014: $54bn; 2013: $55bn), of which $18bn (2014: $9bn; 2013: $9bn) are guaranteed by various governments.*
3 *Includes securities that are supported by an explicit guarantee issued by the US Government.*
4 *Excludes asset-backed securities included under US Government agencies and sponsored entities.*

Financial investments listed and unlisted

	Treasury and other eligible bills available for sale $m	Debt securities available for sale $m	Debt securities held to maturity $m	Equity securities available for sale $m	Total $m
Carrying amount					
Listed[1]	6,151	170,271	9,565	842	186,829
Unlisted[2]	98,400	104,196	34,537	4,993	242,126
At 31 December 2015	**104,551**	**274,467**	**44,102**	**5,835**	**428,955**
Carrying amount					
Listed[1]	4,101	168,879	6,037	5,928	184,945
Unlisted[2]	77,416	116,626	31,714	4,766	230,522
At 31 December 2014	81,517	285,505	37,751	10,694	415,467

1 *The fair value of listed held-to-maturity debt securities as at 31 December 2015 was $10bn (2014: $6bn). Included within listed investments were $5bn (2014: $4bn) of investments listed on a recognised exchange in Hong Kong.*
2 *Unlisted treasury and other eligible bills available for sale primarily comprise treasury bills not listed on an exchange but for which there is a liquid market.*

Maturities of investments in debt securities at their carrying amount

	1 year or less $m	5 years or less but over 1 year $m	10 years or less but over 5 years $m	Over 10 years $m	Total $m
Available for sale	61,664	131,023	42,140	39,640	274,467
Held to maturity	2,428	10,242	8,881	22,551	44,102
At 31 December 2015	**64,092**	**141,265**	**51,021**	**62,191**	**318,569**
Available for sale	68,344	134,815	44,938	37,408	285,505
Held to maturity	1,396	9,622	7,087	19,646	37,751
At 31 December 2014	69,740	144,437	52,025	57,054	323,256

Contractual maturities and weighted average yields of investment debt securities

	Within one year		After one year but within five years		After five years but within ten years		After ten years	
	Amount $m	Yield %	Amount $m	Yield %	Amount $m	Yield %	Amount $m	Yield %
Available for sale								
US Treasury	9,316	0.5	20,352	1.2	12,805	2.1	3,594	3.3
US Government agencies	–	–	6	4.2	33	3.9	13,575	2.5
US Government-sponsored agencies	8	5.3	3,029	3.0	911	2.2	1,716	3.0
UK Government	2,479	1.7	8,005	1.3	8,518	1.4	1,215	0.1
Hong Kong Government	674	0.5	1,408	1.1	–	–	–	–
Other governments	37,197	2.0	60,899	2.4	10,312	2.9	2,543	3.0
Asset-backed securities	18	1.4	657	1.4	2,530	1.3	11,027	1.3
Corporate debt and other securities	12,285	1.5	35,210	1.4	5,937	1.9	6,287	3.0
Total amortised cost at 31 December 2015	**61,977**		**129,566**		**41,046**		**39,957**	
Total carrying value	61,664		131,023		42,140		39,640	
Held to maturity								
US Treasury	2	0.9	76	4.9	46	4.8	119	4.2
US Government agencies	–	–	13	1.4	30	4.0	9,254	2.4
US Government-sponsored agencies	–	–	112	1.3	597	2.7	3,991	2.9
Hong Kong Government	4	0.7	44	1.4	16	1.8	9	1.4
Other governments	59	5.5	217	4.7	184	5.3	725	4.6
Asset-backed securities	–	–	–	–	–	–	7	6.5
Corporate debt and other securities	2,363	3.0	9,780	3.5	8,008	3.7	8,446	4.1
Total amortised cost at 31 December 2015	**2,428**		**10,242**		**8,881**		**22,551**	
Total carrying value	2,428		10,242		8,881		22,551	

The maturity distributions of ABSs are presented in the above table on the basis of contractual maturity dates. The weighted average yield for each range of maturities is calculated by dividing the annualised interest income for the year ended 31 December 2015 by the book amount of available-for-sale debt securities at that date. The yields do not include the effect of related derivatives.

18 Assets charged as security for liabilities, assets transferred and collateral accepted as security for assets

Financial assets pledged to secure liabilities

	2015 $m	2014 $m
Treasury bills and other eligible securities	**5,941**	5,170
Loans and advances to banks	**15,582**	17,294
Loans and advances to customers	**88,927**	77,960
Debt securities	**69,470**	138,991
Equity securities	**4,644**	11,373
Other	**213**	6,079
Assets pledged at 31 December	**184,777**	256,867

The above table shows assets over which a charge has been granted to secure liabilities on a legal and contractual basis. The total amount may be greater than the book value of assets utilised as collateral for funding purposes or to cover liabilities, for example, in the case of securitisations and covered bonds where the amount of liabilities issued plus any mandatory over-collateralisation is less than the book value of financial assets available for funding or collateral purposes in the relevant pool of assets. This is also the case where financial assets are placed with a custodian or a settlement agent which has a floating charge over all the financial assets placed to secure any liabilities under settlement accounts.

These transactions are conducted under terms that are usual and customary to collateralised transactions including, where relevant, standard securities lending, repurchase agreements and derivative margining. HSBC places both cash and non-cash collateral in relation to derivative transactions.

Assets transferred

Accounting policy

Derecognition of financial assets

Financial assets are derecognised when the contractual rights to receive cash flows from the assets have expired; or when HSBC has transferred its contractual right to receive the cash flows of the financial assets, and either:

- substantially all the risks and rewards of ownership have been transferred; or
- HSBC has neither retained nor transferred substantially all the risks and rewards, but has not retained control.

The financial assets shown above include amounts transferred to third parties that do not qualify for derecognition, notably debt securities held by counterparties as collateral under repurchase agreements and equity securities lent under securities lending agreements. As the substance of these transactions is secured borrowings, the asset collateral continues to be recognised in full and the related liability reflecting the Group's obligation to repurchase the transferred assets for a fixed price at a future date is also recognised on the balance sheet. As a result of these transactions, the Group is unable to use, sell or pledge the transferred assets for the duration of the transaction. The Group remains exposed to interest rate risk and credit risk on these pledged instruments. The counterparty's recourse is not limited to the transferred assets.

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	Carrying amount of assets before transfer $m	Carrying amount of transferred assets $m	Carrying amount of associated liabilities $m	Fair value of transferred assets $m	Fair value of associated liabilities $m	Net position $m
At 31 December 2015						
Repurchase agreements		**36,153**	**35,913**			
Securities lending agreements		**5,275**	**5,704**			
Other sales (recourse to transferred asset only)		**2,717**	**2,768**	**2,720**	**2,726**	**(6)**
Securitisations recognised to the extent of continuing involvement	**17,427**	**5**	**2**	**5**	**2**	**3**
At 31 December 2014						
Repurchase agreements		78,541	79,141			
Securities lending agreements		13,177	10,643			
Other sales (recourse to transferred asset only)		3,775	4,049	4,007	4,018	(11)
Securitisations recognised to the extent of continuing involvement	17,427	11	5	11	5	6

Collateral accepted as security for assets

The fair value of assets accepted as collateral in relation to reverse repo, securities borrowing and derivative margining that HSBC is permitted to sell or repledge in the absence of default was $222,065m (2014: $269,019m). The fair value of any such collateral sold or repledged was $139,532m (2014: $163,342m). HSBC is obliged to return equivalent securities.

These transactions are conducted under terms that are usual and customary to standard securities borrowing, reverse repurchase agreements and derivative margining.

19 Interests in associates and joint ventures

Accounting policy

Investments in which HSBC, together with one or more parties, has joint control of an arrangement set up to undertake an economic activity are classified as joint ventures. HSBC classifies investments in entities over which it has significant influence, and that are neither subsidiaries (Note 21) nor joint ventures, as associates.

Investments in associates and interests in joint ventures are recognised using the equity method. Under this method, such investments are initially stated at cost, including attributable goodwill, and are adjusted thereafter for the post-acquisition change in HSBC's share of net assets. Goodwill arises on the acquisition of interests in joint ventures and associates when the cost of investment exceeds HSBC's share of the net fair value of the associate's or joint venture's identifiable assets and liabilities.

Investments in associates and joint ventures are tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in joint ventures and associates is not tested separately for impairment.

Profits on transactions between HSBC and its associates and joint ventures are eliminated to the extent of HSBC's interest in the respective associates or joint ventures. Losses are also eliminated to the extent of HSBC's interest in the associates or joint ventures unless the transaction provides evidence of an impairment of the asset transferred.

Critical accounting estimates and judgements

Impairment of interests in associates

Impairment testing involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment.

The most significant judgements relate to the impairment testing of our investment in Bank of Communications ('BoCom'). Key assumptions used in estimating BoCom's value in use, the sensitivity of the value in use calculation to different assumptions and a sensitivity analysis that shows the changes in key assumptions that would reduce the excess of value in use over the carrying amount (the 'headroom') to nil are described below.

Associates

At 31 December 2015, the carrying amount of HSBC's interests in associates was $18,900m (2014: $17,940m).

Principal associates of HSBC

	2015		2014	
	Carrying amount $m	Fair value[1] $m	Carrying amount $m	Fair value[1] $m
Listed				
Bank of Communications Co., Limited	15,344	9,940	14,590	13,140
The Saudi British Bank	3,021	3,957	2,811	6,220
At 31 December	**18,365**	**13,897**	17,401	19,360

1 *Principal associates are listed on recognised stock exchanges. The fair values are based on the quoted market prices of the shares held (Level 1 in the fair value hierarchy).*

	At 31 December 2015			
	Country of incorporation and principal place of business	Principal activity	HSBC's interest in equity capital	Issued equity capital
Bank of Communications Co., Limited	PRC[1]	Banking services	19.03%	RMB74,263m
The Saudi British Bank	Saudi Arabia	Banking services	40.00%	SR15,000m

1 *People's Republic of China.*

Details of all HSBC associates and joint ventures, as required under Section 409 of the Companies Act 2006, are set out on pages 468 to 469.

HSBC had $15,344m (2014: $14,590m) of interests in associates listed in Hong Kong.

Bank of Communications Co., Limited

HSBC's investment in BoCom was equity accounted with effect from August 2004. Its significant influence in BoCom was established as a result of representation on the Board of Directors and, in accordance with the Technical Cooperation and Exchange Programme, HSBC is assisting in the maintenance of financial and operating policies and a number of staff have been seconded to assist in this process.

Impairment testing

At 31 December 2015, the fair value of HSBC's investment in BoCom had been below the carrying amount for approximately 44 months, apart from a short period in 2013 and briefly during the first half of 2015. As a result, the Group performed an impairment test on the carrying amount of the investment in BoCom. The test confirmed that there was no impairment at 31 December 2015.

	At 31 December 2015			At 31 December 2014		
	VIU	**Carrying value**	**Fair value**	VIU	Carrying value	Fair value
	$bn	**$bn**	**$bn**	$bn	$bn	$bn
Bank of Communications Co., Limited	**17.0**	**15.3**	**9.9**	15.7	14.6	13.1

Basis of recoverable amount

The impairment test was performed by comparing the recoverable amount of BoCom, determined by a value in use ('VIU') calculation, with its carrying amount. The VIU calculation uses discounted cash flow projections based on management's estimates of earnings. Cash flows beyond the short- to medium-term are then extrapolated in perpetuity using a long-term growth rate. An imputed capital maintenance charge ('CMC') is calculated to reflect the expected regulatory capital requirements, and is calculated as a deduction from forecast cash flows. The principal inputs to the CMC calculation include estimates of asset growth, the ratio of risk-weighted assets to total assets, and the expected regulatory capital requirements. Management judgement is required in estimating the future cash flows of BoCom.

Key assumptions in VIU calculation

Long-term growth rate: the growth rate used was 5% (2014: 5%) for periods after 2018 and does not exceed forecast GDP growth in mainland China.

Long-term asset growth rate: the growth rate used was 4% (2014: 4%) for periods after 2018 and this is the rate of growth required for an assumed 5% long-term growth rate in profit.

Discount rate: the discount rate of 13% (2014: 13%) is derived from a range of values obtained by applying a Capital Asset Pricing Model ('CAPM') calculation for BoCom, using market data. Management supplements this by comparing the rates derived from the CAPM with discount rates available from external sources, and HSBC's discount rate for evaluating investments in mainland China. The discount rate used is within the range of 10.1% to 14.2% (2014: 11.4% to 14.2%) indicated by the CAPM and external sources.

Loan impairment charge as a percentage of customer advances: the ratio used ranges from 0.71% to 0.78% (2014: 0.73% to 1%) in the short- to medium-term and is based on the forecasts disclosed by external analysts. It was assumed that the long-term ratio will stabilise at a rate of 0.70% (2014: 0.65%) which is slightly higher than the historical rate of 0.65%.

Risk-weighted assets as a percentage of total assets: the ratio used was 67% for all forecast periods (2014: 70% to 72% in the short- to medium-term and 70% in the long-term). This is consistent with the forecasts disclosed by external analysts.

Cost-income ratio: the ratio used was 41% (2014: ranged from 40.0% to 42.4%) in the short- to medium-term. The ratios were consistent with the short- to medium-term range forecasts of 40.3% to 40.7% (2014: 37.2% to 44.5%) disclosed by external analysts.

Sensitivity analyses were performed on each key assumption to ascertain the impact of reasonably possible changes in assumptions. The following change to each key assumption used on its own in the VIU calculation would reduce the headroom to nil.

Key assumption	**Changes to key assumption to reduce headroom to nil**
• Long-term growth rate	• Decrease by 62 basis points
• Long-term asset growth rate	• Increase by 62 basis points
• Discount rate	• Increase by 82 basis points
• Loan impairment charge as a percentage of customer advances	• Increase by 13 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 5.4%
• Cost-income ratio	• Increase by 2.8%

The following table illustrates the effect on VIU of reasonably possible changes to key assumptions. This reflects the sensitivity of VIU to each key assumption on its own and it is possible that more than one favourable and/or unfavourable change will occur at the same time.

	Favourable change		Current model	Unfavourable change	
	$bn	$bn	$bn	$bn	$bn
At 31 December 2015					
Carrying amount: $15.3bn					
Long-term growth rate	+100bps		5%	-210bps	
VIU	20.3		17.0	12.3	
Increase/(decrease) in VIU	3.2			(4.7)	
Long-term asset growth rate	-50bps		4%	+100bps	
VIU	18.2		17.0	14.3	
Increase/(decrease) in VIU	1.2			(2.8)	
Discount rate	-150bps		13%	+110bps	
VIU	21.2		17.0	14.9	
Increase/(decrease) in VIU	4.2			(2.1)	
Loan impairment charge as a percentage of customer advances	70bps throughout		2015-18: 0.71% - 0.78% 2019 onwards: 0.70%	2015-18: 0.85% 2019 onwards: 0.75%	
VIU	17.2		17.0	16.4	
Increase/(decrease) in VIU	0.1			(0.7)	
Risk-weighted assets as a percentage of total assets	-350bps		67% throughout	+10bps	
VIU	18.2		17.0	17.0	
Increase/(decrease) in VIU	1.2			(0.0)	
Cost income ratio	-250bps		41% throughout	+120bps	
VIU	18.5		17.0	16.35	
Increase/(decrease) in VIU	1.5			(0.7)	
At 31 December 2014					
Carrying amount: $14.6bn					
Long-term growth rate	+50bp	+100bp	5%	-50bp	-100bp
VIU	17.0	18.6	15.7	14.5	13.4
Increase/(decrease) in VIU	1.3	2.9		(1.2)	(2.3)
Discount rate	-50bp	-100bp	13%	+50bp	+100bp
VIU	16.8	18.1	15.7	14.7	13.9
Increase/(decrease) in VIU	1.1	2.4		(1.0)	(1.8)
Loan impairment charge as a percentage of customer advances	0.65% throughout		2014-18: 0.73% – 1% 2019 onwards: 0.65%	1% from 2014-18 2019 onwards: 0.65%	
VIU	16.2		15.7	14.9	
Increase/(decrease) in VIU	0.5			(0.8)	
Risk-weighted assets as a percentage of total assets	-100bp	-200bp	2014-18: 70% – 72% 2019 onwards: 70.0%	+100bp	+200bp
VIU	16.0	16.3	15.7	15.4	15.1
Increase/(decrease) in VIU	0.3	0.6		(0.3)	(0.6)
Cost income ratio	-50bp	-100bp	2014-18: 40.0% – 42.4% 2019 onwards: 42.4%	+50bp	+100bp
VIU	16.0	16.3	15.7	15.4	15.1
Increase/(decrease) in VIU	0.3	0.6		(0.3)	(0.6)

Based on the forecasts disclosed by external analysts, management estimates that the reasonably possible range of VIU is $12.4bn to $22.7bn.

Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2015, HSBC included the associate's results on the basis of financial statements made up for the 12 months ended 30 September 2015, taking into account changes in the subsequent period from 1 October 2015 to 31 December 2015 that would have materially affected the results.

Selected balance sheet information of BoCom

	At 30 September 2015 $m	2014 $m
Cash and balances at central banks	**144,702**	150,306
Loans and advances to banks and other financial institutions	**110,915**	79,960
Loans and advances to customers	**560,503**	547,706
Other financial assets	**244,722**	178,883
Other assets	**49,246**	45,140
Total assets	**1,110,088**	1,001,995
Deposits by banks and other financial institutions	**261,211**	209,935
Customer accounts	**691,959**	663,745
Other financial liabilities	**46,932**	28,860
Other liabilities	**29,329**	25,361
Total liabilities	**1,029,431**	927,901
Total equity	**80,657**	74,094

Reconciliation of BoCom's total shareholders' equity to the carrying amount in HSBC's consolidated financial statements as at 31 December

	At 30 September 2015 $m	2014 $m
HSBC's share of total shareholders' equity	**14,824**	14,040
Add: Goodwill and other intangible assets	**520**	550
Carrying amount	**15,344**	14,590

Selected income statement information of BoCom

	For the 12 months ended 30 September 2015 $m	2014 $m
Net interest income	**22,397**	22,030
Net fee and commission income	**5,432**	4,792
Loan impairment charges	**(3,772)**	(3,509)
Depreciation and amortisation	**(1,012)**	(920)
Tax expense	**(2,976)**	(3,102)
Profit for the year	**10,634**	10,626
Other comprehensive income	**377**	217
Total comprehensive income	**11,011**	10,843
Dividends received from BoCom	**624**	597

Summarised aggregate financial information in respect of all associates excluding BoCom

	2015 $m	2014 $m
Carrying amount	**3,556**	3,350
HSBC's share of:		
– total assets	**21,645**	20,099
– total liabilities	**18,166**	16,837
– revenues	**821**	801
– profit or loss from continuing operations	**508**	519
– other comprehensive income	**–**	2
– total comprehensive income	**508**	521

Joint ventures

At 31 December 2015, the carrying amount of HSBC's interests in joint ventures was $239m (2014: $241m).

Associates and joint ventures

For the year ended 31 December 2015, HSBC's share of associates and joint ventures' tax on profit was $575m (2014: $600m). This is included within 'Share of profit in associates and joint ventures' in the income statement.

Movements in interests in associates and joint ventures

	2015 $m	2014 $m
At 1 January	**18,181**	16,640
Additions	**3**	30
Disposals	**(8)**	(133)
Share of results	**2,556**	2,532
Dividends	**(879)**	(757)
Exchange differences	**(718)**	(212)
Share of other comprehensive income of associates and joint ventures	**(9)**	78
Other movements	**13**	3
At 31 December[1]	**19,139**	18,181

1 *Includes goodwill of $593m (2014: $621m).*

20 Goodwill and intangible assets

	2015 $m	2014 $m
Goodwill	**16,294**	19,169
Present value of in-force long-term insurance business	**5,685**	5,307
Other intangible assets	**2,626**	3,101
At 31 December	**24,605**	27,577

Goodwill

Accounting policy

Goodwill arises on the acquisition of subsidiaries, when the aggregate of the fair value of the consideration transferred, the amount of any non-controlling interest and the fair value of any previously held equity interest in the acquiree exceed the amount of the identifiable assets acquired and liabilities assumed. If the amount of the identifiable assets and liabilities acquired is greater, the difference is recognised immediately in the income statement.

Goodwill is allocated to cash-generating units ('CGU's) for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. HSBC's CGU's are based on geographical regions subdivided by global business. Impairment testing is performed at least annually, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount. The carrying amount of a CGU is based on its assets and liabilities, including attributable goodwill. The recoverable amount of a CGU is the higher of its fair value less cost to sell and its value in use. VIU is the present value of the expected future CGU cash flows. If the recoverable amount is less than the carrying value, an impairment loss is charged to the income statement. Goodwill is carried on the balance sheet at cost less accumulated impairment losses.

Goodwill is included in a disposal group if the disposal group is a CGU to which goodwill has been allocated or it is an operation within such a CGU. The amount of goodwill included in a disposal group is measured on the basis of the relative values of the operation disposed of and the portion of the CGU retained.

At the date of disposal of a business, attributable goodwill is included in HSBC's share of net assets in the calculation of the gain or loss on disposal.

Critical accounting estimates and judgements

Goodwill impairment

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 reflect management's view of future business prospects at the time of the assessment; and
- the rates used to discount future expected cash flows can have a significant effect on their valuation and are based on the costs of capital assigned to individual CGUs. The cost of capital percentage is generally derived from a CAPM, 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 management's control, are subject to uncertainty and require the exercise of significant judgement.

The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. In such circumstances, management retests goodwill for impairment more frequently than annually when indicators of impairment exist 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.

Movement analysis of goodwill

	Europe $m	Asia $m	MENA $m	North America $m	Latin America $m	Total $m
Gross amount						
At 1 January 2015	**13,207**	**1,009**	**54**	**7,815**	**3,007**	**25,092**
Exchange differences	**(1,237)**	**(73)**	**(4)**	**4**	**(300)**	**(1,610)**
Reclassified to held for sale[1]	**–**	**–**	**–**	**–**	**(1,319)**	**(1,319)**
Other	**1**	**59**	**(5)**	**(30)**	**(1)**	**24**
At 31 December 2015	**11,971**	**995**	**45**	**7,789**	**1,387**	**22,187**
Accumulated impairment losses						
At 1 January 2015	**–**	**–**	**–**	**(5,923)**	**–**	**(5,923)**
Other	**–**	**–**	**–**	**30**	**–**	**30**
At 31 December 2015	**–**	**–**	**–**	**(5,893)**	**–**	**(5,893)**
Net carrying amount at 31 December 2015	**11,971**	**995**	**45**	**1,896**	**1,387**	**16,294**
Gross amount						
At 1 January 2014	14,977	1,016	55	7,861	3,241	27,150
Disposals	(168)	–	–	–	–	(168)
Exchange differences	(1,594)	(30)	(1)	1	(240)	(1,864)
Reclassified to held for sale	(8)	–	–	–	24	16
Other	–	23	–	(47)	(18)	(42)
At 31 December 2014	13,207	1,009	54	7,815	3,007	25,092
Accumulated impairment losses						
At 1 January 2014	–	–	–	(5,971)	–	(5,971)
Exchange differences	–	–	–	1	–	1
Other	–	–	–	47	–	47
At 31 December 2014	–	–	–	(5,923)	–	(5,923)
Net carrying amount at 31 December 2014	13,207	1,009	54	1,892	3,007	19,169

1 *During 2015, $1.3bn of goodwill was reclassified to held for sale following the decision to sell our Brazilian operations. Goodwill was allocated based on the relative carrying value of the operations in Brazil to the cash generating units in Latin America. See Note 23 for further details.*

Impairment testing

HSBC's impairment test in respect of goodwill allocated to each CGU is performed as at 1 July each year. A review for indicators of impairment is undertaken at each subsequent quarter end and, as at 31 December 2015, this review identified indicators of impairment for two CGUs, recognised as sensitive in the annual test performed as at 1 July. As a result, an impairment test has been performed for Global Private Banking – Europe and Global Banking and Markets – North America as at 31 December 2015 and the goodwill balances, key assumptions and results of this test are included in the disclosures below. For all other CGUs the annual test performed as at 1 July remains the latest impairment test and the disclosures given are as at 1 July. The testing at both 1 July and 31 December resulted in no impairment of goodwill.

Basis of the recoverable amount

The recoverable amount of all CGUs to which goodwill has been allocated was equal to its VIU at each respective testing date for 2014 and 2015.

For each significant CGU, the VIU is calculated by discounting management's cash flow projections for the CGU. The discount rate used is based on the cost of capital HSBC allocates to investments in the countries within which the CGU operates. The long-term growth rate is used to extrapolate the cash flows in perpetuity because of the long-term perspective within the Group of the business units making up the CGUs. For the goodwill impairment test conducted at 1 July 2015, management's cash flow projections until the end of 2019 were used. For the goodwill impairment test conducted at 31 December 2015, management's cash flow projections until the end of 2020 were used.

Key assumptions in VIU calculation

	Goodwill at: 1 Jul 2015 $m	Goodwill at: 31 Dec 2015 $m	Discount rate %	Nominal growth rate beyond initial cash flow projections %
Cash-generating unit				
Retail Banking and Wealth Management – Europe	**3,562**		**6.9**	**3.3**
Global Private Banking – Europe	**3,414**	**3,343**	**8.4**	**2.5**
Global Banking and Markets – Europe	**2,690**		**9.9**	**3.5**
Commercial Banking – Europe	**2,603**		**9.0**	**3.6**
Global Banking and Markets – North America	**929**	**931**	**10.0**	**4.3**
Retail Banking and Wealth Management – Latin America	**792**		**11.0**	**6.9**
	1 Jul 2014 $m			
Cash-generating unit				
Retail Banking and Wealth Management – Europe	4,298		9.1	4.5
Global Private Banking – Europe	3,808		7.1	3.4
Global Banking and Markets – Europe	3,296		11.0	4.2
Commercial Banking – Europe	3,214		10.1	4.2
Global Banking and Markets – North America	917		9.8	4.6
Retail Banking and Wealth Management – Latin America	1,762		12.8	7.9

At 1 July 2015, aggregate goodwill of $2,787m (1 July 2014: $3,610m) had been allocated to CGUs that were not considered individually significant. The Group's CGUs do not carry on their balance sheets any significant intangible assets with indefinite useful lives, other than goodwill.

Management's judgement in estimating the cash flows of a CGU: the cash flow projections for each CGU are based on plans approved by the GMB.

Nominal long-term growth rate: this growth rate reflects GDP and inflation for the countries within which the CGU operates or derives revenue from. The rates are based on IMF forecast growth rates as they represent an objective estimate of likely future trends. The rates used for 2014 and 2015 do not exceed the long-term growth rates for the countries within which the CGUs operate or derive revenue from.

Discount rate: the discount rate used to discount the cash flows is based on the cost of capital assigned to each CGU, which is derived using a CAPM. The CAPM depends on inputs reflecting a number of financial and economic variables including the risk-free rate and a premium to reflect the inherent risk of the business being evaluated. These variables are based on the market's assessment of the economic variables and management's judgement. The discount rates for each CGU are refined to reflect the rates of inflation for the countries within which the CGU operates. In addition, for the purposes of testing goodwill for impairment, management supplements this process by comparing the discount rates derived using the internally generated CAPM with cost of capital rates produced by external sources for businesses operating in similar markets. For 2014 and 2015, internal cost of capital rates were consistent with externally sourced rates. For the purpose of goodwill testing during 2015, internal rates were adjusted to reflect the uncertainty of the cash flows used in the test.

Sensitivities of key assumptions in calculating VIU

At 1 July 2015 Global Banking and Markets – Europe, and as at 31 December Global Banking and Markets – North America and Global Private Banking – Europe, were all sensitive to reasonably possible changes in the key assumptions supporting the recoverable amount. In making an estimate of reasonably possible changes to assumptions management considers the available evidence in respect of each input to the model such as: the external range of discount rates observable; historical performance against forecast; and risks attaching to the key assumptions underlying cash flow projections.

For Global Banking and Markets – North America, a reasonably possible adverse change in any one of the discount rate, growth rate or management's projections of cash flows could cause an impairment to be recognised. For Global Private Banking – Europe, a reasonably possible adverse change in management's projections of cash flows, or changes in more than one assumption, could cause an impairment to be recognised. Global Banking and Markets – Europe, would require reasonably possible adverse changes in more than one assumption to cause an impairment.

The following table presents a summary of the key assumptions underlying the most sensitive inputs to the model for each CGU; the key risks attaching to each; and details of a reasonably possible change to assumptions where, in the opinion of management, these could result in an impairment.

Reasonably possible changes in key assumptions

Cash-generating unit	Input	Key assumptions	Associated risks	Reasonably possible change
Retail Banking and Wealth Management – Europe and Commercial Banking – Europe	Cash flow projections	• Level of interest rates; • Competitors' positions within the market; and • Level and change in unemployment rates.	• Uncertain regulatory environment; and • Customer remediation and regulatory actions.	• Management has determined that a reasonably possible change in any of the key assumptions would not cause an impairment to be recognised.
Global Private Banking – Europe	Cash flow projections	• Achievement of planned strategic repositioning; • Level of assets under management; • Return on assets; • Central bank interest rate rises; and • Cost savings from recent investment in new platforms.	• Challenges achieving strategic repositioning; • Deferral or non-occurrence of forecast interest rate rises; and • Slower than expected growth in assets under management.	• Cash flow projections decrease by 20%.
	Discount rate	• Discount rate used is a reasonable estimate of a suitable market rate for the profile of the business.	• External evidence arises to suggest that the rate used is not appropriate to the business.	• Discount rate increases by 60bps based on observable broker estimates for private banking focused institutions.
	Long-term growth rates	• Business growth will reflect GDP growth rates in the long term.	• Growth does not match GDP or GDP forecasts fall.	• Real GDP growth does not occur or is not reflected in performance.
Global Banking and Markets – Europe	Cash flow projections	• Level of interest rates; and • Recovery of European markets over the forecast period.	• Deferral or non-occurrence of forecast interest rate rises; • Lower than expected growth in key markets; and • The impact of regulatory changes, including the ring fencing of the UK retail bank.	• Cash flow projections decrease by 20%.
	Discount rate	• Discount rate used is a reasonable estimate of a suitable market rate for the profile of the business.	• External evidence arises to suggest that the rate used is not appropriate to the business.	• Discount rate increases by 110 basis points, based on the high end of the range of broker estimates for comparator European banks with significant investment banking operations.
	Long-term growth rates	• Business growth will reflect GDP growth rates in the long term.	• Growth does not match GDP or GDP forecasts fall.	• Real GDP growth does not occur or is not reflected in performance.
Global Banking and Markets – North America	Cash flow projections	• Level of interest rates; • Growth in NAFTA, China, and other major trade corridors; • Product and sales enhancements to increase market share; and • Increased collaboration with the CMB business to capture further opportunities from existing clients.	• Deferral or non-occurrence of forecast interest rate rises; and • Lower than expected growth in key markets.	• Cash flow projections decrease by 20%.
	Discount rate	• Discount rate used is a reasonable estimate of a suitable market rate for the profile of the business.	• External evidence arises to suggest that the rate used is not appropriate to the business.	• Discount rate increases by 100 basis points, based on the high end of the range of broker estimates for comparator US banks with significant investment banking operations.
	Long-term growth rates	• Business growth will reflect GDP growth rates in the long term.	• Growth does not match GDP or GDP forecasts fall.	• Real GDP growth does not occur or is not reflected in performance.
Retail Banking and Wealth Management – Latin America	Cash flow projections	• Growth in lending and deposit volumes; and • Credit quality of loan portfolios.	• Unfavourable economic conditions; and • Competitive pricing constraining margins.	• Management has determined that a reasonably possible change in any of the key assumptions would not cause an impairment to be recognised.

The following table presents the sensitivities of the VIU for each sensitive CGU to the reasonably possible adverse changes in the assumptions set out above:

Sensitivity of VIU to reasonably possible changes in key assumptions

			Reasonably possible change in key assumptions and impact on VIU						
	Carrying amount $bn	Value in use $bn	Discount rate bps	Impact on VIU $bn	Cash flows %	Impact on VIU $bn	Long-term growth rate bps	Impact on VIU $bn	Cumulative impact of all changes $bn
Cash-generating unit									
Global Private Banking – Europe[1]	4.6	5.2	60	(0.5)	(20)	(1.0)	(76)	(0.5)	(1.8)
Global Banking and Markets – Europe[2]	20.9	27.1	110	(3.9)	(20)	(5.4)	(213)	(5.6)	(11.9)
Global Banking and Markets – North America[1]	13.8	14.8	100	(2.2)	(20)	(3.0)	(215)	(3.3)	(6.6)

1 *As at 31 December 2015.*
2 *As at 1 July 2015.*

The following table presents for each sensitive CGU, the change required to individual current assumptions to reduce headroom to nil (breakeven).

Changes to current assumptions to achieve nil headroom

	Increase/(decrease)		
	Discount rate bps	Cash flow %	Long-term growth rate bps
Cash-generating unit			
Global Private Banking – Europe[1]	69	(11.2)	(86)
Global Banking and Markets – Europe[2]	193	(23.0)	(245)
Global Banking and Markets – North America[1]	41	(6.7)	(50)

1 *As at 31 December 2015.*
2 *As at 1 July 2015.*

Intangible assets

Accounting policy

Intangible assets are recognised, and those that are acquired in a business combination are distinguished from goodwill, when they are separable or arise from contractual or other legal rights, and it is probable that future economic benefits will flow to HSBC, the cost of which can be measured reliably.

Intangible assets include the present value of in-force long-term insurance business and long-term investment contracts with discretionary participating features ('PVIF'), computer software, trade names, mortgage servicing rights, customer lists, core deposit relationships, credit card customer relationships and merchant or other loan relationships. Computer software includes both purchased and internally generated software. The cost of internally generated software comprises all directly attributable costs necessary to create, produce and prepare the software to be capable of operating in the manner intended by management. Costs incurred in the ongoing maintenance of software are expensed immediately as incurred.

Intangible assets are subject to impairment review if there are events or changes in circumstances that indicate that the carrying amount may not be recoverable. Where:

- intangible assets have an indefinite useful life, or are not yet ready for use, they are tested for impairment annually. An intangible asset recognised during the current period is tested before the end of the current year; and where
- intangible assets have a finite useful life, except for PVIF, they are stated at cost less amortisation and accumulated impairment losses and are amortised over their estimated useful lives. Estimated useful life is the lower of legal duration and expected useful life.

Intangible assets with finite useful lives are generally amortised, on a straight-line basis, over their useful lives as follows:

Trade names	10 years
Mortgage servicing rights	between 5 and 12 years
Internally generated software	between 3 and 5 years
Purchased software	between 3 and 5 years
Customer/merchant relationships	between 3 and 10 years
Other	10 years

Present value of in-force long-term insurance business

The value placed on insurance contracts that are classified as long-term insurance business or long-term investment contracts with discretionary participating features ('DPF') and are in force at the balance sheet date is recognised as an asset. The asset represents the present value of the equity holders' interest in the issuing insurance companies' profits expected to emerge from these contracts written at the balance sheet date. The PVIF is determined by discounting the equity holders' interest in future profits expected to emerge from business currently in force using appropriate assumptions in assessing factors such as future mortality, lapse rates and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees. The PVIF asset is presented gross of attributable tax in the balance sheet and movements in the PVIF asset are included in 'Other operating income' on a gross of tax basis.

Present value of in-force long-term insurance business

Movements in PVIF

	2015 $m	2014 $m
PVIF at 1 January	**5,307**	5,335
Change in PVIF of long-term insurance business	**799**	261
Value of new business written during the year[1]	**809**	870
Movements arising from in-force business:		
– expected return	**(552)**	(545)
– experience variances[2]	**15**	62
– changes in operating assumptions	**129**	(69)
Investment return variances	**222**	(34)
Changes in investment assumptions	**138**	(75)
Other adjustments	**38**	52
Transfer of assets classified as held for sale[3]	**(219)**	(122)
Exchange differences and other	**(202)**	(167)
PVIF at 31 December	**5,685**	5,307

1 *'Value of new business written during the year' is the present value of the projected stream of profits from the business.*
2 *'Experience variances' includes 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 affects profits on future business.*
3 *Relates to the Brazilian insurance operations and the UK pensions business which were classified as held for sale in the first half of 2015 and 2014 respectively. See page 180 for further details.*

In the PVIF calculation, expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends, and after applying risk margins to reflect any uncertainty in the underlying assumptions. Variations in actual experience and changes to assumptions 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 ('changes in operating assumptions');
- the effects of changes in projected future cash flows associated with operating assumption experience variances compared with those assumed at the start of the period ('experience variances');
- changes related to future investment returns ('changes in investment assumptions'); and
- the effect of actual investment experience on existing assets compared with the assumptions 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.

Key assumptions used in the computation of PVIF for main life insurance operations

Economic assumptions are either set in a way that is consistent with observable market values or, in certain markets (including those where the risk free curve is not observable at tenors matching the duration of our insurance contract liabilities) use is made of long-term economic assumptions. Setting such assumptions involves the projection of long-term interest rates and the time horizon over which observable rates tend towards these long-term assumptions. The assumptions are informed by relevant historical data and by research and analysis performed by the Group's Economic Research team and external experts, including regulatory bodies. The valuation of PVIF will be sensitive to any changes in these long-term assumptions in the same way that it is sensitive to observed market movements, and the impact of such changes is included in the sensitivities presented below.

	2015			2014		
	UK	**Hong Kong**	**France[1]**	UK	Hong Kong	France[1]
	%	**%**	**%**	%	%	%
Weighted average risk free rate	**1.75**	**1.82**	**1.57**	1.65	1.86	1.21
Weighted average risk discount rate	**2.25**	**6.81**	**2.55**	2.15	7.42	1.73
Expense inflation	**4.56**	**3.00**	**1.70**	4.67	3.00	2.00

1 *For 2015, the calculation of France's PVIF assumes a risk discount rate of 2.55% (2014: 1.73%) plus a risk margin of $51m (2014: $63m).*

Sensitivity to changes in economic assumptions

The Group sets the risk discount rate applied to the PVIF calculation by starting from a risk-free rate curve and adding explicit allowances for risks not reflected in the best estimate cash flow modelling. Where shareholders provide options and guarantees to policyholders the cost of these options and guarantees is an explicit reduction to PVIF, unless it is already allowed for as an explicit addition to the technical provisions required by regulators. See page 184 for further details of these guarantees.

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. For the same reason, the impact of the stress is not symmetrical on the upside and downside. The sensitivities shown are before actions that could be taken by management to mitigate effects and allow for adverse changes in policyholder behaviour. The sensitivities have decreased from 2014 to 2015, driven mainly by rising yields and updates to interest rate parameters in France during 2015. In a low yield environment the PVIF asset is particularly sensitive to yield curve movements driven by the projected cost of options and guarantees described on page 184.

	2015	2014
	$m	$m
Effect on PVIF at 31 December of:		
+100 basis point shift in risk-free rate	**(3)**	320
–100 basis point shift in risk-free rate[1]	**(139)**	(589)

1 *Where a –100 basis point parallel shift in the risk-free rate would result in a negative rate, the effect on PVIF has been calculated using a minimum rate of 0%.*

Sensitivity to changes in non-economic assumptions

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 PVIF to reasonably possible changes in these non-economic assumptions at 31 December across all our insurance manufacturing subsidiaries.

	2015	2014
	$m	$m
Effect on PVIF at 31 December of:		
10% increase in mortality and/or morbidity rates	**(73)**	(66)
10% decrease in mortality and/or morbidity rates	**77**	70
10% increase in lapse rates	**(127)**	(146)
10% decrease in lapse rates	**144**	165
10% increase in expense rates	**(83)**	(93)
10% decrease in expense rates	**83**	94

Other intangible assets

Movement of intangible assets excluding goodwill and the PVIF

	Internally generated software $m	Other $m	Total $m
Cost			
At 1 January 2015	**6,413**	**2,863**	**9,276**
Additions	**857**	**114**	**971**
Disposals	**(134)**	**(159)**	**(293)**
Amount written off	**(238)**	**(2)**	**(240)**
Reclassified to held for sale	**(239)**	**(452)**	**(691)**
Other changes	**(292)**	**(184)**	**(476)**
At 31 December 2015	**6,367**	**2,180**	**8,547**
Accumulated amortisation			
At 1 January 2015	**(4,286)**	**(1,889)**	**(6,175)**
Charge for the year[1]	**(686)**	**(142)**	**(828)**
Impairment	**(149)**	**15**	**(134)**
Disposals	**128**	**147**	**275**
Amount written off	**238**	**2**	**240**
Reclassified to held for sale	**141**	**250**	**391**
Other changes	**181**	**120**	**301**
At 31 December 2015	**(4,433)**	**(1,497)**	**(5,930)**
Net carrying amount at 31 December 2015	**1,934**	**683**	**2,617**
Cost			
At 1 January 2014	5,999	2,975	8,974
Additions	732	177	909
Disposals	(35)	(80)	(115)
Amount written off	(24)	(53)	(77)
Other changes	(259)	(156)	(415)
At 31 December 2014	6,413	2,863	9,276
Accumulated amortisation			
At 1 January 2014	(3,809)	(1,761)	(5,570)
Charge for the year[1]	(677)	(261)	(938)
Impairment	(11)	(54)	(65)
Disposals	32	77	109
Amount written off	24	53	77
Other changes	155	57	212
At 31 December 2014	(4,286)	(1,889)	(6,175)
Net carrying amount at 31 December 2014	2,127	974	3,101

1 *The amortisation charge for the year is recognised within the income statement under 'Amortisation and impairment of intangible assets', with the exception of the amortisation of mortgage servicing rights which is recognised in 'Net fee income'. The revaluation net of amortisation charge for mortgage servicing rights was $25m in 2015 (2014: charge of $67m).*

21 Investments in subsidiaries

Accounting policy

HSBC classifies investments in entities which it controls as subsidiaries. HSBC's consolidation policy is described in Note 1(g). Subsidiaries which are structured entities are covered in Note 39.

HSBC Holdings' investments in subsidiaries are stated at cost less impairment losses. Impairment losses recognised in prior periods are reversed through the income statement if there has been a change in the estimates used to determine the investment's recoverable amount since the last impairment loss was recognised.

Principal subsidiaries of HSBC Holdings

	At 31 December 2015			
	Country of incorporation or registration	HSBC's interest in equity capital %	Issued equity capital	Share class
Europe				
HSBC Bank plc	England	100	£797m	Ordinary £1 Preferred Ordinary £1 Series 2 Third Dollar Preference $0.01 Third Dollar Preference $0.01
HSBC France	France	99.99	€337m	Shares €5.00
HSBC Private Banking Holdings (Suisse) SA	Switzerland	100	CHF1,363m	Ordinary CHF1,000
HSBC Trinkaus & Burkhardt AG	Germany	80.65	€75.4m	Shares of no par value
Asia				
Hang Seng Bank Limited[1]	Hong Kong	62.14	HK$9, 658m	Ordinary no par value
HSBC Bank Australia Limited	Australia	100	A$811m	Ordinary no par value
HSBC Bank (China) Company Limited	PRC[5]	100	RMB15,400m	Ordinary CNY1.00
HSBC Bank Malaysia Berhad	Malaysia	100	RM115m	Ordinary RM0.50
HSBC Bank (Taiwan) Limited	Taiwan	100	TWD34,800m	Ordinary TWD10.00
HSBC Life (International) Limited	Bermuda	100	HK$4,178m	Ordinary HK$1.00
The Hongkong and Shanghai Banking Corporation Limited	Hong Kong	100	HK$96,052m	Ordinary no par value CIP[2] $1.00 CRP[3] $1.00 NIP[4] $1.00
Middle East and North Africa				
HSBC Bank Middle East Limited	Jersey	100	$931m	Ordinary $1.00 CRP[3] $1.00
HSBC Bank Egypt S.A.E.	Egypt	94.53	EGP2,796m	Ordinary EGP84.00
North America				
HSBC Bank Canada	Canada	100	C$1,225m C$500m	Common shares of no par value Preference shares of no par value
HSBC Bank USA, N.A.	USA	100	$2m	Common $100
HSBC Finance Corporation	USA	100	–[6]	Common $0.01
HSBC Securities (USA) Inc.	USA	100	–[6]	Common $0.05
Latin America				
HSBC Bank Brasil S.A. – Banco Múltiplo	Brazil	100	BRL6,402m	Shares of no par value
HSBC Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC	Mexico	99.99	MXN5,681m	Ordinary MXN2.00

1 *Listed in Hong Kong.*
2 *Cumulative Irredeemable Preference shares.*
3 *Cumulative Redeemable Preference shares.*
4 *Non-cumulative Irredeemable Preference shares.*
5 *People's Republic of China.*
6 *Issued equity capital is less than $1m.*

Details of the debt, subordinated debt and preference shares issued by the principal subsidiaries to parties external to the Group are included in Notes 26 'Debt securities in issue', 30 'Subordinated liabilities' and 34 'Non-controlling interests', respectively.

All the above subsidiaries are included in the HSBC consolidated financial statements.

Details of all HSBC subsidiaries, as required under Section 409 of the Companies Act 2006, are set out on pages 458 to 469. The principal countries of operation are the same as the countries of incorporation except for HSBC Bank Middle East Limited, which operates mainly in the Middle East and North Africa, and HSBC Life (International) Limited, which operates mainly in Hong Kong.

HSBC is structured as a network of regional banks and locally incorporated regulated banking entities. Each bank is separately capitalised in accordance with applicable prudential requirements and maintains a capital buffer consistent with the Group's risk appetite for the relevant country or region. HSBC's capital management process culminates in the annual Group capital plan, which is approved by the Board.

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' issuance of equity and non-equity capital and by profit retention. As part of its capital management process, HSBC Holdings seeks to maintain a balance between the composition of its capital and its investment in subsidiaries. Subject to this, there is no current or foreseen impediment to HSBC Holdings' ability to provide funding for such investments. The ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective local regulatory capital and banking requirements, exchange controls, statutory reserves, and financial and operating performance. During 2015, none of the Group's subsidiaries experienced significant restrictions on paying dividends or repaying loans and advances. Also, there are no foreseen restrictions envisaged by our subsidiaries, with the exception of HSBC North America Holdings Inc., on paying dividends or repaying loans and advances.

The amount of guarantees by HSBC Holdings in favour of other HSBC Group entities is set out in Note 37.

Structured entities consolidated by HSBC where HSBC owns less than 50% of the voting rights

	Carrying value of total consolidated assets		Nature of SPE
	2015	2014	
	$bn	$bn	
Solitaire Funding Ltd	**7.3**	9.0	Securities investment conduit
Mazarin Funding Limited	**1.9**	3.9	Securities investment conduit
Barion Funding Limited	**1.1**	2.0	Securities investment conduit
Malachite Funding Limited	**0.4**	1.4	Securities investment conduit
HSBC Home Equity Loan Corporation I	**–**	1.9	Securitisation
HSBC Home Equity Loan Corporation II	**1.6**	0.9	Securitisation
Regency Assets Limited	**15.2**	11.0	Conduit

In addition to the above, HSBC consolidates a number of individually insignificant structured entities with total assets of $17.9bn (2014: $22.9bn). For further details, see Note 39.

In each of the above cases, HSBC controls and consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Subsidiaries with significant non-controlling interests

	2015	2014
Hang Seng Bank Limited		
Proportion of ownership interests and voting rights held by non-controlling interests	**37.86%**	37.86%
Place of business	**Hong Kong**	Hong Kong
	$m	$m
Profit attributable to non-controlling interests	**1,364**	760
Accumulated non-controlling interests of the subsidiary	**5,866**	5,765
Dividends paid to non-controlling interests	**523**	513
Summarised financial information:		
– total assets	**169,813**	160,769
– total liabilities	**153,458**	144,642
– net operating income before loan impairment	**5,411**	3,687
– profit for the year	**3,604**	2,007
– total comprehensive income for the year	**1,636**	4,460

22 Prepayments, accrued income and other assets

	2015 $m	2014 $m
Prepayments and accrued income	**7,765**	10,554
Bullion	**11,501**	15,726
Endorsements and acceptances	**9,149**	10,775
Reinsurers' share of liabilities under insurance contracts (Note 28)	**1,378**	1,032
Employee benefit assets (Note 6)	**5,272**	5,028
Other accounts	**9,410**	13,882
Property, plant and equipment	**9,923**	10,532
At 31 December	**54,398**	67,529

Prepayments, accrued income and other assets included $25,310m (2014: $33,889m) of financial assets, the majority of which were measured at amortised cost.

23 Assets held for sale and liabilities of disposal groups held for sale

Accounting policy

Assets held for sale

Assets and liabilities of disposal groups and non-current assets are classified as held for sale when their carrying amounts will be recovered principally through sale rather than through continuing use. Held-for-sale assets and liabilities are measured at the lower of their carrying amount and fair value less cost to sell, except for those assets and liabilities that are not within the scope of the measurement requirements of IFRS 5 'Non-current Assets Held for Sale and Discontinued Operations'.

Immediately before the initial classification as held for sale, the carrying amounts of the relevant assets and liabilities are measured in accordance with applicable IFRSs. On subsequent remeasurement of a disposal group, the carrying amounts of any assets and liabilities that are not within the scope of the measurement requirements of IFRS 5, but are included in a disposal group classified as held for sale, are remeasured under applicable IFRSs before the fair value less costs to sell of the disposal group is determined.

	2015 $m	2014 $m
Held for sale at 31 December		
Disposal groups	**41,715**	6,883
Non-current assets held for sale	**2,185**	764
Total assets	**43,900**	7,647
Liabilities of disposal groups	**36,840**	6,934

Disposal groups

Brazil

In the first half of 2015, we announced the plan to sell our operations in Brazil. At 31 December 2015, the sale was considered highly probable and therefore the assets and liabilities of the disposal group were classified as held for sale. The disposal group includes the assets and liabilities expected to be sold plus allocated goodwill as set out in the table on page 417.

The disposal group is measured at its carrying amount at 31 December 2015, which is lower than its fair value less cost to sell. The carrying amount includes a $1.3bn deferred tax asset and $1.3bn of allocated goodwill (see Note 20). The assets and liabilities of the disposal group have been reclassified from their individual lines in the consolidated balance sheet and are presented in separate 'Held for sale' lines at 31 December 2015. There is no change to the comparative balance sheet presentation and there is no separate presentation in the income statement.

At 31 December 2015, there were no significant accounting implications in respect of the planned sale although this may evolve as it progresses. The disposal group represents a foreign operation and when the disposal completes the cumulative amount of associated exchange differences previously recognised in other comprehensive income will be reclassified to the income statement. At 31 December 2015, there was a cumulative loss of $2.6bn in the Group's foreign exchange reserve attributable to the Brazilian operations.

The major classes of assets and associated liabilities of disposal groups held for sale are as follows:

	Brazil $m	Other $m	Total $m
Assets of disposal groups held for sale			
Trading assets	**55**	**–**	**55**
Fair value of financial assets designated at fair value	**3,123**	**–**	**3,123**
Loans and advances to banks	**4,068**	**–**	**4,068**
Loans and advances to customers	**17,001**	**40**	**17,041**
Reverse repurchase agreements	**3,511**	**–**	**3,511**
Financial investments	**6,238**	**–**	**6,238**
Goodwill and intangible assets	**1,680**	**–**	**1,680**
Deferred tax asset[1]	**1,325**	**–**	**1,325**
Prepayments, accrued income and other assets	**4,674**	**–**	**4,674**
Total assets at 31 December 2015	**41,675**	**40**	**41,715**
Liabilities of disposal groups held for sale			
Deposits by banks	**1,521**	**–**	**1,521**
Customer accounts	**15,094**	**1,588**	**16,682**
Debt securities in issue	**7,957**	**–**	**7,957**
Liabilities under insurance contracts	**3,338**	**–**	**3,338**
Accruals, deferred income and other liabilities	**7,335**	**7**	**7,342**
Total liabilities at 31 December 2015	**35,245**	**1,595**	**36,840**
Expected date of completion	**First Half of 2016**	**First Half of 2016**	
Operating segment	**Latin America**	**North America**	
Fair value of selected financial instruments which are not carried at fair value on the balance sheet at 31 December 2015			
Loans and advances to banks and customers	**20,912**	**40**	**20,952**
Customer accounts	**15,094**	**1,588**	**16,682**

1 *The recognition of deferred tax assets relies on an assessment of the probability and sufficiency of future taxable profits and future reversals of existing taxable temporary differences. In recognising the deferred tax asset management has critically assessed all available information, including sufficiency of future taxable profits using internal and external benchmarks, and historical performance.*

24 Trading liabilities

Accounting policy

Financial 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. They are recognised on trade date, when HSBC enters into contractual arrangements with counterparties, and are normally derecognised when extinguished. They are initially measured at fair value, with transaction costs taken to the income statement. Subsequent changes in fair value and interest are recognised in the income statement in 'Net trading income'.

Liabilities arising from the sale of borrowed securities are classified as held for trading.

Trading liabilities

	2015 $m	2014 $m
Deposits by banks[1]	**27,054**	41,453
Customer accounts[1,2]	**40,208**	50,600
Other debt securities in issue (Note 26)[3]	**30,525**	33,602
Other liabilities – net short positions in securities	**43,827**	64,917
At 31 December	**141,614**	190,572

1 *'Deposits by banks' and 'Customer accounts' include repos, settlement accounts, stock lending and other amounts.*
2 *Structured deposits placed at HSBC Bank USA and HSBC Trust Company (Delaware) National Association are insured by the Federal Deposit Insurance Corporation, a US government agency, up to $250,000 per depositor.*
3 *'Other debt securities in issue' comprises structured notes issued by HSBC for which market risks are actively managed as part of trading portfolios.*

At 31 December 2015, the cumulative amount of change in fair value attributable to changes in HSBC's credit risk was a gain of $122m (2014: loss of $79m).

25 Financial liabilities designated at fair value

Accounting policy

The criteria for designating instruments at fair value and their measurement are described in Note 15. The fair value designation, once made, is irrevocable. Designated financial liabilities are recognised when HSBC enters into contracts with counterparties and are normally derecognised when extinguished. Examples of such designations include:

Long-term debt issues

The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy. An accounting mismatch would arise if the debt securities issued were accounted for at amortised cost, and this mismatch is eliminated through the fair value designation.

Financial liabilities under unit-linked and non-linked investment contracts

HSBC issues contracts to customers that contain insurance risk, financial risk or a combination thereof. A contract under which HSBC accepts insignificant insurance risk from another party is not classified as an insurance contract, but is accounted for as a financial liability. See Note 28 for contracts where HSBC accepts significant insurance risk.

Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries and the corresponding financial assets are designated at fair value. Liabilities are at least equivalent to the surrender or transfer value which is calculated by reference to the value of the relevant underlying funds or indices. Premiums receivable and amounts withdrawn are accounted for as increases or decreases in the liability recorded in respect of investment contracts. The incremental costs directly related to the acquisition of new investment contracts or renewing existing investment contracts are deferred and amortised over the period during which the investment management services are provided.

Financial liabilities designated at fair value – HSBC

	2015 $m	2014 $m
Deposits by banks and customer accounts	**193**	160
Liabilities to customers under investment contracts	**6,027**	6,312
Debt securities in issue (Note 26)	**37,678**	46,364
Subordinated liabilities (Note 30)	**21,168**	21,822
Preferred securities (Note 30)	**1,342**	1,495
At 31 December	**66,408**	76,153

The carrying amount at 31 December 2015 of financial liabilities designated at fair value was $4,147m more than the contractual amount at maturity (2014: $5,813m more). The cumulative amount of the change in fair value attributable to changes in credit risk was a gain of $158m (2014: loss of $870m).

Financial liabilities designated at fair value – HSBC Holdings

	2015 $m	2014 $m
Debt securities in issue (Note 26):		
– owed to third parties	**7,897**	8,185
Subordinated liabilities (Note 30):		
– owed to third parties	**11,100**	9,513
– owed to HSBC undertakings	**856**	981
At 31 December	**19,853**	18,679

The carrying amount at 31 December 2015 of financial liabilities designated at fair value was $2,127m more than the contractual amount at maturity (2014: $2,694m more). The cumulative amount of the change in fair value attributable to changes in credit risk was a loss of $172m (2014: loss of $520m).

26 Debt securities in issue

Accounting policy

Financial liabilities for debt securities issued are recognised when HSBC enters into contractual arrangements with counterparties and are initially measured at fair value, which is normally the consideration received, net of directly attributable transaction costs incurred. The subsequent measurement of financial liabilities, other than those measured at fair value through profit or loss and financial guarantees, is at amortised cost, using the effective interest method to amortise the difference between proceeds received, net of directly attributable transaction costs incurred, and the redemption amount over their expected life.

Debt securities in issue – HSBC

	2015 $m	2014 $m
Bonds and medium-term notes	**128,348**	132,539
Other debt securities in issue	**28,804**	43,374
	157,152	175,913
Of which debt securities in issue reported as:		
– trading liabilities (Note 24)	**(30,525)**	(33,602)
– financial liabilities designated at fair value (Note 25)	**(37,678)**	(46,364)
At 31 December	**88,949**	95,947

Debt securities in issue – HSBC Holdings

	2015 $m	2014 $m
Debt securities	**8,857**	9,194
Of which debt securities in issue reported as:		
– financial liabilities designated at fair value (Note 25)	**(7,897)**	(8,185)
At 31 December	**960**	1,009

27 Accruals, deferred income and other liabilities

	2015 $m	2014 $m
Accruals and deferred income	**11,129**	15,075
Amounts due to investors in funds consolidated by HSBC	**474**	782
Obligations under finance leases	**37**	67
Endorsements and acceptances	**9,135**	10,760
Employee benefit liabilities (Note 6)	**2,809**	3,208
Other liabilities	**14,532**	16,570
At 31 December	**38,116**	46,462

Accruals, deferred income and other liabilities include $29,358m (2014: $39,846m) of financial liabilities, the majority of which are measured at amortised cost.

28 Liabilities under insurance contracts

Accounting policy

HSBC issues contracts to customers that contain insurance risk, financial risk or a combination thereof. A contract under which HSBC accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event, is classified as an insurance contract. An insurance contract may also transfer financial risk, but is accounted for as an insurance contract if the insurance risk is significant.

Liabilities under insurance contracts

Liabilities under non-linked life insurance contracts are calculated by each life insurance operation based on local actuarial principles. Liabilities under unit-linked life insurance contracts are at least equivalent to the surrender or transfer value, which is calculated by reference to the value of the relevant underlying funds or indices.

A liability adequacy test is carried out on insurance liabilities to ensure that the carrying amount of the liabilities is sufficient in the light of current estimates of future cash flows. When performing the liability adequacy test, all contractual cash flows are discounted and compared with the carrying value of the liability. When a shortfall is identified it is charged immediately to the income statement.

Future profit participation on insurance contracts with DPF

Where contracts provide discretionary profit participation benefits to policyholders, liabilities for these contracts include provisions for the future discretionary benefits to policyholders. These provisions reflect the actual performance of the investment portfolio to date and management's expectation of the future performance of the assets backing the contracts, as well as other experience factors such as mortality, lapses and operational efficiency, where appropriate. This benefit may arise from the contractual terms, regulation, or past distribution policy.

Investment contracts with DPF

While investment contracts with DPF are financial instruments, they continue to be treated as insurance contracts as permitted by IFRS 4 'Insurance Contracts'. The Group therefore recognises the premiums for those contracts as revenue and recognises as an expense the resulting increase in the carrying amount of the liability.

In the case of net unrealised investment gains on these contracts, whose discretionary benefits principally reflect the actual performance of the investment portfolio, the corresponding increase in the liabilities is recognised in either the income statement or other comprehensive income, following the treatment of the unrealised gains on the relevant assets. In the case of net unrealised losses, a deferred participating asset is recognised only to the extent that its recoverability is highly probable. Movements in the liabilities arising from realised gains and losses on relevant assets are recognised in the income statement.

Liabilities under insurance contracts

	Gross $m	Reinsurers' share $m	Net $m
Non-linked insurance contracts[1]			
At 1 January 2015	**36,973**	**(772)**	**36,201**
Claims and benefits paid	**(3,200)**	**153**	**(3,047)**
Increase in liabilities to policyholders	**7,746**	**(575)**	**7,171**
Disposals/transfers to held-for-sale	**(443)**	**6**	**(437)**
Exchange differences and other movements	**(538)**	**73**	**(465)**
At 31 December 2015	**40,538**	**(1,115)**	**39,423**
Investment contracts with DPF			
At 1 January 2015	**25,068**	**–**	**25,068**
Claims and benefits paid	**(2,101)**	**–**	**(2,101)**
Increase in liabilities to policyholders	**2,728**	**–**	**2,728**
Exchange differences and other movements[2]	**(3,086)**	**–**	**(3,086)**
At 31 December 2015	**22,609**	**–**	**22,609**
Linked life insurance contracts			
At 1 January 2015	**11,820**	**(260)**	**11,560**
Claims and benefits paid	**(1,869)**	**64**	**(1,805)**
Increase in liabilities to policyholders	**1,398**	**(5)**	**1,393**
Disposals/transfers to held-for-sale	**(4,594)**	**–**	**(4,594)**
Exchange differences and other movements[3]	**36**	**(62)**	**(26)**
At 31 December 2015	**6,791**	**(263)**	**6,528**
Total liabilities to policyholders at 31 December 2015	**69,938**	**(1,378)**	**68,560**
Non-linked insurance contracts[1]			
At 1 January 2014	33,950	(1,118)	32,832
Claims and benefits paid	(3,575)	175	(3,400)
Increase in liabilities to policyholders	7,764	(409)	7,355
Disposals/transfers to held-for-sale	(589)	527	(62)
Exchange differences and other movements	(577)	53	(524)
At 31 December 2014	36,973	(772)	36,201
Investment contracts with DPF			
At 1 January 2014	26,427	–	26,427
Claims and benefits paid	(2,175)	–	(2,175)
Increase in liabilities to policyholders	3,188	–	3,188
Exchange differences and other movements[2]	(2,372)	–	(2,372)
At 31 December 2014	25,068	–	25,068
Linked life insurance contracts			
At 1 January 2014	13,804	(290)	13,514
Claims and benefits paid	(1,499)	88	(1,411)
Increase in liabilities to policyholders	2,762	33	2,795
Disposals/transfers to held-for-sale	(2,547)	74	(2,473)
Exchange differences and other movements[3]	(700)	(165)	(865)
At 31 December 2014	11,820	(260)	11,560
Total liabilities to policyholders at 31 December 2014	73,861	(1,032)	72,829

1 *'Non-linked insurance contracts' includes liabilities under non-life insurance contracts.*
2 *'Exchange differences and other movements' includes movement in liabilities relating to discretionary profit participation benefits due to policyholders arising from net unrealised investment gains recognised in other comprehensive income.*
3 *'Exchange differences and other movements' includes amounts arising under reinsurance agreements.*

The increase in liabilities to policyholders represents the aggregate of all events giving rise to additional liabilities to policyholders in the year. The key factors contributing to the movement in liabilities to policyholders included death claims, surrenders, lapses, liabilities to policyholders created at the initial inception of the policies, the declaration of bonuses and other amounts attributable to policyholders.

29 Provisions

Accounting policy

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a present legal or constructive obligation which has arisen as a result of past events and for which a reliable estimate can be made.

Critical accounting estimates and judgements

Provisions

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 the assessment of litigation, property (including onerous contracts) and similar obligations.

Provisions for legal proceedings and regulatory matters typically require a higher degree of judgement than other types of provisions. When matters 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, management and legal advisers evaluate on an ongoing basis whether provisions should be recognised, revising previous judgements and estimates as appropriate. At more advanced stages, it is typically easier to make judgements and estimates around a better defined set of possible outcomes. However, the amount provisioned can remain 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.

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.

Provisions

	Restructuring costs $m	Contractual commitments $m	Legal proceedings and regulatory matters $m	Customer remediation $m	Other provisions $m	Total $m
At 1 January 2015	**197**	**234**	**2,184**	**1,831**	**552**	**4,998**
Additional provisions/increase in provisions	**430**	**120**	**2,153**	**765**	**138**	**3,606**
Provisions utilised	**(95)**	**(2)**	**(619)**	**(856)**	**(159)**	**(1,731)**
Amounts reversed	**(29)**	**(15)**	**(95)**	**(170)**	**(133)**	**(442)**
Unwinding of discounts	**–**	**–**	**40**	**6**	**–**	**46**
Exchange differences and other movements	**(40)**	**(97)**	**(489)**	**(236)**	**(63)**	**(925)**
At 31 December 2015	**463**	**240**	**3,174**	**1,340**	**335**	**5,552**
At 1 January 2014	271	177	1,832	2,382	555	5,217
Additional provisions/increase in provisions	147	136	1,752	1,440	154	3,629
Provisions utilised	(143)	(2)	(1,109)	(1,769)	(112)	(3,135)
Amounts reversed	(43)	(46)	(281)	(184)	(66)	(620)
Unwinding of discounts	–	1	43	10	11	65
Exchange differences and other movements	(35)	(32)	(53)	(48)	10	(158)
At 31 December 2014	197	234	2,184	1,831	552	4,998

Further details of 'Legal proceedings and regulatory matters' are set out in Note 40. Legal proceedings include civil court, arbitration or tribunal proceedings brought against HSBC companies (whether by way of claim or counterclaim) or civil disputes that may, if not settled, result in court, arbitration or tribunal proceedings. Regulatory matters refer to investigations, reviews and other actions carried out by, or in response to the actions of, regulators or law enforcement agencies in connection with alleged wrongdoing by HSBC.

Further details of 'Customer remediation' are set out in this note. 'Customer remediation' refers to activities (root cause analysis, customer contact, case reviews, decision making and redress calculations) carried out by HSBC to compensate customers for losses or damages associated with a failure to comply with regulations or to treat customers fairly. Customer remediation is often initiated by HSBC in response to customer complaints and/or industry developments in sales practices, and is not necessarily initiated by regulatory action.

Payment protection insurance

At 31 December 2015, a provision of $1,039m (2014: $1,079m) was held relating to the estimated liability for redress in respect of the possible mis-selling of payment protection insurance ('PPI') policies in previous years. An increase in provisions of $549m was recognised during the year, primarily reflecting an increase in inbound complaints by claims management companies compared with previous forecasts and management's current best estimate of the impact on provisions of the FCA consultation on the introduction of a time bar and the 2014 decision of the UK Supreme Court ('Plevin'). The current projected trend of inbound complaint volumes implies that the redress programme will be completed by the first half of 2018 taking into account the likely impact of a time bar. (2014 assumption: first quarter of 2018). Cumulative provisions made since the Judicial Review ruling in the first half of 2011 amounted to $4.7bn of which $3.6bn had been paid as at 31 December 2015.

The estimated liability for redress is calculated on the basis of total premiums paid by the customer plus simple interest of 8% per annum (or the rate inherent in the related loan product where higher). The basis for calculating the redress liability is the same for single premium and regular premium policies. Future estimated redress levels are based on historically observed redress per policy.

A total of 5.4m PPI policies have been sold by HSBC since 2000, generating estimated revenues of approximately $4.0bn at 2015 average exchange rates. The gross written premiums on these policies was approximately $5.2bn. At 31 December 2015, the estimated total complaints expected to be received was 1.9m, representing 35% of total policies sold. It is estimated that contact will be made with regard to 2.3m policies, representing 42% of total policies sold. This estimate includes inbound complaints as well as HSBC's proactive contact exercise on certain policies ('outbound contact').

The cumulative number of PPI complaints received to 31 December 2015 and the number of future claims expected

	Cumulative to 31 December 2015	Future expected
Inbound complaints[1] (000s of policies)	1,215	336
Outbound contact (000s of policies)	624	101
Response rate to outbound contact	44%	52%
Average uphold rate per claim[2]	74%	81%
Average redress per claim ($)	3,058	2,844
Complaints to FOS (000s of policies)	121	51
Average uphold rate per FOS claim	36%	53%

1 *Excludes invalid claims where the complainant has not held a PPI policy.*
2 *Claims include inbound and responses to outbound contact.*

The main assumptions involved in calculating the redress liability are the volume of inbound complaints, the projected period of inbound complaints, the decay rate of complaint volumes, the population identified as systemically mis-sold and the number of policies per customer complaint. The main assumptions are likely to evolve over time as root cause analysis continues, more experience is available regarding customer-initiated complaint volumes received, and we handle responses to our ongoing outbound contact.

A 100,000 increase/decrease in the total inbound complaints would increase/decrease the redress provision by approximately $221m at 2015 average exchange rates. Each 1% increase/decrease in the response rate to our outbound contact exercise would increase/decrease the redress provision by approximately $15m.

The decision under Plevin held that, judged on its own facts, non-disclosure of the amount of commissions payable in connection with the sale of PPI to a customer created an unfair relationship under the provisions of the UK Consumer Credit Act ('CCA'). The FCA has issued a consultation on proposed rules and guidelines in relation to the application of this ruling, together with a proposal for the introduction of a time bar. HSBC has reflected its current best estimate of the impact of these matters in the provision held as at 31 December 2015. There remains uncertainty as to what the eventual outcome of the consultation will be: HSBC will continue to review provisioning levels as further facts become known.

In addition to these factors and assumptions, the extent of the required redress will also depend on the facts and circumstances of each individual customer's case. For these reasons, there is currently a high degree of uncertainty as to the eventual costs of redress.

Interest rate derivatives

At 31 December 2015, a provision of $87m (2014: $312m) was held relating to the estimated liability for redress in respect of the possible mis-selling of interest rate derivatives in the UK. The provision relates to the estimated redress payable to customers in respect of historical payments under derivative contracts. A release to the provision of $38m (2014: $288m increase) was recorded during the year.

UK Consumer Credit Act

HSBC has undertaken a review of compliance with the fixed-sum unsecured loan agreement requirements of the CCA. $167m was recognised at 31 December 2015 within 'Accruals, deferred income and other liabilities' for the repayment of interest to customers (2014: $379m), primarily where annual statements did not remind them of their right to partially prepay the loan, notwithstanding that the customer loan documentation did refer to this right. The cumulative liability to date was $569m (2014: $591m), of which payments of $414m (2014: $212m) have been made to customers. There is uncertainty as to whether other technical requirements of the CCA have been met.

Brazilian labour, civil and fiscal claims

Brazilian labour, civil and fiscal litigation provisions were $363m (2014: $501m) as at 31 December 2015. Of these provisions, $168m (2014: $246m) was in respect of labour and overtime litigation claims brought by past employees against HSBC operations in Brazil following their departure from the bank. The main assumptions involved in estimating the liability are the expected number of departing employees, individual salary levels and the facts and circumstances of each individual case. These provisions form part of the Brazilian disposal group and were classified as 'held for sale' at 31 December 2015 (see Note 23).

30 Subordinated liabilities

HSBC

	2015 $m	2014 $m
Subordinated liabilities		
At amortised cost	**22,702**	26,664
– subordinated liabilities	**20,773**	22,355
– preferred securities	**1,929**	4,309
Designated at fair value (Note 25)	**22,510**	23,317
– subordinated liabilities	**21,168**	21,822
– preferred securities	**1,342**	1,495
At 31 December	**45,212**	49,981
HSBC Holdings	**26,062**	25,277
Other HSBC	**19,150**	24,704
At 31 December	**45,212**	49,981

HSBC's subordinated liabilities

Subordinated liabilities rank behind senior obligations and generally count towards the capital base of HSBC. Where applicable, capital securities may be called and redeemed by HSBC subject to prior notification to the PRA and, where relevant, the consent of the local banking regulator. If not redeemed at the first call date, coupons payable may step-up or become floating rate based on interbank rates.

Interest rates on the floating rate capital securities are generally related to interbank offered rates. On the remaining capital securities, interest is payable at fixed rates of up to 10.176%.

The balance sheet amounts disclosed below are presented on an IFRSs basis and do not reflect the amount that the instruments contribute to regulatory capital due to the inclusion of issuance costs, regulatory amortisation and regulatory eligibility limits prescribed in the grandfathering provisions under CRD IV.

HSBC's subordinated liabilities in issue

		First call date	Maturity date	2015 $m	2014 $m
Additional tier 1 capital securities guaranteed by HSBC Holdings plc[1]					
£500m	8.208% non-cumulative step-up perpetual preferred securities[2]	Jun 2015		**–**	779
€750m	5.13% non-cumulative step-up perpetual preferred securities[3]	Mar 2016		**856**	979
$900m	10.176% non-cumulative step-up perpetual preferred securities, series 2	Jun 2030		**891**	891
				1,747	2,649
Additional tier 1 capital securities guaranteed by HSBC Bank plc[1]					
£300m	5.862% non-cumulative step-up perpetual preferred securities	Apr 2020		**488**	515
£700m	5.844% non-cumulative step-up perpetual preferred securities	Nov 2031		**1,038**	1,091
				1,526	1,606
Tier 2 securities issued by HSBC Bank plc					
£500m	4.75% callable subordinated notes[4]	Sep 2015	Sep 2020	**–**	802
£350m	5.00% callable subordinated notes[5]	Mar 2018	Mar 2023	**562**	605
£300m	6.50% subordinated notes	–	Jul 2023	**444**	466
£350m	5.375% callable subordinated step-up notes[6]	Nov 2025	Nov 2030	**569**	620
£500m	5.375% subordinated notes	–	Aug 2033	**846**	905
£225m	6.25% subordinated notes	–	Jan 2041	**332**	349
£600m	4.75% subordinated notes	–	Mar 2046	**879**	924
€500m	Callable subordinated floating rate notes[4]	Sep 2015	Sep 2020	**–**	588
$300m	7.65% subordinated notes	–	May 2025	**386**	400
$750m	Undated floating rate primary capital notes	Jun 1990		**750**	750
$500m	Undated floating rate primary capital notes	Sep 1990		**500**	500
$300m	Undated floating rate primary capital notes, series 3	Jun 1992		**300**	300
				5,568	7,209

		First call date	Maturity date	2015 $m	2014 $m
Tier 2 securities issued by The Hongkong and Shanghai Banking Corporation Ltd					
$400m	Primary capital undated floating rate notes[7]	Aug 1990		**401**	403
$400m	Primary capital undated floating rate notes (second series)[8]	Dec 1990		**–**	401
$400m	Primary capital undated floating rate notes (third series)	Jul 1991		**400**	400
				801	1,204
Tier 2 securities issued by HSBC Bank Australia Limited					
AUD200m	Callable subordinated floating rate notes[9]	Nov 2015	Nov 2020	**–**	164
				–	164
Tier 2 securities issued by HSBC Bank Malaysia Berhad					
MYR500m	4.35% subordinated bonds	Jun 2017	Jun 2022	**116**	143
MYR500m	5.05% subordinated bonds	Nov 2022	Nov 2027	**116**	144
				232	287
Tier 2 securities issued by HSBC USA Inc.					
$200m	7.808% capital securities[10]	Dec 2006	Dec 2026	**–**	200
$200m	8.38% capital securities[10]	May 2007	May 2027	**–**	200
$150m	7.75% Capital Trust pass through securities[10]	Nov 2006	Nov 2026	**–**	150
$750m	5.00% subordinated notes	–	Sep 2020	**747**	738
$250m	7.20% subordinated debentures	–	Jul 2097	**220**	216
	Other subordinated liabilities each less than $150m[11]			**299**	297
				1,266	1,801
Tier 2 securities issued by HSBC Bank USA, N.A.					
$500m	6.00% subordinated notes	–	Aug 2017	**502**	508
$1,250m	4.875% subordinated notes	–	Aug 2020	**1,258**	1,210
$1,000m	5.875% subordinated notes	–	Nov 2034	**1,142**	1,245
$750m	5.625% subordinated notes	–	Aug 2035	**850**	934
$700m	7.00% subordinated notes	–	Jan 2039	**691**	676
				4,443	4,573
Tier 2 securities issued by HSBC Finance Corporation					
$1,000m	5.911% trust preferred securities[9]	Nov 2015	Nov 2035	**–**	998
$2,939m	6.676% senior subordinated notes[12]	–	Jan 2021	**2,188**	2,185
				2,188	3,183
Tier 2 securities issued by HSBC Bank Brazil S.A.[13]					
BRL383m	Subordinated certificates of deposit	–	Feb 2015	**–**	144
BRL500m	Subordinated floating rate certificates of deposit	–	Dec 2016	**–**	188
	Other subordinated liabilities each less than $150m[11]			**–**	81
				–	413
Tier 2 securities issued by HSBC Bank Canada					
CAD400m	4.80% subordinated debentures	Apr 2017	Apr 2022	**298**	367
CAD200m	4.94% subordinated debentures[7]	Mar 2016	Mar 2021	**144**	172
CAD39m	Floating rate debentures	Oct 1996	Nov 2083	**29**	34
				471	573
Securities issued by HSBC Mexico, S.A.					
MXN1,818m	Non-convertible subordinated obligations[14]	Sep 2013	Sep 2018	**105**	124
MXN2,273m	Non-convertible subordinated obligations[14]	Dec 2013	Dec 2018	**131**	154
$300m	Non-convertible subordinated obligations[14,15]	Jun 2014	Jun 2019	**240**	240
				476	518
Securities issued by other HSBC subsidiaries					
Other subordinated liabilities each less than $200m[11]				**432**	524
Subordinated liabilities issued by HSBC subsidiaries at 31 December				**19,150**	24,704

1 *See paragraph below, 'Guaranteed by HSBC Holdings or HSBC Bank plc'.*
2 *In June 2015, HSBC called and redeemed £500m 8.208% non-cumulative step-up perpetual preferred securities at par.*
3 *In February 2016, HSBC gave notice that it will call and redeem the €750m 5.13% non-cumulative step-up perpetual preferred securities.*
4 *In September 2015, HSBC called and redeemed £500m 4.75% callable subordinated notes and €500m callable subordinated floating rate notes at par.*
5 *The interest rate payable after March 2018 is the sum of the gross redemption yield of the then prevailing five-year UK gilt plus 1.80%.*
6 *The interest rate payable after November 2025 is the sum of the three-month sterling Libor plus 1.50%.*
7 *In January 2016, HSBC gave notice that it will call and redeem the $400m Primary capital undated floating rate notes and CAD200m 4.94% subordinated debentures.*
8 *In December 2015, HSBC called and redeemed $400m Primary capital undated floating rate notes at par.*
9 *In November 2015, HSBC called and redeemed $1,000m 5.911% trust preferred securities and AUD 200m callable subordinated floating rate notes at par.*
10 *In June 2015, HSBC called and redeemed $200m 7.808% capital securities, $200m 8.38% capital securities, and $150m 7.75% Capital Trust pass through securities at par.*
11 *Some securities included here are ineligible for inclusion in the capital base of HSBC in accordance with CRD IV rules.*
12 *Approximately $731m of the senior subordinated notes are held by HSBC Holdings.*
13 *Included in Note 23, Assets held for sale and liabilities of disposal groups held for sale.*

14 *These securities are ineligible for inclusion in the capital base of HSBC in accordance with CRD IV rules.*
15 *Approximately $60m of the subordinated obligations are held by HSBC Holdings.*

HSBC Holdings

	2015 $m	2014 $m
Subordinated liabilities:		
– at amortised cost	**15,895**	17,255
– designated at fair value (Note 25)	**11,956**	10,494
At 31 December	**27,851**	27,749

HSBC Holdings' subordinated liabilities

		First call date	Maturity date	2015 $m	2014 $m
Tier 2 securities issued by HSBC Holdings plc					
Amounts owed to third parties					
$488m	7.625% subordinated notes[1]	–	May 2032	**531**	538
$222m	7.35% subordinated notes[1]	–	Nov 2032	**278**	278
$2,000m	6.5% subordinated notes[1]	–	May 2036	**2,029**	2,029
$2,500m	6.5% subordinated notes[1]	–	Sep 2037	**3,085**	3,278
$1,500m	6.8% subordinated notes[1]	–	Jun 2038	**1,487**	1,487
$2,000m	4.25% subordinated notes[2,5]	–	Mar 2024	**2,078**	2,069
$1,500m	5.25% subordinated notes[2,5]	–	Mar 2044	**1,735**	1,735
$1,500m	4.25% subordinated notes[2]	–	Aug 2025	**1,529**	–
£900m	6.375% callable subordinated notes[1,3]	Oct 2017	Oct 2022	**1,432**	1,558
£650m	5.75% subordinated notes[2]	–	Dec 2027	**1,079**	1,176
£650m	6.75% subordinated notes[2]	–	Sep 2028	**955**	1,005
£750m	7.0% subordinated notes[2]	–	Apr 2038	**1,159**	1,217
£900m	6.0% subordinated notes[2]	–	Mar 2040	**1,310**	1,379
€1,600m	6.25% subordinated notes[2]	–	Mar 2018	**1,748**	1,950
€1,750m	6.0% subordinated notes[2]	–	Jun 2019	**2,284**	2,623
€700m	3.625% callable subordinated notes[1,4]	Jun 2015	Jun 2020	**–**	878
€1,500m	3.375% callable subordinated notes[2,5]	Jan 2019	Jan 2024	**1,694**	1,898
€1,500m	3.0% subordinated notes[2]	–	Jun 2025	**1,691**	–
				26,104	25,098
Amounts owed to HSBC undertakings					
£500m	8.208% subordinated step-up cumulative notes[4]	Jun 2015	Jun 2040	**–**	779
€750m	5.13% fixed/floating subordinated notes	Mar 2016	Dec 2044	**856**	981
$900m	10.176% subordinated step-up cumulative notes	Jun 2030	Jun 2040	**891**	891
				1,747	2,651
At 31 December				**27,851**	27,749

1 *Amounts owed to third parties represent securities included in the capital base of HSBC as tier 2 securities in accordance with the grandfathering provisions under CRD IV rules.*
2 *These securities are included in the capital base of HSBC as fully CRD IV compliant tier 2 securities on an end point basis.*
3 *The interest rate payable after October 2017 is the sum of the three-month sterling Libor plus 1.3%.*
4 *In June 2015, HSBC Holdings called and redeemed the €700m 3.625% callable subordinated notes and £500m 8.208% non-cumulative step-up perpetual preferred securities at par.*
5 *These subordinated notes are measured at amortised cost in HSBC Holdings, where the interest rate risk is hedged using a fair value hedge, while they are measured at fair value in the Group.*

Additional tier 1 capital securities

HSBC has included three types of additional tier 1 capital securities in its tier 1 capital. Additional tier 1 capital securities are perpetual subordinated securities on which coupon payments may be deferred or cancelled at the discretion of HSBC Holdings. The securities presented in this Note are accounted for as liabilities because HSBC has an obligation to pay dividends in perpetuity. See Note 35 for the other two types of additional tier 1 capital securities accounted for as equity.

The additional tier 1 securities presented in this section do not meet the identifying criteria in full for recognition as tier 1 capital under CRD IV but are eligible as regulatory capital subject to grandfathering limits and progressive phase-out.

Guaranteed by HSBC Holdings or HSBC Bank plc

The five capital securities above that are guaranteed on a subordinated basis by HSBC Holdings or HSBC Bank plc ('HSBC Bank') and are non-cumulative step-up perpetual preferred securities issued by Jersey limited partnerships. The proceeds of the issues were on-lent to the respective guarantors by the limited partnerships in the form of subordinated notes. These

preferred securities qualify as additional tier 1 capital for HSBC under CRD IV by virtue of the application of grandfathering provisions, and the two capital securities guaranteed by HSBC Bank also qualify as additional tier 1 capital for HSBC Bank (on a solo and a consolidated basis) under CRD IV by virtue of the same grandfathering process.

These preferred securities, together with the guarantee, are intended to provide investors with economic rights equivalent to the rights that they would have had if they had purchased non-cumulative perpetual preference shares of the relevant issuer. There are limitations on the payment of distributions if such payments are prohibited under UK banking regulations or other requirements, if a payment would cause a breach of HSBC's capital adequacy requirements or if HSBC Holdings or HSBC Bank have insufficient distributable reserves (as defined).

HSBC Holdings and HSBC Bank have individually covenanted that if prevented under certain circumstances from paying distributions on the preferred securities in full, they will not pay dividends or other distributions in respect of their ordinary shares, or effect repurchases or redemptions of their ordinary shares, until the distribution on the preferred securities has been paid in full.

With respect to preferred securities guaranteed by HSBC Holdings, if (i) HSBC's total capital ratio falls below the regulatory minimum ratio required or (ii) the Directors expect, in view of the deteriorating financial condition of HSBC Holdings, that (i) will occur in the near term, then the preferred securities will be substituted by preference shares of HSBC Holdings which have economic terms which are in all material respects equivalent to those of the preferred securities and the guarantee taken together.

With respect to preferred securities guaranteed by HSBC Bank, if (i) any of the two issues of preferred securities are outstanding in April 2049 or November 2048, respectively, or (ii) the total capital ratio of HSBC Bank on a solo and consolidated basis falls below the regulatory minimum ratio required or (iii) in view of the deteriorating financial condition of HSBC Bank, the Directors expect (ii) to occur in the near term, then the preferred securities will be substituted by preference shares of HSBC Bank having economic terms which are in all material respects equivalent to those of the preferred securities and the guarantee taken together.

Tier 2 capital securities

These capital securities are included within HSBC's regulatory capital base as tier 2 capital under CRD IV by virtue of the application of grandfathering provisions (with the exception of identified HSBC Holding securities which are compliant with CRD IV end point rules). Tier 2 capital securities are either perpetual subordinated securities or dated securities on which there is an obligation to pay coupons. In accordance with CRD IV, the capital contribution of all tier 2 securities is amortised for regulatory purposes in their final five years before maturity.

31 Maturity analysis of assets, liabilities and off-balance sheet commitments

The table on page 427 provides an analysis of consolidated total assets, liabilities and off-balance sheet commitments by residual contractual maturity at the balance sheet date. Asset and liability balances are included in the maturity analysis as follows:

- except for reverse repos, repos and debt securities in issue, trading assets and liabilities (including trading derivatives) are included in the 'Due not more than 1 month' time bucket, and not by contractual maturity because trading balances are typically held for short periods of time;
- financial assets and liabilities with no contractual maturity (such as equity securities) are included in the 'Due over 5 years' time bucket. Undated or perpetual instruments are classified based on the contractual notice period which the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are included in the 'Due over 5 years' time bucket;
- non-financial assets and liabilities with no contractual maturity (such as property, plant and equipment, goodwill and intangible assets, current and deferred tax assets and liabilities and retirement benefit liabilities) are included in the 'Due over 5 years' time bucket;
- financial instruments included within assets and liabilities of disposal groups held for sale are classified on the basis of the contractual maturity of the underlying instruments and not on the basis of the disposal transaction; and
- liabilities under insurance contracts are included in the 'Due over 5 years' time bucket. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are classified based on the contractual notice period investors are entitled to give. Where there is no contractual notice period, undated contracts are included in the 'Due over 5 years' time bucket.

Loan and other credit-related commitments are classified on the basis of the earliest date they can be drawn down.

Maturity analysis of assets and liabilities

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial assets									
Cash and balances at central banks	98,934	–	–	–	–	–	–	–	98,934
Items in the course of collection from other banks	5,768	–	–	–	–	–	–	–	5,768
Hong Kong Government certificates of indebtedness	28,410	–	–	–	–	–	–	–	28,410
Trading assets	224,691	34	–	–	–	112	–	–	224,837
– reverse repos	292	34	–	–	–	112	–	–	438
– other trading assets	224,399	–	–	–	–	–	–	–	224,399
Financial assets designated at fair value	429	194	222	83	390	896	2,603	19,035	23,852
Derivatives	285,797	215	223	198	33	499	841	670	288,476
– trading	285,678	–	–	–	–	–	–	–	285,678
– non-trading	119	215	223	198	33	499	841	670	2,798
Loans and advances to banks	57,296	14,530	4,063	1,964	2,499	5,134	3,274	1,641	90,401
Loans and advances to customers	176,862	69,638	54,730	33,095	34,774	81,560	201,253	272,542	924,454
– personal	39,191	8,328	8,510	7,457	9,350	22,438	57,283	218,646	371,203
– corporate and commercial	123,901	54,711	40,489	21,081	21,811	50,355	131,166	49,564	493,078
– financial	13,770	6,599	5,731	4,557	3,613	8,767	12,804	4,332	60,173
Reverse repurchase agreements – non-trading	110,478	21,978	7,220	2,786	580	2,985	228	–	146,255
Financial investments	35,104	59,098	36,897	19,102	17,293	48,634	94,549	118,278	428,955
Assets held for sale	15,816	2,628	2,544	1,218	2,611	4,675	6,365	4,422	40,279
Accrued income and other financial assets	12,732	6,682	1,995	483	395	463	445	2,115	25,310
Financial assets at 31 December 2015	1,052,317	174,997	107,894	58,929	58,575	144,958	309,558	418,703	2,325,931
Non-financial assets	–	–	–	–	–	–	–	83,725	83,725
Total assets at 31 December 2015	1,052,317	174,997	107,894	58,929	58,575	144,958	309,558	502,428	2,409,656

Maturity analysis of assets and liabilities (continued)

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial liabilities									
Hong Kong currency notes in circulation	28,410	–	–	–	–	–	–	–	28,410
Deposits by banks	46,693	2,225	1,049	325	116	712	3,182	69	54,371
Customer accounts[1]	1,185,091	50,831	21,397	10,421	10,869	6,596	3,852	529	1,289,586
– personal	574,468	27,646	13,032	7,371	7,990	3,566	2,920	354	637,347
– corporate and commercial	459,813	18,802	7,314	2,479	2,495	2,926	828	156	494,813
– financial	150,810	4,383	1,051	571	384	104	104	19	157,426
Repurchase agreements – non-trading	73,478	3,788	1,816	164	154	–	500	500	80,400
Items in the course of transmission to other banks	5,638	–	–	–	–	–	–	–	5,638
Trading liabilities	111,691	1,471	1,529	882	2,184	4,344	10,105	9,408	141,614
– repos	77	365	–	–	–	–	–	–	442
– debt securities in issue	967	1,106	1,529	882	2,184	4,344	10,105	9,408	30,525
– other trading liabilities	110,647	–	–	–	–	–	–	–	110,647
Financial liabilities designated at fair value	2,036	1,822	2,943	342	1,900	4,930	14,316	38,119	66,408
– debt securities in issue: covered bonds	–	–	–	–	–	2,012	1,608	2,577	6,197
– debt securities in issue: otherwise secured	–	–	–	–	–	–	–	–	–
– debt securities in issue: unsecured	1,972	973	2,926	342	1,786	2,918	9,819	10,745	31,481
– subordinated liabilities and preferred securities	–	848	–	–	–	–	2,773	18,889	22,510
– other	64	1	17	–	114	–	116	5,908	6,220
Derivatives	276,765	34	251	213	52	524	1,063	2,169	281,071
– trading	276,558	–	–	–	–	–	–	–	276,558
– non-trading	207	34	251	213	52	524	1,063	2,169	4,513
Debt securities in issue	16,536	9,326	16,295	5,542	1,365	10,754	22,866	6,265	88,949
– covered bonds	–	–	1	–	1	83	17	33	135
– otherwise secured	8,436	173	195	206	173	2,082	4,354	1,118	16,737
– unsecured	8,100	9,153	16,099	5,336	1,191	8,589	18,495	5,114	72,077
Liabilities of disposal groups held for sale	20,350	1,416	1,548	1,344	1,246	5,050	1,484	115	32,553
Accruals and other financial liabilities	14,802	7,965	2,467	659	421	925	1,454	665	29,358
Subordinated liabilities	–	401	–	–	34	650	4,579	17,038	22,702
Total financial liabilities at 31 December 2015	1,781,490	79,279	49,295	19,892	18,341	34,485	63,401	74,877	2,121,060
Non-financial liabilities	–	–	–	–	–	–	–	91,078	91,078
Total liabilities at 31 December 2015	1,781,490	79,279	49,295	19,892	18,341	34,485	63,401	165,955	2,212,138

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial assets									
Cash and balances at central banks	129,957	–	–	–	–	–	–	–	129,957
Items in the course of collection from other banks	4,927	–	–	–	–	–	–	–	4,927
Hong Kong Government certificates of indebtedness	27,674	–	–	–	–	–	–	–	27,674
Trading assets	303,463	–	–	–	–	–	730	–	304,193
– reverse repos	567	–	–	–	–	–	730	–	1,297
– other trading assets	302,896	–	–	–	–	–	–	–	302,896
Financial assets designated at fair value	244	399	417	346	208	1,825	4,634	20,964	29,037
Derivatives	341,558	56	463	220	32	1,003	1,033	643	345,008
– trading	341,416	–	–	–	–	–	–	–	341,416
– non-trading	142	56	463	220	32	1,003	1,033	643	3,592
Loans and advances to banks	73,758	17,649	5,682	1,934	1,850	7,371	1,981	1,924	112,149
Loans and advances to customers	203,130	76,236	55,018	35,347	37,674	91,300	187,728	288,227	974,660
– personal	42,170	9,673	8,911	7,486	8,672	27,305	54,439	230,298	388,954
– corporate and commercial	146,250	61,809	41,924	23,720	23,697	56,398	124,796	56,590	535,184
– financial	14,710	4,754	4,183	4,141	5,305	7,597	8,493	1,339	50,522
Reverse repurchase agreements – non-trading	116,002	30,490	9,076	2,230	582	868	2,465	–	161,713
Financial investments	28,237	50,445	41,503	14,577	17,011	48,392	96,891	118,411	415,467
Assets held for sale	114	186	13	18	10	41	126	6,224	6,732
Accrued income and other financial assets	17,756	7,386	2,402	587	317	707	1,156	3,579	33,890
Financial assets at 31 December 2014	1,246,820	182,847	114,574	55,259	57,684	151,507	296,744	439,972	2,545,407
Non-financial assets	–	–	–	–	–	–	–	88,732	88,732
Total assets at 31 December 2014	1,246,820	182,847	114,574	55,259	57,684	151,507	296,744	528,704	2,634,139

Maturity analysis of assets and liabilities (continued)

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial liabilities									
Hong Kong currency notes in circulation	27,674	–	–	–	–	–	–	–	27,674
Deposits by banks	66,829	2,890	2,539	511	810	621	2,963	263	77,426
Customer accounts[1]	1,216,574	57,127	32,925	15,023	13,586	9,278	5,819	310	1,350,642
– personal	572,459	28,580	16,728	10,609	9,625	7,220	3,967	125	649,313
– corporate and commercial	465,990	21,841	10,688	3,716	2,894	1,615	1,316	150	508,210
– financial	178,125	6,706	5,509	698	1,067	443	536	35	193,119
Repurchase agreements – non-trading	95,243	5,029	4,054	1,392	714	–	–	1,000	107,432
Items in the course of transmission to other banks	5,990	–	–	–	–	–	–	–	5,990
Trading liabilities	155,604	2,041	2,636	1,439	2,918	5,744	9,603	10,587	190,572
– repos	746	909	224	264	1,249	406	–	–	3,798
– debt securities in issue	1,686	1,132	2,412	1,175	1,669	5,338	9,603	10,587	33,602
– other trading liabilities	153,172	–	–	–	–	–	–	–	153,172
Financial liabilities designated at fair value	981	912	4,264	972	1,557	8,500	15,037	43,930	76,153
– debt securities in issue: covered bonds	–	–	–	205	–	–	2,705	2,942	5,852
– debt securities in issue: otherwise secured	–	–	–	–	–	–	–	–	–
– debt securities in issue: unsecured	942	868	4,242	742	1,409	8,500	9,576	14,233	40,512
– subordinated liabilities and preferred securities	–	36	–	–	18	–	2,623	20,640	23,317
– other	39	8	22	25	130	–	133	6,115	6,472
Derivatives	335,802	23	86	223	54	621	1,121	2,739	340,669
– trading	335,400	–	–	–	–	–	–	–	335,400
– non-trading	402	23	86	223	54	621	1,121	2,739	5,269
Debt securities in issue	14,741	15,424	13,027	7,854	6,050	14,209	19,481	5,161	95,947
– covered bonds	–	–	–	–	–	–	81	–	81
– otherwise secured	8,807	1,063	60	283	272	912	1,562	1,008	13,967
– unsecured	5,934	14,361	12,967	7,571	5,778	13,297	17,838	4,153	81,899
Liabilities of disposal groups held for sale	191	28	56	55	63	213	551	2,837	3,994
Accruals and other financial liabilities	20,893	9,170	3,013	1,166	1,757	1,355	1,674	818	39,846
Subordinated liabilities	–	150	–	3	167	113	3,607	22,624	26,664
Total financial liabilities at 31 December 2014	1,940,522	92,794	62,600	28,638	27,676	40,654	59,856	90,269	2,343,009
Non-financial liabilities	–	–	–	–	–	–	–	91,152	91,152
Total liabilities at 31 December 2014	1,940,522	92,794	62,600	28,638	27,676	40,654	59,856	181,421	2,434,161

1 *'Customer accounts' includes $342,908m (2014: $342,927m) insured by guarantee schemes.*

Maturity analysis of off-balance sheet commitments received

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
At 31 December 2015									
Loan and other credit-related commitments	**3,472**	**–**	**2,149**	**–**	**–**	**111**	**–**	**–**	**5,732**
At 31 December 2014									
Loan and other credit-related commitments	3,313	–	4,312	607	–	–	–	–	8,232

Maturity analysis of off-balance sheet commitments given

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
At 31 December 2015									
Loan and other credit-related commitments	**472,277**	**45,792**	**16,271**	**9,798**	**47,122**	**11,325**	**48,756**	**15,089**	**666,430**
Of which:									
– personal	**161,843**	**11,547**	**6,333**	**963**	**19,607**	**1,207**	**425**	**1,018**	**202,943**
– corporate and commercial	**272,044**	**32,764**	**9,126**	**8,372**	**23,984**	**8,227**	**38,838**	**12,558**	**405,913**
– financial	**38,390**	**1,481**	**812**	**463**	**3,531**	**1,891**	**9,493**	**1,513**	**57,574**
At 31 December 2014									
Loan and other credit-related commitments	455,319	52,398	8,919	14,163	41,500	13,979	48,333	16,769	651,380
Of which:									
– personal	179,088	15,784	452	305	14,036	1,432	1,003	955	213,055
– corporate and commercial	239,646	34,657	7,595	12,556	23,519	9,926	36,918	12,185	377,002
– financial	36,585	1,957	872	1,302	3,945	2,621	10,412	3,629	61,323

HSBC Holdings

Maturity analysis of assets, liabilities and off-balance sheet commitments

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial assets									
Cash at bank and in hand:									
– balances with HSBC undertakings	242	–	–	–	–	–	–	–	242
Derivatives	1,990	–	–	–	–	–	109	368	2,467
– trading	1,990	–	–	–	–	–	–	–	1,990
– non-trading	–	–	–	–	–	–	109	368	477
Loans and advances to HSBC undertakings	7,805	2,629	4,618	–	–	–	–	29,298	44,350
Financial investments in HSBC undertakings	40	6	–	–	–	–	–	4,239	4,285
Accrued income and other financial assets	7	–	–	–	–	–	–	109	116
Total financial assets at 31 December 2015	10,084	2,635	4,618	–	–	–	109	34,014	51,460
Non-financial assets	–	–	–	–	–	–	–	98,734	98,734
Total assets at 31 December 2015	10,084	2,635	4,618	–	–	–	109	132,748	150,194
Financial liabilities									
Amounts owed to HSBC undertakings	1,629	–	–	–	–	415	–	108	2,152
Financial liabilities designated at fair value	–	960	–	–	–	–	2,285	16,608	19,853
– debt securities in issue	–	960	–	–	–	–	–	6,937	7,897
– subordinated liabilities and preferred securities	–	–	–	–	–	–	2,285	9,671	11,956
Derivatives	2,065	–	–	–	–	–	213	–	2,278
– trading	2,065	–	–	–	–	–	–	–	2,065
– non-trading	–	–	–	–	–	–	213	–	213
Debt securities in issue	–	–	–	–	–	–	–	960	960
Accruals and other financial liabilities	1,231	195	132	20	–	–	–	–	1,578
Subordinated liabilities	–	–	–	–	–	–	1,749	14,146	15,895
Total financial liabilities at 31 December 2015	4,925	1,155	132	20	–	415	4,247	31,822	42,716
Non-financial liabilities	–	–	–	–	–	–	–	64	64
Total liabilities at 31 December 2015	4,925	1,155	132	20	–	415	4,247	31,886	42,780
Off-balance sheet commitments given									
Undrawn formal standby facilities, credit lines and other commitments to lend	–	–	–	–	–	–	–	–	–

	Due not more than 1 month $m	Due over 1 month but not more than 3 months $m	Due over 3 months but not more than 6 months $m	Due over 6 months but not more than 9 months $m	Due over 9 months but not more than 1 year $m	Due over 1 year but not more than 2 years $m	Due over 2 years but not more than 5 years $m	Due over 5 years $m	Total $m
Financial assets									
Cash at bank and in hand:									
– balances with HSBC undertakings	249	–	–	–	–	–	–	–	249
Derivatives	2,287	–	–	–	–	–	127	357	2,771
– trading	2,287	–	–	–	–	–	–	–	2,287
– non-trading	–	–	–	–	–	–	127	357	484
Loans and advances to HSBC undertakings	7,007	858	7,676	–	14	–	–	28,355	43,910
Financial investments in HSBC undertakings	26	6	–	–	–	–	–	4,041	4,073
Accrued income and other financial assets	8	–	–	–	–	–	–	–	8
Total financial assets at 31 December 2014	9,577	864	7,676	–	14	–	127	32,753	51,011
Non-financial assets	–	–	–	–	–	–	–	96,853	96,853
Total assets at 31 December 2014	9,577	864	7,676	–	14	–	127	129,606	147,864
Financial liabilities									
Amounts owed to HSBC undertakings	2,423	–	32	–	1	436	–	–	2,892
Financial liabilities designated at fair value	–	–	–	–	–	1,110	2,623	14,946	18,679
– debt securities in issue	–	–	–	–	–	1,110	–	7,075	8,185
– subordinated liabilities and preferred securities	–	–	–	–	–	–	2,623	7,871	10,494
Derivatives	1,066	–	–	–	–	–	103	–	1,169
– trading	1,066	–	–	–	–	–	–	–	1,066
– non-trading	–	–	–	–	–	–	103	–	103
Debt securities in issue	–	–	–	–	–	–	–	1,009	1,009
Accruals and other financial liabilities	924	208	137	21	–	–	–	–	1,290
Subordinated liabilities	–	–	–	–	–	–	1,951	15,304	17,255
Total financial liabilities at 31 December 2014	4,413	208	169	21	1	1,546	4,677	31,259	42,294
Non-financial liabilities	–	–	–	–	–	–	–	125	125
Total liabilities at 31 December 2014	4,413	208	169	21	1	1,546	4,677	31,384	42,419
Off-balance sheet commitments given									
Undrawn formal standby facilities, credit lines and other commitments to lend	16	–	–	–	–	–	–	–	16

32 Offsetting of financial assets and financial liabilities

Accounting policy

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously ('the offset criteria').

The disclosure below has been enhanced this year with the inclusion of 'Amounts not subject to enforceable netting arrangements' resulting in a change in the basis of preparation from the prior period. Prior period data have been represented accordingly.

The 'Amounts not set off in the balance sheet' in the following table for derivatives and reverse repurchase/repurchase, stock borrowing/lending and similar agreements include transactions where:

- the counterparty has an offsetting exposure with HSBC and a master netting or similar arrangement is in place with a right of set off only in the event of default, insolvency or bankruptcy, or the offset criteria are otherwise not satisfied; and
- cash and non-cash collateral has been received/pledged in respect of the transactions described above.

For loans and advances to customers and customer accounts at amortised cost the amounts included in the table below typically relate to transactions entered into with corporate and commercial customers for working capital management purposes. The 'Amounts not set off in the balance sheet' relate to transactions where the customer has an offsetting exposure with HSBC and an agreement is in place with the right of offset but the offset criteria are otherwise not satisfied. For risk management purposes, the net amounts of such exposures are subject to limits which are monitored and the relevant customer agreements are subject to review and updated, as necessary, to ensure that the legal right of offset remains appropriate.

Footnotes to the table on page 435 are set out below:

1 *At 31 December 2015, the amount of cash margin received that has been offset against the gross derivatives assets is $4,135m (2014: $606m). The amount of cash margin paid that has been offset against the gross derivatives liabilities is $4,224m (2014: $190m).*
2 *For the amount of reverse repos, stock borrowing and similar agreements recognised in the balance sheet, see the 'Funding sources and uses; table on page 160. In the analysis below, the $7,556m (2014: $9,266m) of trading assets presented in the balance sheet comprised $438m of reverse repos (2014: $1,297m) and $7,118m of stock borrowing (2014: $7,969m).*
3 *At 31 December 2015, the total amount of loans and advances to customers at amortised cost was $924,454m (2014: $974,660m) of which $45,904m (2014: $62,096m) was subject to offsetting. For the amount of loans and advances to customers at amortised cost recognised in the balance sheet, see the 'Funding sources and uses' table on page 160.*
4 *For the amount of repos, stock lending and similar agreements recognised in the balance sheet, see the 'Funding sources and uses' table on page 160. In the analysis below, the $9,301m (2014: $15,830m) of trading liabilities presented in the balance sheet comprised $442m of repos (2014: $3,798m) and $8,859m of stock lending (2014: $12,032m).*
5 *At 31 December 2015, the total amount of customer accounts at amortised cost was $1,289,586m (2014: $1,350,642m) of which $51,442m (2014: $69,082m) was subject to offsetting. For the amount of customer accounts at amortised cost recognised in the balance sheet, see the 'Funding sources and uses' table on page 160.*
6 *These exposures continue to be secured by financial collateral, but we may not have sought or been able to obtain a legal opinion evidencing enforceability of the right of offset.*

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Amounts subject to enforceable netting arrangements							Amounts not subject to enforceable netting arrangements[6]	
				Amounts not set off in the balance sheet					
	Gross amounts $m	Amounts offset $m	Net amounts in the balance sheet $m	Financial instruments $m	Non-cash collateral $m	Cash collateral $m	Net amount $m	$m	Total $m
Financial assets									
Derivatives (Note 16)[1]	**385,682**	**(105,860)**	**279,822**	**(215,531)**	**(8,621)**	**(34,040)**	**21,630**	**8,654**	**288,476**
Reverse repos, stock borrowing and similar agreements[2]	**208,417**	**(77,925)**	**130,492**	**(544)**	**(129,476)**	**(270)**	**202**	**23,319**	**153,811**
Classified as:									
– trading assets	**7,496**	**–**	**7,496**	**–**	**(7,495)**	**–**	**1**	**60**	**7,556**
– non-trading assets	**200,921**	**(77,925)**	**122,996**	**(544)**	**(121,981)**	**(270)**	**201**	**23,259**	**146,255**
Loans and advances to customers at amortised cost[3]	**77,547**	**(31,643)**	**45,904**	**(40,790)**	**–**	**–**	**5,114**	**1,487**	**47,391**
At 31 December 2015	**671,646**	**(215,428)**	**456,218**	**(256,865)**	**(138,097)**	**(34,310)**	**26,946**	**33,460**	**489,678**
Derivatives (Note 16)[1]	584,359	(250,465)	333,894	(262,856)	(7,655)	(41,750)	21,633	11,114	345,008
Reverse repos, stock borrowing and similar agreements[2]	208,893	(88,676)	120,217	(5,117)	(114,394)	(249)	457	50,762	170,979
Classified as:									
– trading assets	9,341	(390)	8,951	–	(8,951)	–	–	315	9,266
– non-trading assets	199,552	(88,286)	111,266	(5,117)	(105,443)	(249)	457	50,447	161,713
Loans and advances to customers at amortised cost[3]	99,623	(37,527)	62,096	(55,989)	–	–	6,107	1,597	63,693
At 31 December 2014	892,875	(376,668)	516,207	(323,962)	(122,049)	(41,999)	28,197	63,473	579,680
Financial liabilities									
Derivatives (Note 16)[1]	**377,930**	**(105,860)**	**272,070**	**(215,508)**	**(13,629)**	**(30,063)**	**12,870**	**9,001**	**281,071**
Repos, stock lending and similar agreements[4]	**136,040**	**(77,925)**	**58,115**	**(2,034)**	**(56,030)**	**(26)**	**25**	**31,586**	**89,701**
Classified as:									
– trading liabilities	**9,300**	**–**	**9,300**	**–**	**(9,299)**	**–**	**1**	**1**	**9,301**
– non-trading liabilities	**126,740**	**(77,925)**	**48,815**	**(2,034)**	**(46,731)**	**(26)**	**24**	**31,585**	**80,400**
Customer accounts at amortised cost[5]	**83,085**	**(31,643)**	**51,442**	**(40,790)**	**–**	**(1)**	**10,651**	**729**	**52,171**
At 31 December 2015	**597,055**	**(215,428)**	**381,627**	**(258,332)**	**(69,659)**	**(30,090)**	**23,546**	**41,316**	**422,943**
Derivatives (Note 16)[1]	580,644	(250,465)	330,179	(262,864)	(9,465)	(39,571)	18,279	10,490	340,669
Repos, stock lending and similar agreements[4]	165,514	(88,676)	76,838	(8,934)	(67,793)	(105)	6	46,424	123,262
Classified as:									
– trading liabilities	16,206	(390)	15,816	–	(15,813)	–	3	14	15,830
– non-trading liabilities	149,308	(88,286)	61,022	(8,934)	(51,980)	(105)	3	46,410	107,432
Customer accounts at amortised cost[5]	106,609	(37,527)	69,082	(55,989)	–	–	13,093	479	69,561
At 31 December 2014	852,767	(376,668)	476,099	(327,787)	(77,258)	(39,676)	31,378	57,393	533,492

For footnotes, see page 434.

33 Foreign exchange exposures

Structural foreign exchange exposures

HSBC's structural foreign exchange exposures are represented by the net asset value of its foreign exchange equity and subordinated debt investments in subsidiaries, branches, joint ventures and associates with non-US dollar functional currencies. Gains or losses on structural foreign exchange exposures are recognised in other comprehensive income. HSBC's management of its structural foreign exchange exposures is discussed on page 171.

Net structural foreign exchange exposures

	2015 $m	2014 $m
Currency of structural exposure		
Pound sterling[1]	**32,701**	30,071
Hong Kong dollars	**28,270**	24,028
Chinese renminbi	**24,117**	24,578
Euros	**19,966**	20,378
Mexican pesos	**4,228**	5,249
Indian rupees	**3,645**	3,466
Canadian dollars	**3,595**	4,187
Saudi riyals	**3,109**	2,910
Brazilian real	**2,865**	4,910
Swiss francs	**2,642**	1,864
Malaysian ringgit	**1,994**	2,219
UAE dirhams	**1,898**	2,199
Taiwanese dollars	**1,702**	1,721
Singapore dollars	**1,454**	1,185
Australian dollars	**1,396**	1,516
Indonesian rupiah	**1,303**	1,352
Korean won	**1,296**	1,360
Turkish lira	**1,006**	1,366
Egyptian pounds	**925**	868
Argentine pesos	**875**	1,059
Others, each less than $700m	**5,775**	5,918
At 31 December	**144,762**	142,404

1 *During 2015, we entered into new forward exchange contracts amounting to $2.6bn (2014: $1.6bn) in order to manage our sterling structural foreign exchange exposure.*

Shareholders' equity would decrease by $2,633m (2014: $2,522m) if euro and sterling foreign currency exchange rates weakened by 5% relative to the US dollar.

34 Non-controlling interests

	2015 $m	2014 $m
Non-controlling interests attributable to holders of ordinary shares in subsidiaries	**6,981**	7,104
Preferred securities issued by subsidiaries	**2,077**	2,427
At 31 December	**9,058**	9,531

Preferred securities issued by subsidiaries

Preferred securities are securities for which there is no obligation to pay a dividend and, if the dividend is not paid, it may not be cumulative. Such securities do not generally carry voting rights but rank higher than ordinary shares for dividend payments and in the event of a winding-up. These securities have no stated maturity date but may be called and redeemed by the issuer, subject to prior notification to the PRA and, where relevant, the consent of the local banking regulator. Dividends on floating rate preferred securities are generally related to interbank offer rates.

Included in the capital base of HSBC are non-cumulative preferred securities classified as additional tier 1 capital and cumulative preferred securities classified as tier 2 capital in accordance with CRD IV rules, by virtue of the application of grandfathering provisions.

Preferred securities issued by HSBC's subsidiaries

		First call date	2015 $m	2014 $m
HSBC USA Inc.				
$150m[1]	Depositary shares each representing 25% interest in a share of adjustable-rate cumulative preferred stock, series D	Jul 1999	**–**	150
$150m[2]	Cumulative preferred stock	Oct 2007	**–**	150
$518m	Floating rate non-cumulative preferred stock, series F	Apr 2010	**518**	518
$374m	Floating rate non-cumulative preferred stock, series G	Jan 2011	**374**	374
$374m	6.50% non-cumulative preferred stock, series H	Jul 2011	**374**	374
HSBC Finance Corporation				
$575m	6.36% non-cumulative preferred stock, series B	Jun 2010	**559**	559
HSBC Bank Canada				
CAD175m	Non-cumulative redeemable class 1 preferred shares, series C	Jun 2010	**126**	151
CAD175m	Non-cumulative class 1 preferred shares, series D	Dec 2010	**126**	151
At 31 December			**2,077**	2,427

1 *In May 2015, HSBC redeemed its depositary shares representing 25% interest in a share of adjustable-rate cumulative preferred stock, series D for $152m.*
2 *In May 2015, HSBC redeemed its cumulative preferred stock for $152m.*

35 Called up share capital and other equity instruments

Accounting policy

Financial instruments issued are classified as equity when there is no contractual obligation to transfer cash or other financial assets or issue a variable number of own equity instruments. Incremental costs directly attributable to the issue of equity instruments are shown in equity as a deduction from the proceeds, net of tax.

HSBC Holdings equity instruments held by HSBC are recognised in equity as a deduction from retained earnings until they are cancelled. When such instruments are subsequently sold, reissued or otherwise disposed of, any consideration received is included in equity, net of any directly attributable incremental transaction costs and related income tax effects.

Issued and fully paid

HSBC Holdings ordinary shares of $0.50 each

	2015 $m	2014 $m
HSBC Holdings ordinary shares[1] at 31 December	**9,842**	9,609

	Number	$m
At 1 January 2015	**19,217,874,260**	**9,609**
Shares issued under HSBC employee share plans	**91,265,909**	**45**
Shares issued in lieu of dividends	**375,956,765**	**188**
At 31 December 2015	**19,685,096,934**	**9,842**
At 1 January 2014	18,830,007,039	9,415
Shares issued under HSBC employee share plans	119,391,238	60
Shares issued in lieu of dividends	268,475,983	134
At 31 December 2014	19,217,874,260	9,609

HSBC Holdings non-cumulative preference shares of $0.01 each

	Number	$m
At 1 January 2015 and 31 December 2015[2]	**1,450,000**	**–**
At 1 January 2014 and 31 December 2014	1,450,000	–

1 *All HSBC Holdings ordinary shares in issue confer identical rights, including in respect of capital, dividends and voting.*
2 *Included in the capital base of HSBC as additional tier 1 capital in accordance with the CRD IV rules, by virtue of the application of grandfathering provisions.*

Dividends on the HSBC Holdings non-cumulative dollar preference shares in issue ('dollar preference shares') are paid quarterly at the sole and absolute discretion of the Board of Directors. The Board of Directors will not declare a dividend on the dollar preference shares if payment of the dividend would cause HSBC Holdings not to meet the applicable capital adequacy requirements of the PRA or the profit of HSBC Holdings available for distribution as dividends is not sufficient to enable HSBC Holdings to pay in full both dividends on the dollar preference shares and dividends on any other shares that are scheduled to be paid on the same date and that have an equal right to dividends. HSBC Holdings may not declare or pay dividends on any class of its shares ranking lower in the right to dividends than the dollar preference shares nor redeem nor purchase in any manner any of its other shares ranking equal with or lower than the dollar preference shares unless it has paid in full, or set aside an amount to provide for payment in full, the dividends on the dollar preference shares for the then current dividend period. The dollar preference shares carry no rights to conversion into ordinary shares of HSBC Holdings. Holders of the dollar preference shares will only be entitled to attend and vote at general meetings of shareholders of HSBC Holdings if the dividend payable on the dollar preference shares has not been paid in full for four consecutive dividend payment dates. In such circumstances, holders of the dollar preference shares will be entitled to vote on all matters put to general meetings until such time as HSBC Holdings has paid a full dividend on the dollar preference shares. HSBC Holdings may redeem the dollar preference shares in whole at any time on or after 16 December 2010, subject to prior notification to the PRA.

HSBC Holdings non-cumulative preference share of £0.01

The one non-cumulative sterling preference share of £0.01 in issue ('sterling preference share') has been in issue since 29 December 2010 and is held by a subsidiary of HSBC Holdings. Dividends on the sterling preference share are paid quarterly at the sole and absolute discretion of the Board. The sterling preference share carries no rights of conversion into ordinary shares of HSBC Holdings and no rights to attend and vote at general meetings of shareholders of HSBC Holdings. HSBC Holdings may redeem it in whole at any time at the option of the Company.

Other equity instruments

HSBC has included three types of additional tier 1 capital securities in its tier 1 capital. The two types of additional tier 1 securities presented in this Note are accounted for as equity because HSBC does not have an obligation to transfer cash or a variable number of its own ordinary shares to holders under any circumstances outside its control. See Note 30 for additional tier 1 securities accounted for as liabilities.

Other equity instruments which have been included in the regulatory capital base of HSBC comprise additional tier 1 capital securities and additional tier 1 contingent convertible securities.

Additional tier 1 capital securities

Additional tier 1 capital securities are perpetual subordinated securities on which coupon payments may be deferred at the discretion of HSBC Holdings. While any coupon payments are unpaid or deferred, HSBC Holdings will not declare, pay dividends or make distributions or similar periodic payments in respect of, or repurchase, redeem or otherwise acquire any securities of lower or equal rank. Such securities do not generally carry voting rights but rank higher than ordinary shares for coupon payments and in the event of a winding-up. These securities do not meet the identifying criteria in full for recognition as tier 1 capital under CRD IV but are eligible as regulatory capital subject to grandfathering limits and progressive phase-out.

At HSBC Holdings' discretion, and subject to certain conditions being satisfied, the capital securities may be exchanged on any coupon payment date for non-cumulative preference shares to be issued by HSBC Holdings and ranking *pari passu* with the dollar and sterling preference shares in issue. The preference shares would be issued at a nominal value of $0.01 per share and a premium of $24.99 per share, with both such amounts being subscribed and fully paid. These securities may be called and redeemed by HSBC subject to prior notification to the PRA.

HSBC's additional tier 1 capital securities in issue which are accounted for in equity

		First call date	2015 $m	2014 $m
$2,200m	8.125% perpetual subordinated capital securities	Apr 2013	2,133	2,133
$3,800m	8.00% perpetual subordinated capital securities, Series 2	Dec 2015	3,718	3,718
At 31 December			5,851	5,851

Additional tier 1 capital – contingent convertible securities

During 2015, HSBC continued to issue contingent convertible securities that are included in HSBC's capital base as fully CRD IV compliant additional tier 1 capital securities on an end point basis. The net proceeds of the issuances will be used for general corporate purposes and to further strengthen the capital base pursuant to requirements under CRD IV. These securities bear a fixed rate of interest until their initial call dates. After the initial call dates, in the event they are not redeemed, the securities will bear interest at rates which are fixed periodically in advance for five-year periods based on prevailing market rates. Interest on the contingent convertible securities will be due and payable only at the sole discretion of HSBC, and HSBC has sole and absolute discretion at all times and for any reason to cancel (in whole or in part) any interest payment that would otherwise be payable on any interest payment date. There are limitations on the payment of distributions if such payments are prohibited under UK banking regulations, or other requirements, if HSBC Holdings has insufficient reserves available for distribution or if HSBC fails to satisfy the solvency condition as defined in the securities' terms.

The contingent convertible securities are undated and are repayable, at the option of HSBC, in whole at the initial call date, or on any fifth anniversary after the initial call date. In addition, the securities are repayable at the option of HSBC in whole for certain regulatory or tax reasons. Any repayments require the prior consent of the PRA. These securities rank *pari passu* with HSBC's dollar and sterling preference shares and are therefore ahead of ordinary shares. The contingent convertible securities will be converted into fully paid ordinary shares of HSBC at a pre-determined price should HSBC's consolidated end point CET1 ratio fall below 7.0%. Therefore, in accordance with the terms of the securities, if the end point CET1 ratio breaches the 7.0% trigger the securities will convert into ordinary shares at fixed contractual conversion prices in the issuance currencies of the relevant securities equivalent to £2.70 at the prevailing rate of exchange on the issuance date subject to certain anti-dilution adjustments.

HSBC's additional tier 1 capital – contingent convertible securities in issue which are accounted for in equity

		First call date	2015 $m	2014 $m
$2,250m	6.375% perpetual subordinated contingent convertible securities	Sep 2024	**2,244**	2,244
$1,500m	5.625% perpetual subordinated contingent convertible securities	Jan 2020	**1,494**	1,494
€1,500m	5.25% perpetual subordinated contingent convertible securities	Sep 2022	**1,943**	1,943
$2,450m	6.375% perpetual subordinated contingent convertible securities	Mar 2025	**2,459**	–
€1,000m	6.000% perpetual subordinated contingent convertible securities	Sep 2023	**1,121**	–
At 31 December			**9,261**	5,681

Shares under option

For details of the options outstanding to subscribe for HSBC Holdings ordinary shares under the HSBC Holdings savings-related share option plans, see Note 6.

Aggregate options outstanding under these plans

	Number of HSBC Holdings ordinary shares	Period of exercise	Exercise price
31 December 2015	**72,840,810**	**2015 to 2021**	**£4.0472 – 5.4738**
	1,114,830	**2015 to 2018**	**HK$55.4701 – 63.9864**
	153,610	**2015 to 2018**	**€5.3532 – 6.0657**
	665,445	**2015 to 2018**	**$7.1456 – 8.2094**
31 December 2014	63,918,042	2014 to 2020	£3.3116 – 7.9911
	6,468,782	2014 to 2018	HK$37.8797 – 63.9864
	571,502	2014 to 2018	€3.6361 – 6.0657
	1,867,328	2014 to 2018	$4.8876 – 8.2094
31 December 2013	119,085,250	2013 to 2019	£3.3116 – 7.9911
	24,215,341	2013 to 2018	HK$37.8797 – 92.5881
	1,574,652	2013 to 2018	€3.6361 – 7.5571
	3,997,069	2013 to 2018	$4.8876 – 11.8824

Maximum obligation to deliver HSBC Holdings ordinary shares

At 31 December 2015, the maximum obligation to deliver HSBC Holdings ordinary shares under all of the above option arrangements and the HSBC International Employee Share Purchase Plan, together with GPSP awards and restricted share awards granted under the HSBC Share Plan and/or the HSBC Share Plan 2011, was 193,178,906 (2014: 193,154,512). The total number of shares at 31 December 2015 held by employee benefit trusts that may be used to satisfy such obligations to deliver HSBC Holdings ordinary shares was 4,753,747 (2014: 7,943,191).

36 Notes on the statement of cash flows

Other non-cash items included in profit before tax

	HSBC			HSBC Holdings	
	2015 $m	2014 $m	2013 $m	2015 $m	2014 $m
Depreciation, amortisation and impairment	**2,181**	2,251	2,330	**30**	39
(Gains)/losses arising from dilution of interests in associates	**–**	32	(1,051)	**–**	–
Revaluations on investment property	**(61)**	(120)	(113)	**–**	–
Share-based payment expense	**757**	732	630	**86**	74
Loan impairment losses gross of recoveries and other credit risk provisions	**4,546**	5,125	7,356	**–**	–
Provisions	**3,210**	3,074	2,578	**–**	–
Impairment/(release of impairment) of financial investments	**94**	54	(36)	**–**	–
Charge for defined benefit plans	**262**	535	121	**–**	–
Accretion of discounts and amortisation of premiums	**(224)**	(421)	180	**(2)**	(61)
Year ended 31 December	**10,765**	11,262	11,995	**114**	52

Change in operating assets

	HSBC			HSBC Holdings	
	2015	2014	2013	**2015**	2014
	$m	$m	$m	**$m**	$m
Change in loans to HSBC undertakings	**–**	–	–	**(729)**	1,364
Change in net trading securities and net derivatives	**24,384**	(18,498)	(24,870)	**1,413**	483
Change in loans and advances to banks	**1,218**	5,147	(4,739)	**–**	–
Change in loans and advances to customers	**31,753**	12,666	(46,551)	**–**	–
Change in reverse repurchase agreements – non-trading	**(3,011)**	18,900	(70,403)	**–**	–
Change in financial assets designated at fair value	**2,394**	3,269	(4,922)	**–**	–
Change in other assets	**9,090**	4,393	2,586	**(141)**	7
Year ended 31 December	**65,828**	25,877	(148,899)	**543**	1,854

Change in operating liabilities

	HSBC			HSBC Holdings	
	2015	2014	2013	**2015**	2014
	$m	$m	$m	**$m**	$m
Change in deposits by banks	**(21,534)**	(9,081)	(7,781)	**–**	–
Change in customer accounts	**(44,373)**	(8,362)	57,365	**–**	–
Change in repurchase agreements – non-trading	**(26,481)**	(56,788)	123,653	**–**	–
Change in debt securities in issue	**960**	(8,133)	(15,381)	**(49)**	(149)
Change in financial liabilities designated at fair value	**(10,785)**	(10,734)	994	**(1,228)**	(694)
Change in other liabilities	**(4,549)**	(716)	5,907	**(1,065)**	(9,071)
Year ended 31 December	**(106,762)**	(93,814)	164,757	**(2,342)**	(9,914)

Interest and dividends

	HSBC			HSBC Holdings	
	2015	2014	2013	**2015**	2014
	$m	$m	$m	**$m**	$m
Interest paid	**(14,559)**	(15,633)	(17,262)	**(2,309)**	(2,463)
Interest received	**47,623**	51,522	50,823	**2,026**	1,945
Dividends received	**914**	1,199	1,133	**8,469**	9,077

Cash and cash equivalents

Accounting policy

Cash and cash equivalents include highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value. Such investments are normally those with less than three months' maturity from the date of acquisition.

Cash and cash equivalents

	HSBC			HSBC Holdings	
	2015	2014	2013	**2015**	2014
	$m	$m	$m	**$m**	$m
Cash at bank with HSBC undertakings	**–**	–	–	**242**	249
Cash and balances at central banks	**98,934**	129,957	166,599	**–**	–
Items in the course of collection from other banks	**5,768**	4,927	6,021	**–**	–
Loans and advances to banks of one month or less	**70,985**	89,285	96,584	**–**	–
Reverse repurchase agreements with banks of one month or less	**53,971**	68,930	68,007	**–**	–
Treasury bills, other bills and certificates of deposit less than three months	**19,843**	14,192	15,980	**–**	–
Less: items in the course of transmission to other banks	**(5,638)**	(5,990)	(6,910)	**–**	–
At 31 December	**243,863**	301,301	346,281	**242**	249

The amount of cash and cash equivalents not available for use by HSBC at 31 December 2015 was $33,744m (2014: $43,738m), of which $21,773m (2014: $29,883m) related to mandatory deposits at central banks.

Disposal of subsidiaries and businesses

During 2014, we completed the disposals of HSBC Bank Middle East Limited's banking business in Jordan and operations in Pakistan. This resulted in a net $303m outflow of cash and cash equivalents which is included under 'Cash flow from investing activities' in the consolidated statement of cash flows on page 340.

In October 2013, we completed the disposal of HSBC Bank (Panama) S.A., receiving total cash consideration of $2,210m which is included under 'Cash flow from investing activities' in the consolidated statement of cash flows on page 340.

37 Contingent liabilities, contractual commitments and guarantees

Accounting policy

Contingent liabilities

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security and contingent liabilities related to legal proceedings or regulatory matters (see Note 40), are possible obligations that arise from past events whose existence will be confirmed only by the occurrence, or non-occurrence, of one or more uncertain future events not wholly within the control of HSBC; or are present obligations that have arisen from past events but are not recognised because it is not probable that settlement will require the outflow of economic benefits, or because the amount of the obligations cannot be reliably measured. Contingent liabilities are not recognised in the financial statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

Financial guarantee contracts are contracts that require HSBC to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due. Liabilities under financial guarantee contracts which are not classified as insurance contracts are recorded initially at their fair value, which is generally the fee received or present value of the fee receivable. Subsequently, financial guarantee liabilities are measured at the higher of the initial fair value, less cumulative amortisation, and the best estimate of the expenditure required to settle the obligations.

HSBC Holdings has issued financial guarantees and similar contracts to other Group entities. HSBC elects to account for certain guarantees as insurance contracts in HSBC Holdings' financial statements, in which case they are measured and recognised as insurance liabilities. This election is made on a contract by contract basis, and is irrevocable.

Contingent liabilities, contractual commitments and guarantees

	HSBC		HSBC Holdings	
	2015 $m	2014 $m	**2015 $m**	2014 $m
Guarantees and contingent liabilities				
Guarantees	**85,855**	86,385	**68,333**	52,023
Other contingent liabilities	**490**	346	**–**	–
At 31 December	**86,345**	86,731	**68,333**	52,023
Commitments				
Documentary credits and short-term trade-related transactions	**10,168**	12,082	**–**	–
Forward asset purchases and forward forward deposits placed	**981**	823	**–**	–
Undrawn formal standby facilities, credit lines and other commitments to lend	**655,281**	638,475	**–**	16
At 31 December	**666,430**	651,380	**–**	16

The above table discloses the nominal principal amounts of commitments, guarantees and other contingent liabilities. Contingent liabilities arising from legal proceedings, regulatory and other matters against Group companies are disclosed in Notes 29 and 40. Nominal principal amounts represent the amounts at risk should the contracts be fully drawn upon and clients default. As a significant portion of guarantees and commitments is expected to expire without being drawn upon, the total of the nominal principal amounts is not indicative of future liquidity requirements.

Guarantees

	2015		2014	
	Guarantees in favour of third parties $m	**Guarantees by HSBC Holdings in favour of other Group entities $m**	Guarantees in favour of third parties $m	Guarantees by HSBC Holdings in favour of other Group entities $m
Guarantee type				
Financial guarantees	**27,643**	**55,000**	30,406	36,800
Credit-related guarantees[1]	**18,473**	**13,333**	16,672	15,223
Other guarantees	**39,739**	**–**	39,307	–
At 31 December	**85,855**	**68,333**	86,385	52,023

1 *Credit-related guarantees are contracts that have similar features to financial guarantee contracts but fail to meet the definition of a financial guarantee contract under IAS 39.*

The amounts disclosed in the above table are nominal principal amounts and reflect HSBC's maximum exposure under a large number of individual guarantee undertakings. The risks and exposures arising from guarantees are captured and managed in accordance with HSBC's overall credit risk management policies and procedures. Approximately half the above guarantees have a term of less than one year. Guarantees with terms of more than one year are subject to HSBC's annual credit review process.

Financial Services Compensation Scheme

The Financial Services Compensation Scheme ('FSCS') has provided compensation to consumers following the collapse of a number of deposit takers. The compensation paid out to consumers is currently funded through loans from HM Treasury which at 31 December 2015 stood at approximately £16bn ($23.7bn).

The Group could be liable to pay a proportion of the outstanding amount that the FSCS has borrowed from HM Treasury. The ultimate FSCS levy to the industry as a result of the collapses cannot currently be estimated reliably as it is dependent on various uncertain factors including the potential recoveries of assets by the FSCS and changes in the level of protected deposits and the population of FSCS members at the time.

Capital commitments

In addition to the commitments disclosed on page 441, at 31 December 2015 HSBC had $468m (2014: $656m) of capital commitments contracted but not provided for and $100m (2014: $101m) of capital commitments authorised but not contracted for.

Associates

HSBC's share of associates' contingent liabilities amounted to $39,222m at 31 December 2015 (2014: $47,593m). No matters arose where HSBC was severally liable.

38 Lease commitments

Accounting policy

Agreements which transfer substantially all the risks and rewards incidental to the ownership of assets are classified as finance leases.

As a lessor under finance leases, HSBC presents the amounts due under the leases after deduction of unearned charges in 'Loans and advances to banks' or 'Loans and advances to customers'. As a lessee under finance leases, HSBC presents the leased assets in 'Property, plant and equipment' with the corresponding liability included in 'Other liabilities'. A finance lease asset and its corresponding liability are recognised initially at the fair value of the asset or, if lower, the present value of the minimum lease payments.

All other leases are classified as operating leases. As lessor, HSBC presents assets subject to operating leases in 'Property, plant and equipment'. Impairment losses are recognised to the extent that carrying values are not fully recoverable. As a lessee, leased assets are not recognised on the balance sheet.

Finance income or charges on finance leases are recognised in 'Net interest income' over the lease periods so as to give a constant rate of return. Rentals payable or receivable under operating leases are spread on a straight-line basis over the lease periods and are recognised in 'General and administrative expenses' or in 'Other operating income'.

Operating lease commitments

At 31 December 2015, future minimum lease payments under non-cancellable operating leases for land, buildings and equipment were $5,333m (2014: $5,372m).

Finance lease receivables

HSBC leases a variety of assets to third parties under finance leases, including transport assets (such as aircraft), property and general plant and machinery. At the end of lease terms, assets may be sold to third parties or leased for further terms. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income.

	2015			2014		
	Total future minimum payments $m	**Unearned finance income $m**	**Present value $m**	Total future minimum payments $m	Unearned finance income $m	Present value $m
Lease receivables:						
– no later than one year	**3,382**	**(332)**	**3,050**	3,383	(374)	3,009
– later than one year and no later than five years	**7,219**	**(837)**	**6,382**	8,089	(980)	7,109
– later than five years	**4,897**	**(702)**	**4,195**	5,013	(744)	4,269
At 31 December	**15,498**	**(1,871)**	**13,627**	16,485	(2,098)	14,387

39 Structured entities

Accounting policy

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, for example when any voting rights relate to administrative tasks only, and key activities are directed by contractual arrangements. Structured entities often have restricted activities and a narrow and well defined objective.

Structured entities are assessed for consolidation in accordance with the accounting policy set out in Note 1.

HSBC is mainly involved with structured entities through the securitisation of financial assets, conduits and investment funds.

HSBC's arrangements that involve structured entities are authorised centrally when they are established to ensure appropriate purpose and governance. The activities of structured entities administered by HSBC are closely monitored by senior management. The Group is involved with both consolidated and unconsolidated structured entities which are established either by HSBC or a third party, as detailed below.

Consolidated structured entities

Total assets of HSBC's consolidated structured entities, split by entity type

	Conduits $bn	Securitisations $bn	HSBC managed funds $bn	Other $bn	Total $bn
At 31 December 2015	**25.9**	**5.6**	**8.2**	**5.7**	**45.4**
At 31 December 2014	27.2	7.9	11.2	6.7	53.0

Conduits

HSBC has established and manages two types of conduits: securities investment conduits ('SIC's) and multi-seller conduits. These entities have been designed so that voting or similar rights are not the dominant factor in deciding who has control: in such cases, the relevant activities are directed by means of contractual arrangement. The conduits are consolidated as HSBC is exposed to or has the right to variable returns from its involvement with the entity and has the ability to affect its returns through its power over the entity.

Securities investment conduits

Solitaire, HSBC's principal SIC, purchases highly rated ABSs to facilitate tailored investment opportunities. At 31 December 2015, Solitaire held $6.2bn of ABSs (2014: $8.0bn). These are included within the disclosures of ABSs 'held through consolidated structured entities' on page 153. HSBC's other SICs, Mazarin, Barion and Malachite, evolved from the restructuring of the Group's structured investment vehicles in 2008.

- *Solitaire* – Solitaire is currently funded entirely by commercial paper ('CP') issued to HSBC. Although HSBC continues to provide a liquidity facility, Solitaire has no need to draw on it as long as HSBC purchases its issued CP, which HSBC intends to do for the foreseeable future. At 31 December 2015, HSBC held $8bn of CP (2014: $9.5bn).
- *Mazarin* – HSBC is exposed to the par value of Mazarin's assets through the provision of a liquidity facility equal to the lesser of the amortised cost of issued senior debt and the amortised cost of non-defaulted assets. At 31 December 2015, this amounted to $1.8bn (2014: $3.9bn). First loss protection is provided through the capital notes issued by Mazarin, which are substantially all held by third parties.

  At 31 December 2015, HSBC held 2.7% of Mazarin's capital notes (2014: 1.2%) with a par value of $13m (2014: $10m) and a carrying amount of $4m (2014: $1.4m).
- *Barion and Malachite* – HSBC's primary exposure to these SICs is represented by the amortised cost of the debt required to support the non-cash assets of the vehicles. At 31 December 2015, this amounted to $1.4bn (2014: $3.0bn). First loss protection is provided through the capital notes issued by these vehicles, which are substantially all held by third parties.

  At 31 December 2015, HSBC held 13.7% of the capital notes (2014: 9.9%) issued by these vehicles with a par value of $42.2m (2014: $54.8m) and a carrying amount of $20.3m (2014: $10.1m).

Multi-seller conduits

Multi-seller conduits were established for the purpose of providing access to flexible market-based sources of finance for HSBC's clients. HSBC bears risk equal to the transaction-specific liquidity facilities offered to the multi-seller conduits amounting to $19.8bn at 31 December 2015 (2014: $15.4bn). First loss protection is provided by the originator of the assets, and not by HSBC, through transaction-specific credit enhancements. A layer of secondary loss protection is provided by HSBC in the form of programme-wide enhancement facilities.

Securitisations

HSBC uses structured entities to securitise customer loans and advances that it has originated in order to diversify its sources of funding for asset origination and capital efficiency purposes. The loans and advances are transferred by HSBC to the structured entities for cash or synthetically through credit default swaps, and the structured entities issue debt securities to investors.

HSBC managed funds

HSBC has established a number of money market and non-money market funds. Where it is deemed to be acting as principal rather than agent in its role as investment manager, HSBC controls and hence consolidates these funds.

Other

HSBC has also entered into a number of transactions in the normal course of business which include asset and structured finance transactions where it has control of the structured entity. In addition, HSBC is deemed to control a number of third-party managed funds through its involvement as a principal in the funds.

Unconsolidated structured entities

The term 'unconsolidated structured entities' refers to all structured entities that are not controlled by HSBC. The Group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities.

The table below shows the total assets of unconsolidated structured entities in which HSBC had an interest at the reporting date and its maximum exposure to loss in relation to those interests.

Nature and risks associated with HSBC interests in unconsolidated structured entities

	Securitisations $bn	HSBC managed funds $bn	Non-HSBC managed funds $bn	Other $bn	Total $bn
Total assets of the entities	**12.9**	**227.9**	**2,003.1**	**139.9**	**2,383.8**
Total assets in relation to HSBC's interests in the unconsolidated structured entities	**1.4**	**5.6**	**8.0**	**9.8**	**24.8**
– trading assets	**–**	**0.1**	**0.2**	**2.6**	**2.9**
– financial assets designated at fair value	**–**	**5.3**	**6.6**	**–**	**11.9**
– derivatives	**–**	**–**	**–**	**3.8**	**3.8**
– loans and advances to banks	**–**	**–**	**–**	**0.1**	**0.1**
– loans and advances to customers	**1.1**	**–**	**0.1**	**2.9**	**4.1**
– financial investments	**0.3**	**0.2**	**1.1**	**0.2**	**1.8**
– other assets	**–**	**–**	**–**	**0.2**	**0.2**
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	**–**	**–**	**–**	**(0.1)**	**(0.1)**
Other liabilities	**–**	**–**	**–**	**(0.1)**	**(0.1)**
HSBC's maximum exposure at 31 December 2015	**3.5**	**5.6**	**8.0**	**14.6**	**31.7**
Total assets of the entities	11.0	308.5	2,899.9	32.8	3,252.2
Total assets in relation to HSBC's interests in the unconsolidated structured entities	0.8	7.8	8.3	7.7	24.6
– trading assets	–	0.1	0.1	4.6	4.8
– financial assets designated at fair value	–	5.2	2.3	–	7.5
– derivatives	–	–	–	1.3	1.3
– loans and advances to banks	–	–	–	0.1	0.1
– loans and advances to customers	0.8	–	–	1.5	2.3
– financial investments	–	2.5	5.9	0.1	8.5
– other assets	–	–	–	0.1	0.1
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	–	–	–	0.1	0.1
Other liabilities	–	–	–	0.1	0.1
HSBC's maximum exposure at 31 December 2014	0.8	7.8	8.3	11.1	28.0

The maximum exposure to loss from HSBC's interests in unconsolidated structured entities represents the maximum loss that HSBC could incur as a result of its involvement with unconsolidated structured entities regardless of the probability of the loss being incurred.

- For commitments, guarantees and written credit default swaps, the maximum exposure to loss is the notional amount of potential future losses.
- For retained and purchased investments in and loans to unconsolidated structured entities, the maximum exposure to loss is the carrying value of these interests at the balance sheet reporting date.

The maximum exposure to loss is stated gross of the effects of hedging and collateral arrangements entered into to mitigate HSBC's exposure to loss.

Securitisations

HSBC has interests in unconsolidated securitisation vehicles through holding notes issued by these entities. In addition, HSBC has investments in ABSs issued by third party structured entities as set out on page 153.

HSBC managed funds

HSBC establishes and manages money market funds and non-money market investment funds to provide customers with investment opportunities. Further information on funds under management is provided on page 96.

HSBC, as fund manager, may be entitled to receive management and performance fees based on the assets under management. HSBC may also retain units in these funds.

Non-HSBC managed funds

HSBC purchases and holds units of third-party managed funds in order to facilitate both business and customer needs. In addition, HSBC enters into derivative contracts to facilitate risk management solutions for non-HSBC managed funds. Note 16 provides information on derivatives entered into by HSBC.

Other

HSBC has established structured entities in the normal course of business, such as structured credit transactions for customers, to provide finance to public and private sector infrastructure projects, and for asset and structured finance transactions.

HSBC sponsored structured entities

Accounting policy

HSBC is considered to sponsor another entity if, in addition to ongoing involvement with the entity, it had a key role in establishing that entity or in bringing together the relevant counterparties so that the transaction which is the purpose of the entity could occur. HSBC is generally not considered a sponsor if the only involvement with the entity is merely administrative in nature.

The amount of assets transferred to and income received from such sponsored entities during 2015 and 2014 was not significant.

40 Legal proceedings and regulatory matters

HSBC is party to legal proceedings and regulatory matters in a number of jurisdictions arising out of its normal business operations. Apart from the matters described below, HSBC considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in Note 29. While the outcome of legal proceedings and regulatory matters is inherently uncertain, management believes that, based on the information available to it, appropriate provisions have been made in respect of these matters as at 31 December 2015 (see Note 29). Where an individual provision is material, the fact that a provision has been made is stated and quantified, except to the extent doing so would be seriously prejudicial. Any provision recognised does not constitute an admission of wrongdoing or legal liability. It is not practicable to provide an aggregate estimate of potential liability for our legal proceedings and regulatory matters as a class of contingent liabilities.

Securities litigation

As a result of an August 2002 restatement of previously reported consolidated financial statements and other corporate events, including the 2002 settlement with 46 states and the District of Columbia relating to real estate lending practices, Household International, Inc. ('Household International') and certain former officers were named as defendants in a class action lawsuit, *Jaffe v. Household International, Inc., et al.*, filed in August 2002 in the US District Court for the Northern District of Illinois (the 'Illinois District Court'). The complaint asserted claims under the US Securities Exchange Act and alleged that the defendants knowingly or recklessly made false and misleading statements of material fact relating to Household International's Consumer Lending operations, including collections, sales and lending practices, some of which ultimately led to the 2002 state settlement agreement, and facts relating to accounting practices evidenced by the financial restatement. Ultimately, a class was certified on behalf of all persons who acquired and disposed of Household International common stock between July 1999 and October 2002.

A jury trial concluded in April 2009, which was decided partly in favour of the plaintiffs. Various legal challenges to the verdict were raised in post-trial briefing.

In December 2011, following the submission of claim forms by class members, the court-appointed claims administrator reported to the Illinois District Court that the total number of claims that generated an allowed loss was 45,921, and that the aggregate amount of those claims was approximately $2.2bn. The Illinois District Court directed further proceedings before a court-appointed Special Master to address certain issues and objections regarding the remaining claims.

In October 2013, the Illinois District Court entered a partial final judgement against the defendants in the amount of approximately $2.5bn (including pre-judgement interest). The defendants appealed that partial final judgement.

In addition to the partial judgement that has been entered, there are also approximately $625m in remaining claims, prior to the imposition of pre-judgement interest, that are still subject to objections that have not yet been ruled upon by the Illinois District Court.

In May 2015, the US Court of Appeals for the Seventh Circuit issued a decision reversing the partial final judgement of the Illinois District Court and remanding the case for a new trial on loss causation, which may entail a reassessment of the quantum of damages. On remand to the Illinois District Court, the case was reassigned to a different judge, who has issued various rulings on certain preliminary issues and has entered a scheduling order that includes a trial date in June 2016.

The timing and ultimate resolution of this matter remains highly uncertain, and given the complexity and uncertainties associated with a new trial on loss causation and a reassessment of the quantum of damages, there continues to be a wide range of possible outcomes. Depending on whether and to what extent the plaintiffs are able to demonstrate loss causation, the amount of damages, based upon the claims included in the reversed partial final judgement and the other remaining claims, as well as the application of pre-judgement interest, may be up to or exceeding $3.6bn. A provision has been recognised based on management's best estimate of probable outflows, but the amount of such provision is not disclosed as it would seriously prejudice the position of HSBC in the resolution of this matter.

Bernard L. Madoff Investment Securities LLC

Bernard L. Madoff ('Madoff') was arrested in December 2008 and later pleaded guilty to running a Ponzi scheme. He has acknowledged, in essence, that while purporting to invest his customers' money in securities, he in fact never invested in securities and used other customers' money to fulfil requests to return investments. His firm, Bernard L. Madoff Investment Securities LLC ('Madoff Securities'), is being liquidated in the US by a trustee (the 'Trustee').

Various non-US HSBC companies provided custodial, administration and similar services to a number of funds incorporated outside the US whose assets were invested with Madoff Securities. Based on information provided by Madoff Securities, as at 30 November 2008, the purported aggregate value of these funds was $8.4bn, an amount that includes fictitious profits reported by Madoff. Based on information available to HSBC, we have estimated that the funds' actual transfers to Madoff Securities minus their actual withdrawals from Madoff Securities during the time that HSBC serviced the funds totalled approximately $4bn. Various HSBC companies have been named as defendants in lawsuits arising out of Madoff Securities' fraud.

US/UK litigation: The Trustee has brought lawsuits against various HSBC companies in the US Bankruptcy Court and in the English High Court. The Trustee's ongoing US claims seek recovery of prepetition transfers pursuant to US bankruptcy law. The amount of these claims has not been pleaded or determined as against HSBC. The Trustee's English action seeks recovery of unspecified transfers from Madoff Securities to or through HSBC. HSBC has not yet been served with the Trustee's English action. The Trustee's deadline for serving the claim has been extended through the third quarter of 2016.

Alpha Prime Fund Ltd ('Alpha Prime') and Senator Fund SPC ('Senator'), co-defendants in the Trustee's US actions, have each brought cross-claims against HSBC. These funds have also sued HSBC in Luxembourg (discussed below). In June 2015, the US Bankruptcy Court heard HSBC's motion to dismiss Alpha Prime and Senator's cross-claims and a decision on that motion is pending.

Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited (together, 'Fairfield'), funds whose assets were invested with Madoff Securities, commenced multiple lawsuits in the US and the British Virgin Islands ('BVI') against fund shareholders, including various HSBC companies that acted as nominees for HSBC clients, seeking restitution of payments made in connection with share redemptions. Fairfield's US actions are stayed pending the outcome of the cases in the BVI (discussed below).

In September 2013, the US Court of Appeals for the Second Circuit affirmed the dismissal of purported class action claims against HSBC and others brought by investors in three Madoff-invested funds on grounds of *forum non conveniens.* In May 2015, plaintiffs filed a motion asking the Court of Appeals to restore their class action claims on the basis of an alleged change of law. Plaintiffs' motion was denied by the Court of Appeals in June 2015.

In December 2014, three additional actions were filed in the US. The first is a purported class action brought in the United States District Court for the Southern District of New York (the 'New York District Court') by direct investors in Madoff Securities who were holding their investments as of December 2008, asserting various common law claims and seeking to recover damages lost to Madoff Securities' fraud on account of HSBC's purported knowledge and alleged furtherance of the fraud. HSBC moved to dismiss this action in November 2015 and a decision on that motion is pending. The other two actions were both filed by SPV Optimal SUS Ltd ('SPV OSUS'), the purported assignee of the Madoff-invested company, Optimal Strategic US Equity Ltd. One of these actions was filed in New York state court and the other in New York District Court. In January 2015, SPV OSUS dismissed its federal lawsuit against HSBC. The state court action against HSBC remains pending.

In May 2015, an action was filed in New York District Court by two investors in the Madoff-invested fund Hermes International Fund Limited ('Hermes'), asserting various common law claims against HSBC and seeking to recover damages lost to Madoff Securities' fraud. HSBC's motion to dismiss the action was filed in January 2016 and a decision on that motion is pending.

BVI litigation: Beginning in October 2009, Fairfield commenced multiple lawsuits in the BVI against numerous fund shareholders, including various HSBC companies that acted as nominees for clients of HSBC's private banking business and other clients who invested in Fairfield. Fairfield is seeking restitution of redemption payments made by the funds to defendants on the grounds that they were mistakenly based on inflated net asset values. In April 2014, the UK Privy Council issued a ruling in favour of other defendants in the BVI actions, and issued its order in October 2014. The Privy Council ruling found in effect that Fairfield should not be entitled to recover share redemptions that were calculated on a net asset value per share based on fictitious profits, and were paid to shareholders prior to the collapse of Madoff Securities. Separately, a motion was brought by defendants before the BVI court challenging the authorisation of the Fairfield liquidator (appointed in July 2009) to pursue its claims in the US. That motion was heard in March 2015 and a decision is pending.

Bermuda litigation: In January 2009, Kingate Global Fund Limited and Kingate Euro Fund Limited (together, 'Kingate'), funds whose assets were invested with Madoff Securities, commenced an action in Bermuda against HSBC Bank Bermuda Limited for recovery of funds held in Kingate's accounts, fees and dividends. This action is currently pending, but is not expected to move forward until there is a resolution as to the Trustee's separate US actions against Kingate and HSBC Bank Bermuda Limited.

Thema Fund Limited ('Thema') and Hermes, funds whose assets were invested with Madoff Securities, each also brought three actions in Bermuda in 2009. The first set of actions was brought against HSBC Institutional Trust Services (Bermuda) Limited and seeks recovery of funds in frozen accounts held at HSBC. The second set of actions asserts liability against HSBC Institutional Trust Services (Bermuda) Limited in relation to claims for mistake, recovery of fees and damages for breach of contract. The third set of actions seeks return of fees from HSBC Bank Bermuda Limited and HSBC Securities Services (Bermuda). There has been little progress in these actions for several years, although in January 2015, Thema and Hermes served notice of intent to proceed in respect of the second set of actions referred to above.

Cayman Islands litigation: In February 2013, Primeo Fund (in official liquidation since April 2009), a Cayman Islands-based fund whose assets were invested with Madoff Securities, brought an action against the fund administrator, Bank of Bermuda (Cayman), and the fund custodian, HSBC Securities Services (Luxembourg) ('HSSL'), alleging breach of contract by the defendants and breach of fiduciary duty by HSSL. Primeo Fund claims damages from defendants (and equitable compensation from HSSL) to compensate it for alleged losses, including loss of profit. Trial is scheduled to begin in November 2016.

Luxembourg litigation: In April 2009, Herald Fund SPC ('Herald') (in official liquidation since July 2013) commenced action against HSSL before the Luxembourg District Court seeking restitution of all cash and securities Herald purportedly lost because of Madoff Securities' fraud, or in the alternative, money damages in the same amount. In March 2013, the Luxembourg District Court dismissed Herald's restitution claim for the return of the securities, although Herald's restitution claim for return of the cash and its claim for money damages were reserved. Herald appealed this judgement in May 2013. Written submissions on the merits are due to be filed by the parties in March 2016.

In October 2009, Alpha Prime commenced an action against HSSL before the Luxembourg District Court, alleging breach of contract and negligence in the appointment of Madoff Securities as a sub-custodian of Alpha Prime's assets. Alpha Prime requested a stay of these proceedings pending its negotiations with the Trustee in the US proceedings. The matter has been temporarily suspended at Alpha Prime's request.

In March 2010, Herald (Lux) SICAV ('Herald (Lux)') (in official liquidation since April 2009) commenced an action against HSSL before the Luxembourg District Court seeking restitution of securities, or the cash equivalent, or money damages in the alternative. Herald (Lux) has also requested the restitution of fees paid to HSSL as custodian and service agent of the fund. Written submissions on the merits are due to be filed by Herald (Lux) in March 2016.

In December 2014, Senator commenced a separate action against HSSL before the Luxembourg District Court, seeking the restitution of securities held as of the latest net asset value statement from November 2008, or in the alternative, money damages. The matter has been temporarily suspended at Senator's request.

In April 2015, Senator commenced a separate action against the Luxembourg branch of HSBC Bank plc before the Luxembourg District Court asserting identical claims to those asserted in Senator's action against HSSL. This action remains ongoing.

HSSL has been sued in various actions by shareholders in the Primeo Select Fund, Herald, Herald (Lux), and Hermes. These actions are in different stages, most of which have been dismissed, suspended or postponed.

Ireland litigation: In November 2013, Defender Limited, a fund whose assets were invested with Madoff Securities, commenced an action against HSBC Institutional Trust Services (Ireland) Limited ('HTIE') and others, alleging breach of the custodian agreement and claiming damages and indemnification for fund losses. A trial date has not yet been scheduled.

In May 2013 and November 2013, settlements were reached in respect of claims filed against HTIE in the Irish High Court by Thema International Fund plc ('Thema International') and Alternative Advantage Plc ('AA'), respectively. Only two actions by individual Thema International shareholders against HTIE and Thema International remain active. An application to dismiss the two remaining shareholder claims was heard in December 2015 and a decision is pending.

In December 2014, a new proceeding against HTIE and HSBC Securities Services (Ireland) Limited was brought by SPV OSUS, alleging breach of the custodian agreement and claiming damages and indemnification for fund losses. In July 2015, HTIE brought a preliminary application to challenge the standing of SPV OSUS to bring proceedings against its service providers. Judgement was rendered in favour of HTIE in October 2015, resulting in the dismissal of the action. SPV OSUS filed an appeal, which is scheduled for hearing in January 2017.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact, of the various Madoff-related proceedings described above, including but not limited to the multiple jurisdictions in which the proceedings have been brought and the number of different plaintiffs and defendants in such proceedings. Based upon the information currently available, management's estimate of possible aggregate damages that might arise as a result of all claims in the various Madoff-related proceedings is up to or exceeding $800m. Due to uncertainties and limitations of this estimate, the ultimate damages could differ significantly from this amount.

US mortgage-related investigations

In April 2011, following completion of a broad horizontal review of industry foreclosure practices, HSBC Bank USA N.A. ('HSBC Bank USA') entered into a consent cease-and-desist order with the Office of the Comptroller of the Currency ('OCC'), and HSBC Finance Corporation ('HSBC Finance') and HSBC North America Holdings Inc. ('HNAH') entered into a similar consent order with the Federal Reserve Board ('FRB') (together with the OCC order, the 'Servicing Consent Orders'). The Servicing Consent Orders require prescribed actions to address the foreclosure practice deficiencies noted in the joint examination and described in the Servicing Consent Orders. HSBC Bank USA, HSBC Finance and HNAH continue to work with the OCC and the FRB to align their processes with the requirements of the Servicing Consent Orders and to implement operational changes as required; however, as set forth in a June 2015 amended consent order between HSBC Bank USA and the OCC (the 'Amended Consent Order'), HSBC Bank USA is not yet in compliance with all of the requirements of the OCC order. A failure to satisfy all requirements of the OCC order may result in a variety of regulatory consequences for HSBC Bank USA, including the imposition of civil money penalties. The Amended Consent Order includes business restrictions related to residential mortgage servicing that will remain in place until the OCC order is terminated. The restrictions include a prohibition against the bulk acquisition of residential mortgage servicing or residential mortgage servicing rights and a requirement to seek OCC supervisory non-objection to outsource any residential mortgage servicing activities that are not already outsourced as of the date of the Amended Consent Order.

The Servicing Consent Orders required an independent review of foreclosures pending or completed between January 2009 and December 2010 to determine if any borrower was financially injured as a result of an error in the foreclosure process (the 'Independent Foreclosure Review'). As required by the Servicing Consent Orders, an independent consultant was retained to conduct that review. In February 2013, HSBC Bank USA entered into an agreement with the OCC, and HSBC Finance and HNAH entered into an agreement with the FRB (together, the 'IFR Settlement Agreements'), pursuant to which the Independent Foreclosure Review ceased and was replaced by a broader framework under which HSBC and 12 other participating servicers agreed to provide, in the aggregate, over $9.3bn in cash payments and other assistance to help eligible borrowers. Pursuant to the IFR Settlement Agreements, HNAH made a cash payment of $96m into a fund used to make payments to borrowers that were in active foreclosure during 2009 and 2010 and is also providing other assistance, such as loan modifications, to help eligible borrowers. Borrowers who receive compensation will not be required to execute a release or waiver of rights and will not be precluded from pursuing litigation concerning foreclosure or other mortgage servicing practices. For participating servicers, including HSBC Bank USA and HSBC Finance, fulfilment of the terms of the IFR Settlement Agreements will satisfy the Independent Foreclosure Review requirements of the Servicing Consent Orders, including the wind-down of the Independent Foreclosure Review.

The Servicing Consent Orders do not preclude additional enforcement actions against HSBC Bank USA, HSBC Finance or HNAH by regulatory, governmental or law enforcement agencies, such as the DoJ or state Attorneys General, which could include the imposition of civil money penalties and other sanctions relating to the activities that are the subject of the Servicing Consent Orders. In addition, the IFR Settlement Agreements do not preclude future private litigation concerning these practices.

Separate from the Servicing Consent Orders and the settlement related to the Independent Foreclosure Review discussed above, in February 2016, HSBC Bank USA, HSBC Finance, HSBC Mortgage Services Inc. and HNAH entered into an agreement with the DoJ, the US Department of Housing and Urban Development, the Consumer Financial Protection Bureau, other federal agencies (the 'Federal Parties') and the Attorneys General of 49 states and the District of Columbia (the 'State Parties') to resolve civil claims related to past residential mortgage loan origination and servicing practices (the 'National Mortgage Settlement Agreement'). The National Mortgage Settlement Agreement is similar to prior settlements reached with other US mortgage servicers and includes payment of $100m to be allocated among participating Federal and State Parties, and $370m in consumer relief provided through HSBC's loan modification programmes. The National Mortgage Settlement Agreement also sets forth national mortgage servicing standards to which HSBC will adhere.

In addition, in February 2016, the FRB announced the imposition against HSBC Finance and HNAH of a $131m civil money penalty in connection with the FRB's Servicing Consent Order of April 2011. Pursuant to the terms of the FRB order, the penalty will be satisfied by the cash payments made to the Federal Parties and the consumer relief provided pursuant to the National Mortgage Settlement Agreement.

The National Mortgage Settlement Agreement and the FRB order do not completely preclude other enforcement actions by regulatory, governmental or law enforcement agencies related to foreclosure and other mortgage servicing practices, including, but not limited to, matters relating to the securitisation of mortgages for investors, which could include the imposition of civil money penalties, criminal fines or other sanctions. In addition, these practices have in the past resulted in private litigation, and the National Mortgage Settlement Agreement would not preclude further private litigation concerning these practices.

US mortgage securitisation activity and litigation

HSBC Bank USA was a sponsor/seller of loans used to facilitate whole loan securitisations underwritten by HSBC Securities (USA) Inc. ('HSI'). From 2005 to 2007, HSBC Bank USA purchased and sold $24bn of such loans to HSI, which were subsequently securitised and sold by HSI to third parties. The outstanding principal balance on these loans was approximately $5.2bn as at 31 December 2015.

Participants in the US mortgage securitisation market that purchased and repackaged whole loans have been the subject of lawsuits and governmental and regulatory inquiries, which have been directed at groups within the US mortgage market such as servicers, originators, underwriters, trustees or sponsors of securitisations, and at particular participants within these groups. As the industry's residential mortgage foreclosure issues continue, HSBC Bank USA has taken title to an increasing number of foreclosed homes as trustee on behalf of various mortgage securitisation trusts. As nominal record owner of these properties, HSBC Bank USA has been sued by municipalities and tenants alleging various violations of law, including laws regarding property upkeep and tenants' rights. While HSBC believes and continues to maintain that the obligations at issue and any related liabilities are properly those of the servicer of each trust, HSBC continues to receive significant adverse publicity in connection with these and similar matters, including foreclosures that are serviced by others in the name of 'HSBC, as trustee'.

Between June and December 2014, a number of lawsuits were filed in state and federal court in New York and Ohio against HSBC Bank USA as trustee of over 280 mortgage securitisation trusts. These lawsuits are brought on behalf of the trusts by a putative class of investors including, amongst others, BlackRock and PIMCO funds. Similar lawsuits were filed simultaneously against other non-HSBC financial institutions that served as mortgage securitisation pool trustees. The complaints against HSBC Bank USA allege that the trusts have sustained losses in collateral value of approximately $38bn. The lawsuits seek unspecified damages resulting from alleged breaches of the US Trust Indenture Act, breach of fiduciary duties, negligence, breach of contract and breach of the common law duty of trust. HSBC filed motions to dismiss in several of these lawsuits, which were, for the most part, denied. In December 2015, three new actions containing similar allegations were filed in state and federal court in New York against HSBC Bank USA as trustee of over 40 mortgage securitisation trusts, many of which are at issue in the previously filed trustee cases. The complaints in the new actions against HSBC Bank USA allege that the trusts have sustained losses in collateral value of approximately $285m.

Various HSBC companies have also been named as defendants in a number of actions in connection with residential mortgage-backed security ('RMBS') offerings, which generally allege that the offering documents for securities issued by mortgage securitisation trusts contained material misstatements and omissions, including statements regarding the underwriting standards governing the underlying mortgage loans.

HSBC Bank USA, HSBC Finance and Decision One Mortgage Company LLC (an indirect subsidiary of HSBC Finance) have been named as defendants in various mortgage loan repurchase actions brought by trustees of mortgage securitisation trusts. In the aggregate, these actions seek to have the HSBC defendants repurchase mortgage loans, or pay compensatory damages in lieu of repurchase, totalling at least $1bn.

In addition to actions brought by trustees of securitisation trusts, HSBC Mortgage Corporation (USA) Inc. and Decision One Mortgage Company LLC have been named as defendants in two separate actions filed by Residential Funding Company LLC ('RFC'), a mortgage loan purchase counterparty. These actions seek unspecified damages in relation to alleged losses suffered by RFC as a result of approximately 25,000 mortgage loans purchased from HSBC between 1986 and 2007. Discovery is in progress in both of these actions.

Since 2010, various HSBC entities have received subpoenas and requests for information from the DoJ and the Massachusetts state Attorney General seeking the production of documents and information regarding HSBC's involvement in specific private-label RMBS transactions as an issuer, sponsor, underwriter, depositor, trustee, custodian or servicer. In November 2014, HNAH, on behalf of itself and various subsidiaries including, but not limited to, HSBC Bank USA, HSI Asset Securitization Corp., HSI, HSBC Mortgage Corporation (USA), HSBC Finance and Decision One Mortgage Company LLC, received a subpoena from the US Attorney's Office for the District of Colorado, pursuant to the Financial Industry Reform, Recovery and Enforcement Act ('FIRREA'), concerning the origination, financing, purchase, securitisation and servicing of subprime and non-subprime residential mortgages. Five non-HSBC banks have previously reported settlements with the DoJ of FIRREA and other mortgage-backed securities-related matters. HSBC is cooperating with the US authorities and is continuing to produce documents and information responsive to their requests.

HSBC expects the focus on mortgage securitisations to continue. As a result, HSBC companies may be subject to additional claims, litigation and governmental or regulatory scrutiny relating to its participation in the US mortgage securitisation market.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact of these matters. Based upon the information currently available, it is possible that any liabilities that might arise as a result of these matters could be significant.

Anti-money laundering and sanctions-related matters

In October 2010, HSBC Bank USA entered into a consent cease-and-desist order with the OCC, and HNAH entered into a consent cease-and-desist order with the FRB (the 'Orders'). These Orders required improvements to establish an effective compliance risk management programme across HSBC's US businesses, including risk management related to the Bank Secrecy Act ('BSA') and AML compliance. Steps continue to be taken to address the requirements of the Orders.

In December 2012, HSBC Holdings, HNAH and HSBC Bank USA entered into agreements with US and UK government agencies regarding past inadequate compliance with the BSA, AML and sanctions laws. Among those agreements, HSBC Holdings and HSBC Bank USA entered into a five-year deferred prosecution agreement with the DoJ, the US Attorney's Office for the Eastern District of New York, and the US Attorney's Office for the Northern District of West Virginia (the 'US DPA'); and HSBC Holdings consented to a cease-and-desist order, and HSBC Holdings and HNAH consented to a civil money penalty order with the FRB. HSBC Holdings also entered into an agreement with the Office of Foreign Assets Control ('OFAC') regarding historical transactions involving parties subject to OFAC sanctions, as well as an undertaking with the UK FCA to comply with certain forward-looking AML and sanctions-related obligations. In addition, HSBC Bank USA entered into a civil money penalty order with the Financial Crimes Enforcement Network ('FinCEN') of the US Treasury Department and a separate civil money penalty order with the OCC.

Under these agreements, HSBC Holdings and HSBC Bank USA made payments totalling $1.9bn to US authorities. In July 2013, the US District Court for the Eastern District of New York approved the US DPA and retained authority to oversee implementation of that agreement. An independent compliance monitor (the 'Monitor') was appointed in 2013 under the agreements entered into with the DoJ and the FCA to produce annual assessments of the effectiveness of HSBC's AML and sanctions compliance programme. Additionally, the Monitor is serving as HSBC's independent consultant under the consent order of the FRB. In January 2016, the Monitor delivered his second annual follow-up review report as required by the US DPA. The Monitor's report is discussed on page 116.

Under the terms of the US DPA, upon notice and an opportunity to be heard, the DoJ has sole discretion to determine whether HSBC has breached the US DPA. Potential consequences of breaching the US DPA could include the imposition of additional terms and conditions on HSBC, an extension of the agreement, including its monitorship, or the criminal prosecution of HSBC, which could, in turn, entail further financial penalties and collateral consequences.

HSBC Bank USA also entered into a separate consent order with the OCC, requiring it to correct the circumstances and conditions as noted in the OCC's then-most recent report of examination, and imposing certain restrictions on HSBC Bank USA directly or indirectly acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, unless it receives prior approval from the OCC. HSBC Bank USA also entered into a separate consent order with the OCC requiring it to adopt an enterprise-wide compliance programme.

These settlements with US and UK authorities have led to private litigation, and do not preclude further private litigation related to HSBC's compliance with applicable BSA, AML and sanctions laws or other regulatory or law enforcement actions for BSA, AML, sanctions or other matters not covered by the various agreements.

In May 2014, a shareholder derivative action was filed by a shareholder of HSBC Holdings purportedly on behalf of HSBC Holdings, HSBC Bank USA, HNAH and HSBC USA Inc. (the 'Nominal Corporate Defendants') in New York state court against certain current and former directors and officers of those HSBC companies (the 'Individual Defendants'). The complaint alleges that the Individual Defendants breached their fiduciary duties to the Nominal Corporate Defendants and caused a waste of corporate assets by allegedly permitting and/or causing the conduct underlying the US DPA. In March 2015, the Nominal Corporate Defendants moved to dismiss the action, and the Individual Defendants who had been served also responded to the complaint. In November 2015, the New York state court granted the motion to dismiss. The plaintiff has appealed that decision.

In July 2014, a claim was filed in the Ontario Superior Court of Justice against HSBC Holdings and a former employee purportedly on behalf of a class of persons who purchased HSBC common shares and American Depositary Shares between July 2006 and July 2012. The complaint, which seeks monetary damages of up to CA$20bn, alleges that the defendants made statutory and common law misrepresentations in documents released by HSBC Holdings and its wholly owned subsidiary, HSBC Bank Canada, relating to HSBC's compliance with BSA, AML, sanctions and other laws.

In November 2014, a complaint was filed in the US District Court for the Eastern District of New York on behalf of representatives of US persons alleged to have been killed or injured in Iraq between April 2004 and November 2011. The complaint was filed against HSBC Holdings, HSBC Bank plc, HSBC Bank USA and HSBC Bank Middle East, as well as other non-HSBC banks and the Islamic Republic of Iran. The plaintiffs allege that defendants violated the US Anti-Terrorism Act ('US ATA') by altering or falsifying payment messages involving Iran, Iranian parties and Iranian banks for transactions processed through the US. Defendants filed a motion to dismiss in May 2015, and a decision on that motion is pending.

In November 2015, a complaint was filed in the US District Court for the Northern District of Illinois on behalf of representatives of four US persons alleged to have been killed or injured in terrorist attacks on three hotels in Amman, Jordan in 2005. The complaint was filed against HSBC Holdings, HSBC Bank USA, HNAH, HSI, HSBC Finance, HSBC USA Inc. and HSBC Bank Middle East, as well as a non-HSBC bank. The plaintiffs allege that the HSBC defendants violated the US ATA by failing to enforce due diligence methods to prevent its financial services from being used to support the terrorist attacks.

In February 2016, a complaint was filed in the US District Court for the Southern District of Texas by representatives of US persons alleged to have been killed or injured in Mexico by Mexican drug cartels. The complaint was filed against HSBC Holdings, HSBC Bank USA, HSBC México SA, and Grupo Financiero HSBC. The plaintiffs allege that defendants violated the US ATA by providing financial services to individuals and entities associated with the Mexican drug cartels. Defendants have not yet been served with process.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these lawsuits, including the timing or any possible impact on HSBC, which could be significant.

Tax-related investigations

HSBC continues to cooperate in ongoing investigations by the DoJ and the US Internal Revenue Service regarding whether certain HSBC companies and employees, including those associated with HSBC Private Bank (Suisse) SA ('HSBC Swiss Private Bank') and an HSBC company in India, acted appropriately in relation to certain customers who had US tax reporting obligations. In connection with these investigations, HSBC Swiss Private Bank, with due regard for Swiss law, has produced records and other documents to the DoJ. In August 2013, the DoJ informed HSBC Swiss Private Bank that it was not eligible for the 'Program for Non-Prosecution Agreements or Non-Target Letters for Swiss Banks' since a formal investigation had previously been authorised.

In addition, various tax administration, regulatory and law enforcement authorities around the world, including in Belgium, France, Argentina and India, are conducting investigations and reviews of HSBC Swiss Private Bank and other HSBC entities in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation. HSBC Swiss Private Bank has been placed under formal criminal examination by magistrates in both Belgium and France. In February 2015, HSBC was informed that the French magistrates are of the view that they have completed their investigation with respect to HSBC Swiss Private Bank and have referred the matter to the public prosecutor for a recommendation on any potential charges to be brought, whilst reserving the right to continue investigating other conduct at HSBC. In April 2015, HSBC Holdings was informed that it has been placed under formal criminal investigation by the French magistrates in connection with the conduct of HSBC Swiss Private Bank in 2006 and 2007 for alleged tax offences, and a €1bn bail was imposed. HSBC Holdings appealed the magistrates' decision and, in June 2015, bail was reduced to €100m. The ultimate financial impact of this matter could differ significantly, however, from the bail amount of €100m.

In Argentina, in November 2014, the Argentine tax authority filed a complaint against various individuals, including current and former HSBC employees, alleging tax evasion and an unlawful association amongst HSBC Swiss Private Bank, HSBC Bank Argentina, HSBC Bank USA and certain HSBC employees, which allegedly enabled numerous HSBC customers to evade their Argentine tax obligations. In addition, the Argentine Congress convened a special committee to investigate similar allegations, as well as issues related to allegations of Argentine income tax evasion more broadly. The committee issued its final report in December 2015.

In India, in February 2015, the Indian tax authority issued a summons and request for information to an HSBC company in India. In August 2015 and November 2015, HSBC entities received notices issued by two offices of the Indian tax authority, alleging that the Indian tax authority had sufficient evidence to initiate prosecution against HSBC Swiss Private Bank and its Dubai entity for abetting tax evasion of four different Indian individuals and/or families and requesting that the HSBC entities show why such prosecution should not be initiated.

With respect to each of these ongoing matters, HSBC is cooperating with the relevant authorities in a manner consistent with relevant laws. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these investigations and reviews, which could be significant.

In light of the media attention regarding these matters, it is possible that other tax administration, regulatory or law enforcement authorities will also initiate or enlarge similar investigations or regulatory proceedings.

London interbank offered rates, European interbank offered rates and other benchmark interest rate investigations and litigation

Various regulators and competition and law enforcement authorities around the world, including in the UK, the US, the EU, Switzerland, South Korea and elsewhere, are conducting investigations and reviews related to certain past submissions made by panel banks and the processes for making submissions in connection with the setting of Libor, Euribor and other benchmark interest rates. As certain HSBC companies are members of such panels, HSBC has been the subject of regulatory demands for information and is cooperating with those investigations and reviews.

In May 2014, HSBC received a Statement of Objections from the European Commission (the 'Commission'), alleging anti-competitive practices in connection with the pricing of euro interest rate derivatives. The Statement of Objections sets out the Commission's preliminary views and does not prejudge the final outcome of its investigation. HSBC responded to the Commission's Statement of Objections in March 2015, and a hearing before the Commission took place in June 2015. A decision by the Commission is pending.

In addition, HSBC and other US dollar Libor panel banks have been named as defendants in a number of private lawsuits filed in the US with respect to the setting of US dollar Libor. The complaints assert claims under various US laws, including US antitrust and racketeering laws, the US Commodity Exchange Act ('CEA'), and state law. The lawsuits include individual and putative class actions, most of which have been transferred and/or consolidated for pre-trial purposes before the United States District Court for the Southern District of New York (the 'New York District Court').

In March 2013, the New York District Court overseeing the consolidated proceedings related to US dollar Libor issued a decision in the six oldest actions, dismissing the plaintiffs' federal and state antitrust claims, racketeering claims, and unjust enrichment claims in their entirety, but allowing certain of their CEA claims that were not barred by the applicable statute of limitations to proceed. Some of those plaintiffs appealed the New York District Court's decision to the US Court of Appeals for the Second Circuit, which later dismissed those appeals as premature. In January 2015, the US Supreme Court reversed the Court of Appeals' decision and remanded the case to the Court of Appeals for consideration on the merits of the plaintiffs' appeal. Oral argument in the Court of Appeals was held in November 2015, and the parties are awaiting a decision.

Other plaintiffs sought to file amended complaints in the New York District Court to assert additional allegations. In June 2014, the New York District Court issued a decision that, amongst other things, denied the plaintiffs' request for leave to amend their complaints to assert additional theories of Libor manipulation against HSBC and certain non-HSBC banks, but granted leave to assert such manipulation claims against two other banks; and granted defendants' motion to dismiss certain additional claims under the CEA as barred by the applicable statute of limitations. Proceedings with respect to all other actions in the consolidated proceedings were stayed pending this decision. The stay was lifted in September 2014, and amended complaints were filed in certain other individual and class actions thereafter. The defendants filed motions to dismiss, and in August 2015 and November 2015, the court issued decisions granting the motions in part, although it has not yet entered an order specifying which particular claims are dismissed against which defendants.

Separately, HSBC and other panel banks have also been named as defendants in two putative class actions filed in the New York District Court on behalf of persons who transacted in financial instruments allegedly related to the euroyen Tokyo interbank offered rate ('Tibor') and/or Japanese yen Libor. The complaints allege, amongst other things, misconduct related to euroyen Tibor, although HSBC is not a member of the Japanese Bankers Association's euroyen Tibor panel, as well as Japanese yen Libor, in violation of US antitrust laws, the CEA, and state law.

The first of the two actions was filed in April 2012, and HSBC responded by filing a motion to dismiss. In March 2014, the New York District Court dismissed the plaintiffs' claims under US antitrust law and state law, but sustained their claims under the CEA. In June 2014, the plaintiffs then moved for leave to file an amended complaint adding new claims and parties. That motion was denied in March 2015, except insofar as it granted leave to add certain defendants not affiliated with HSBC and reserving on the question of whether the California State Teachers Retirement System ('CALSTRS') may intervene and be added as a plaintiff. In October 2015, the New York District Court denied the motion of CALSTRS to intervene. In November 2015, CALSTRS filed an appeal of that ruling to the United States Court of Appeals for the Second Circuit, which remains pending.

The second action was filed in July 2015. In February 2016, HSBC and the other banks named in the complaint filed a motion to dismiss the action, and a decision on that motion is pending.

In November 2013, HSBC and other panel banks were also named as defendants in a putative class action filed in the New York District Court on behalf of persons who transacted in euro futures contracts and other financial instruments allegedly related to Euribor. The complaint alleges, amongst other things, misconduct related to Euribor in violation of US antitrust laws, the CEA and state law. The court previously stayed proceedings until May 2015. After the stay expired, the plaintiffs filed an amended complaint. In October 2015, HSBC filed a motion to dismiss the action, which remains pending.

In September and October 2014, HSBC Bank plc and other panel banks were named as defendants in a number of putative class actions that were filed and consolidated in the New York District Court on behalf of persons who transacted in interest rate derivatives or purchased or sold financial instruments that were either tied to US dollar International Swaps and Derivatives Association fix ('ISDAfix') rates or were executed shortly before, during, or after the time of the daily ISDAfix setting window. The complaint alleges, amongst other things, misconduct related to these activities in violation of US antitrust laws, the CEA and state law. In February 2015, plaintiffs filed a second consolidated amended complaint replacing HSBC Bank plc with HSBC Bank USA. A motion to dismiss that complaint was filed in April 2015, and a decision is pending.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact, of these lawsuits. Based upon the information currently available, it is possible that any liabilities that might arise as a result of the claims in these actions could be significant.

Foreign exchange rate investigations and litigation

Various regulators and competition and law enforcement authorities around the world, including in the US, the EU, Brazil, South Korea and elsewhere, are conducting investigations and reviews into trading by HSBC and others on the foreign exchange markets. HSBC has been cooperating with these ongoing investigations and reviews.

In May 2015, the DoJ resolved its investigations with respect to five non-HSBC financial institutions, four of whom agreed to plead guilty to criminal charges of conspiring to manipulate prices in the foreign exchange spot market, and resulting in the imposition of criminal fines in the aggregate of more than $2.5bn. Additional penalties were imposed at the same time by the FRB and other banking regulators. HSBC was not a party to these resolutions, and investigations into HSBC by the DoJ, FRB and others around the world continue.

In addition, in late 2013 and early 2014, HSBC Holdings, HSBC Bank plc, HNAH and HSBC Bank USA were named as defendants, amongst other banks, in various putative class actions filed in the New York District Court. In March 2014, the plaintiffs filed a consolidated amended complaint alleging, amongst other things, that defendants conspired to manipulate the WM/Reuters foreign exchange benchmark rates (the 'Consolidated Action'). Separate putative class actions were also brought on behalf of non-US plaintiffs (the 'Foreign Actions'). Defendants moved to dismiss all actions. In January 2015, the court denied defendants' motion to dismiss the Consolidated Action, but granted defendants' motion to dismiss the Foreign Actions. Five additional putative class actions were subsequently filed in the New York District Court making similar allegations on behalf of persons who engaged in foreign exchange futures transactions on a US exchange, and those additional actions were subsequently consolidated with the Consolidated Action. In July 2015, the plaintiffs in the Consolidated Action filed a further amended complaint that, amongst other things, added new claims and parties, including HSBC Securities (USA), Inc. In September 2015, HSBC reached an agreement with plaintiffs to resolve the Consolidated Action, subject to court approval. In December 2015, the court granted preliminary approval of the settlement, and HSBC made payment of the agreed settlement amount into an escrow account. The court has not yet set a date for the final approval hearing.

In addition to the above actions, a putative class action was filed in the New York District Court in June 2015 making similar allegations on behalf of Employee Retirement Income Security Act of 1974 ('ERISA') plan participants, and another complaint was filed in the US District Court for the Northern District of California in May 2015. HSBC filed a motion to transfer the California action to New York, which was granted in November 2015.

In September 2015, two additional putative class actions making similar allegations under Canadian law were issued in Canada against various HSBC entities, including HSBC Bank Canada, and numerous other financial institutions.

As at 31 December 2015, HSBC has recognised a provision in the amount of $1.2bn. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters. Due to uncertainties and limitations of these estimates, the ultimate penalties could differ significantly from the amount provided.

Precious metals fix-related litigation and investigations

Beginning in March 2014, numerous putative class actions were filed in the US District Courts for the Southern District of New York, the District of New Jersey and the Northern District of California, naming HSBC and other members of The London Gold Market Fixing Limited as defendants. The complaints allege that, from January 2004 to the present, defendants conspired to manipulate the price of gold and gold derivatives during the afternoon London gold fix for their collective benefit in violation of US antitrust laws, the CEA and New York state law. The actions were subsequently consolidated in the New York District Court. An amended complaint was filed in March 2015, which defendants moved to dismiss. A hearing has been scheduled for March 2016.

Beginning in July 2014, numerous putative class actions were filed in the US District Courts for the Southern and Eastern Districts of New York, naming HSBC and other members of The London Silver Market Fixing Ltd as defendants. The complaints allege that, from January 1999 to the present, defendants conspired to manipulate the price of silver and silver derivatives for their collective benefit in violation of US antitrust laws, the CEA and New York state law. The actions were subsequently consolidated in the New York District Court. An amended complaint was filed in April 2015, which defendants moved to dismiss. A hearing has been scheduled for March 2016.

Between late 2014 and early 2015, numerous putative class actions were filed in the US District Court for the Southern District of New York, naming HSBC, and other members of The London Platinum and Palladium Fixing Company Limited as defendants. The complaints allege that, from January 2008 to the present, defendants conspired to manipulate the price of platinum group metals ('PGM') and PGM-based financial products for their collective benefit in violation of US antitrust laws and the CEA. An amended complaint was filed in August 2015, which defendants moved to dismiss.

Additionally, in December 2015, a putative class action under Canadian law was filed in the Ontario Superior Court of Justice against various HSBC entities, including HSBC Bank Canada, and other financial institutions. Plaintiffs allege that, from January 2004 to March 2014, defendants conspired to manipulate the price of gold and gold-related investment instruments in violation of the Canadian Competition Act and common law.

Various regulators and competition and law enforcement authorities, including in the US and the EU, are conducting investigations and reviews relating to HSBC's precious metals operations. HSBC has been cooperating with these ongoing investigations. In November 2014, the Antitrust Division and Criminal Fraud Section of the DoJ issued a document request to HSBC Holdings, seeking the voluntary production of certain documents in connection with a criminal investigation that the DoJ is conducting of alleged anti-competitive and manipulative conduct in precious metals trading. In January 2016, the Antitrust Division of the DoJ informed HSBC that it was closing its investigation; however, the Criminal Fraud Section's investigation remains ongoing.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these matters, including the timing or any possible impact on HSBC, which could be significant.

Credit default swap regulatory investigation and litigation

In July 2013, HSBC received a Statement of Objections from the Commission relating to its ongoing investigation of alleged anti-competitive activity by a number of banks and other market participants in the credit derivatives market between 2006 and 2009. The Statement of Objections sets out the Commission's preliminary views and does not prejudge the final outcome of its investigation. HSBC submitted a response and attended a hearing in May 2014. Following the hearing, the Commission decided in December 2015 to close the case against all 13 banks, including all of the HSBC entities; however, the Commission's investigation relating to Markit and ISDA is ongoing.

In addition, HSBC Holdings, HSBC Bank plc and HSBC Bank USA were named as defendants, amongst others, in numerous putative class actions filed in the New York District Court and the Illinois District Court. These class actions allege that the defendants, which include ISDA, Markit and several other financial institutions, conspired to restrain trade in violation of US antitrust laws by, amongst other things, restricting access to credit default swap pricing exchanges and blocking new entrants into the exchange market. The plaintiffs in these suits purport to represent a class of all persons who purchased credit default swaps from or sold credit default swaps to defendants primarily in the US.

In October 2013, these cases were consolidated in the New York District Court (the 'Consolidated Action'). In September 2015, the HSBC defendants reached an agreement with plaintiffs to resolve the Consolidated Action, subject to court approval. In October 2015, the court granted preliminary approval of the settlement. The final settlement approval hearing is scheduled for April 2016.

Economic plans: HSBC Bank Brasil S.A.

In the mid-1980s and early 1990s, certain economic plans were introduced by the government of Brazil to reduce escalating inflation. The implementation of these plans adversely impacted savings account holders, thousands of which consequently commenced legal proceedings against financial institutions in Brazil, including HSBC Bank Brasil S.A. ('HSBC Brazil'), alleging, amongst other things, that savings account balances were adjusted by a different price index than that contractually agreed, which caused them a loss of income. Certain of these cases have reached the Brazilian Supreme Court. The Supreme Court has suspended all cases pending before lower courts until it delivers a final judgement on the constitutionality of the changes resulting from the economic plans. It is anticipated that the outcome of the Supreme Court's final judgement will set a precedent for all cases pending before the lower courts. Separately, the Brazilian Superior Civil Court is considering matters relating to, amongst other things, contractual and punitive interest rates to be applied to calculate any loss of income.

There is a high degree of uncertainty as to the terms on which the proceedings in the Supreme Court and Superior Civil Court will be resolved and the timing of such resolutions, including the amount of losses that HSBC Brazil may be liable to pay in the event of an unfavourable judgement. Such losses may lie in a range from a relatively insignificant amount to an amount up to $564m (based on the exchange rate between the USD and the BRL as at 31 December 2015), although the upper end of this range is considered unlikely.

Regulatory review of consumer 'enhancement services products'

HSBC Finance, through its legacy Cards and Retail Services business, offered or participated in the marketing, distribution, or servicing of products, such as identity theft protection and credit monitoring products, that were ancillary to the provision of credit to the consumer. HSBC Finance ceased offering these products by May 2012. The offering and administration of these and other enhancement services products, such as debt protection products, has been the subject of enforcement actions against other institutions by regulators, including the Consumer Financial Protection Bureau, the OCC, and the Federal Deposit Insurance Corporation. Such enforcement actions have resulted in orders to pay restitution to customers and the assessment of penalties in substantial amounts. We have made restitution to certain customers in connection with certain enhancement services products, and we continue to cooperate with our regulators in connection with their ongoing review. In light of the actions that regulators have taken in relation to other non-HSBC credit card issuers regarding their enhancement services products, one or more regulators may order us to pay additional restitution to customers and/or impose civil money penalties or other relief arising from the prior offering and administration of such enhancement services products by HSBC Finance; however, management no longer expects the resulting financial impact to be material.

Fédération Internationale de Football Association ('FIFA') related investigations

HSBC has received inquiries from the DoJ regarding its banking relationships with certain individuals and entities that are or may be associated with FIFA. The DoJ is investigating whether multiple financial institutions, including HSBC, permitted the processing of suspicious or otherwise improper transactions, or failed to observe applicable AML laws and regulations. HSBC is cooperating with the DoJ's investigation.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

Hiring practices investigation

The US Securities and Exchange Commission (the 'SEC') is investigating multiple financial institutions, including HSBC, in relation to hiring practices of candidates referred by or related to government officials or employees of state-owned enterprises in Asia-Pacific. HSBC has received various requests for information and is cooperating with the SEC's investigation.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

41 Related party transactions

Related parties of the Group and HSBC Holdings include subsidiaries, associates, joint ventures, post-employment benefit plans for HSBC employees, Key Management Personnel, close family members of Key Management Personnel and entities which are controlled or jointly controlled by Key Management Personnel or their close family members.

Particulars of transactions with related parties, disclosed pursuant to the requirements of IAS 24 'Related Party Disclosures', are tabulated below. The disclosure of the year-end balance and the highest amounts outstanding during the year is considered to be the most meaningful information to represent the amount of the transactions and the amount of outstanding balances during the year.

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of HSBC Holdings, being the Directors and Group Managing Directors of HSBC Holdings.

Key Management Personnel

Compensation of Key Management Personnel

	2015 $m	2014 $m	2013 $m
Short-term employee benefits	**40**	41	38
Post-employment benefits	**1**	1	2
Other long-term employee benefits	**9**	7	10
Share-based payments	**51**	54	35
Year ended 31 December	**101**	103	85

Transactions, arrangements and agreements involving related parties

Particulars of advances (loans and quasi-loans), credits and guarantees entered into by subsidiaries of HSBC Holdings during 2015 with Directors, disclosed pursuant to section 413 of the Companies Act 2006, are shown below:

	2015 $m	2014 $m
Advances and credits at 31 December	**4**	5

Transactions and balances during the year with Key Management Personnel

	2015		2014	
	Balance at 31 December $m	**Highest amounts outstanding during year $m**	Balance at 31 December $m	Highest amounts outstanding during year $m
Key Management Personnel[1]				
Advances and credits[2]	**218**	**411**	309	347
Guarantees[3]	**67**	**91**	78	79

1 *Includes Key Management Personnel, close family members of Key Management Personnel and entities which are controlled or jointly controlled by Key Management Personnel or their close family members.*
2 *The 2014 year-end balance has been restated from $194m to $309m and the 2014 highest amount outstanding during the year has been restated from $227m to $347m.*
3 *The 2014 year-end balance has been restated from nil to $78m and the 2014 highest amount outstanding during the year has been restated from nil to $79m.*

Some of the transactions were connected transactions as defined by the Rules Governing The Listing of Securities on The Stock Exchange of Hong Kong Limited, but were exempt from any disclosure requirements under the provisions of those rules. The above transactions were made in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with persons of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features.

Shareholdings, options and other securities of Key Management Personnel

	2015 (000s)	2014 (000s)
Number of options held over HSBC Holdings ordinary shares under employee share plans	29	28
Number of HSBC Holdings ordinary shares held beneficially and non-beneficially	18,961	17,533
Number of HSBC Bank 2.875% Notes 2015 due 30 April 2015 held beneficially and non-beneficially	–	5
At 31 December	18,990	17,566

Associates and joint ventures

The Group provides certain banking and financial services to associates and joint ventures including loans, overdrafts, interest and non-interest bearing deposits and current accounts. Details of the interests in associates and joint ventures are given in Note 19.

Transactions and balances during the year with associates and joint ventures

	2015		2014	
	Highest balance during the year $m	Balance at 31 December $m	Highest balance during the year $m	Balance at 31 December $m
Amounts due from joint ventures:				
– unsubordinated	195	151	205	205
Amounts due from associates:				
– subordinated	–	–	58	–
– unsubordinated	4,209	2,035	5,451	4,273
	4,404	2,186	5,714	4,478
Amounts due to associates	1,047	92	650	162
Guarantees	905	904	952	952
Commitments	–	–	17	–

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Post-employment benefit plans

At 31 December 2015, $4.3bn (2014: $4.5bn) of HSBC post-employment benefit plan assets were under management by HSBC companies, earning management fees of $8m in 2015 (2014: $12m). At 31 December 2015 HSBC's post-employment benefit plans had placed deposits of $811m (2014: $223m) with its banking subsidiaries, earning interest payable to the schemes of nil (2014: $6m). The above outstanding balances arose from the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

HSBC Bank (UK) Pension Scheme enters into swap transactions with HSBC to help manage inflation and interest rate sensitivity of its liabilities. At 31 December 2015 the gross notional value of these swaps was $13.3bn (2014: $24bn), the swaps had a positive fair value to the scheme of $0.5bn (2014: $0.9bn positive); and HSBC had delivered collateral of $1.1bn (2014: $2.0bn) to the scheme in respect of these arrangements. This earned HSBC interest of nil (2014: $5m). All swaps were executed at prevailing market rates and within standard market bid/offer spreads. Over the year, the scheme reduced its level of swap transactions with HSBC.

The International Staff Retirement Benefit Scheme enters into swap transactions with HSBC to manage the inflation and interest rate sensitivity of its liabilities and selected assets. At 31 December 2015, the gross notional value of the swaps was $1.7bn (2014: $1.9bn) and the swaps had a net negative fair value to the scheme of $96m (2014: $107m negative). All swaps were executed at prevailing market rates and within standard market bid/offer spreads.

HSBC Holdings

Details of HSBC Holdings' subsidiaries are shown in Note 43.

Transactions and balances during the year with subsidiaries

	2015		2014	
	Highest balance during the year $m	Balance at 31 December $m	Highest balance during the year $m	Balance at 31 December $m
Assets				
Cash at bank	**620**	**242**	436	249
Derivatives	**3,409**	**2,466**	3,179	2,771
Loans and advances	**47,229**	**44,350**	55,026	43,910
Financial investments	**4,427**	**4,285**	4,073	4,073
Investments in subsidiaries	**97,770**	**97,770**	96,264	96,264
Total related party assets at 31 December	**153,455**	**149,113**	158,978	147,267
Liabilities				
Amounts owed to HSBC undertakings	**2,892**	**2,152**	12,046	2,892
Derivatives	**2,459**	**2,277**	1,169	1,169
Subordinated liabilities:				
– at amortised cost	**1,670**	**891**	1,743	1,670
– designated at fair value	**982**	**855**	3,186	981
Total related party liabilities at 31 December	**8,003**	**6,175**	18,144	6,712
Guarantees	**68,333**	**68,333**	53,180	52,023
Commitments	**16**	**–**	1,245	16

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Some employees of HSBC Holdings are members of the HSBC Bank (UK) Pension Scheme, which is sponsored by a separate Group company. HSBC Holdings incurs a charge for these employees equal to the contributions paid into the scheme on their behalf. Disclosure in relation to the scheme is made in Note 6.

42 Events after the balance sheet date

A fourth interim dividend for 2015 of $0.21 per ordinary share (a distribution of approximately $4,134m) was declared by the Directors after 31 December 2015.

These accounts were approved by the Board of Directors on 22 February 2016 and authorised for issue.

43 HSBC Holdings' subsidiaries, joint ventures and associates

In accordance with Section 409 of the Companies Act 2006 a list of HSBC Holdings plc's subsidiaries, joint ventures and associates, the country of incorporation and the effective percentage of equity owned at 31 December 2015 is disclosed below.

Subsidiaries	**Country**	**Security**	**Direct (%)**	**Total (%)**
0866101 B.C. Ltd	Canada	C$ Common shares		100
0866102 B.C. Ltd	Canada	C$ Common shares		100
ACN 087 652 113 Pty Limited	Australia	A$0.16667 Ordinary shares		100
Albouys Nominees Limited	England and Wales	£1.00 Ordinary shares		100
Allblack Investments Limited	Jersey	£0.0037 Ordinary and £0.0037 Preference shares		100
AMP Client HSBC Custody Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (A) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (E) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (F) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (H) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (M) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (P) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (R) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance December (W) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance June (A) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance June (D) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance June (E) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance March (B) Limited	Northern Ireland	£1.00 Ordinary shares		100
Assetfinance March (D) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance March (F) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance September (F) Limited	England and Wales	£1.00 Ordinary shares		100
Assetfinance September (G) Limited	England and Wales	£1.00 Ordinary shares		100
B&Q Financial Services Limited	England and Wales	£1.00 Ordinary shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
Banco Losango S.A Banco Multiplo	Brazil	BRL Ordinary shares		100
Banco Nominees (Guernsey) Limited	Guernsey	£1.00 Ordinary shares		100
Banco Nominees 2 (Guernsey) Limited	Guernsey	£1.00 Ordinary shares		100
Banco Nominees Limited	Bermuda	BMD2.40 Ordinary shares		100
Bank of Bermuda (Cayman) Limited	Cayman Islands	$1.00 Ordinary shares		100
Bank of Bermuda (Insurance Brokers) Limited	Bermuda	BMD1.00 Common shares		100
Beijing Miyun HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Beneficial Commercial Holding Corporation	United States	$100.00 Common shares		100
Beneficial Company LLC	United States	Limited liability company – no shares		100
Beneficial Consumer Discount Company	United States	$100.00 Common shares		100
Beneficial Direct, Inc.	United States	$100.00 Ordinary shares		100
Beneficial Financial I Inc.	United States	$1.00 Common shares		100
Beneficial Florida Inc.	United States	$100.00 Common shares		100
Beneficial Kentucky Inc.	United States	$100.00 Common shares		100
Beneficial Loan & Thrift Co.	United States	$25.00 Common shares		100
Beneficial Louisiana Inc.	United States	$100.00 Common shares		100
Beneficial Maine Inc.	United States	$100.00 Common shares		100
Beneficial Management Corporation of America	United States	$10.00 Common shares		100
Beneficial Massachusetts Inc.	United States	$100.00 Common shares		100
Beneficial Michigan Inc.	United States	$ Common shares		100
Beneficial Mortgage Corporation	United States	$100.00 Common shares		100
Beneficial New Hampshire Inc.	United States	$100.00 Common shares		100
Beneficial New York Inc.	United States	$100.00 Common shares		100
Beneficial Oregon Inc.	United States	$100.00 Common shares		100
Beneficial Rhode Island Inc.	United States	$100.00 Common shares		100
Beneficial South Dakota Inc.	United States	$ Common shares		100
Beneficial Tennessee Inc.	United States	$100.00 Common shares		100
Beneficial West Virginia, Inc.	United States	$1.00 Common shares		100
Beneficial Wyoming Inc.	United States	$100.00 Common shares		100
BerCay Holdings Limited	Cayman Islands	$20.00 Ordinary shares		100
Bermuda Asia Pacific Holdings Limited	Cook Islands	$1.00 Ordinary shares		100
Bermuda International Securities Limited	Bermuda	BMD1.00 Ordinary shares		100
Bermuda Trust (St Helier) Limited	Jersey	$1.00 Ordinary shares		100
Bermuda Trust Company Limited	Bermuda	BMD1.00 Common shares		100
Bermuda Trust Executors (Jersey) Limited	Jersey	£1.00 Shares		100
BFC Insurance Agency of Nevada	United States	$ Ordinary shares		100
Billingsgate City Securities Public Limited Company	England and Wales	£0.01 Ordinary shares		100
Billingsgate Nominees Limited	England and Wales	£1.00 Issued shares		100
Cabot Park Holdings, Inc.	United States	$1.00 Common shares		100
Cal-Pacific Services, Inc.	United States	$100.00 Ordinary shares		100
Canada Crescent Nominees (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Canada Square Nominees (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Canada Square Property Participations Limited	England and Wales	£1.00 Ordinary shares		100
Canada Water Nominees (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Capco/Cove, Inc.	United States	$1.00 Common shares		100
Capital Financial Services Inc.	United States	$1.00 Common shares		100
Card-Flo #1, Inc.	United States	$1.00 Common shares		100
Card-Flo #3, Inc.	United States	$0.01 Common shares		100
Castlewood Limited	Cook Islands	$ Ordinary shares		100
Cayman International Finance Limited	Cayman Islands	$1.20 Ordinary shares		100
Cayman Nominees Limited	Cayman Islands	KYD2.00 Ordinary shares		100
CBS/Holdings, Inc.	United States	$1.00 Common shares		100
CC&H Holdings LLC	United States	Limited liability company – no shares		100
CCF & Partners Asset Management Limited	England and Wales	£1.00 Ordinary shares		100
CCF Charterhouse GmbH	Germany	€1.00 Actions shares		100
CCF Charterhouse GmbH & Co Asset Leasing KG	Germany	Limited partnership – no shares		100
Charterhouse Administrators (D.T.) Limited	England and Wales	£1.00 Ordinary shares		100
Charterhouse Development Limited	England and Wales	£1.00 Ordinary shares		100
Charterhouse Finance Corporation Limited	Scotland	£1.00 Ordinary shares		100
Charterhouse Management Services Limited	England and Wales	£1.00 Ordinary shares		100
Charterhouse Pensions Limited	England and Wales	£1.00 Ordinary shares		100
Chemi and Cotex Industries Limited	Tanzania, United Rep. of	TZS1.00 Ordinary shares		100
Chongqing Dazu HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Chongqing Fengdu HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Chongqing Rongchang HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
CL Residential Limited	England and Wales	£1.00 Ordinary shares		100
Compass Nominees Limited	Bermuda	BMD1.00 Common shares		100
Compass Services Limited	Bermuda	$1.00 Ordinary shares		100
Cordico Management AG	Switzerland	CHF1,000.00 Ordinary shares		100
Corhold Limited	Virgin Islands, British	$1.00 Bearer shares		100
Credival Participacoes Administracao e Assessoria Ltda	Brazil	BRL0.01 Quota shares		100
Crewfleet Limited	England and Wales	£1.00 Ordinary shares		100
Dalian Pulandian HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
Decision One Mortgage Company, LLC	United States	Limited liability company – no shares		100
Dem 25	France	€1.00 Actions shares		100
Dem 5	France	€16.00 Actions shares		100
Dem 9	France	€8.50 Actions shares		100
Dempar 1	France	Actions shares no par value		100
Dempar 4	France	Actions shares no par value		100
Eagle Rock Holdings, Inc.	United States	$1.00 Common shares		100
Ellenville Holdings, Inc.	United States	$1.00 Common shares		100
Elysees GmbH	Germany	€ Ordinary shares		100
Elysées Immo Invest	France	€16.00 Actions shares		100
Emerging Growth Real Estate II GP Limited	Guernsey	£ Ordinary shares		100
EMTT Limited	England and Wales	£1.00 Ordinary shares		100
Endeavour Personal Finance Limited	England and Wales	£1.00 Ordinary shares		100
Equator Holdings Limited	England and Wales	$1.00 Ordinary shares		100
Eton Corporate Services Limited	Guernsey	$1.00 Ordinary shares		100
Eton Management Ltd	Virgin Islands, British	$1.00 Ordinary shares		100
Far East Leasing SA	Panama	$1,000.00 Ordinary shares		100
Fdm 5 SAS	France	€10.00 Actions shares		100
Fdm 6 SAS	France	€10.00 Actions shares		100
FEPC Leasing Ltd.	Cayman Islands	$0.001 Ordinary and $0.001 Preference shares		100
Finanpar 2	France	Actions shares no par value		100
Finanpar 7	France	Actions shares no par value		100
First Corporate Director Inc.	Virgin Islands, British	$1.00 Ordinary shares		100
First Direct Investments (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Flandres Contentieux S.A.	France	€0.16 Actions shares		100
Foncière Elysées	France	€77.00 Actions shares		100
Forward Trust Rail Services Limited	England and Wales	£0.1 Ordinary shares		100
F-Street Holdings, Inc.	United States	$1.00 Common shares		100
Fujian Yongan HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Fundo de Investimento Multimercado Credito Privado Investimento no Exterior Orion[1]	Brazil	BRL1.14267 Redeemable Preference shares		100
Fundo de Investimento Multimercado Credito Privado Sirius[1]	Brazil	BRL Ordinary shares		100
Fundo de Investimento Multimercado Investimento no Exterior Tellus[1]	Brazil	BRL1.07374 Redeemable Preference shares		100
G.M. Gilt-Edged Nominees Limited	England and Wales	£1.00 Ordinary shares		100
Gesellschaft fur Industrielle Beteiligungen und Finanzierung mbH	Germany	€1.00 Common shares		100
Giller Ltd.	United States	$1.00 Common shares		100
GPIF-I Equity Co., Ltd.[1]	Cayman Islands	KYD0.001 Liquidating Share Class shares		100
GPIF-I Finance Co., Ltd.[1]	Cayman Islands	$0.001 Liquidating Share Class shares		100
Griffin International Limited	England and Wales	£1.00 Ordinary shares		100
Grundstuecksgesellschaft Trinkausstrasse Kommanditgesellschaft	Germany	DEM1.00 Common shares		100
Grupo Financiero HSBC, S. A. de C. V.	Mexico	MXN2.00 Ordinary shares		100
Guangdong Enping HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
GWML Holdings, Inc.	United States	$1.00 Common shares		100
GZ Trust Corporation	Virgin Islands, British	$1.00 Ordinary shares		100
HBL Nominees Limited	England and Wales	£1.00 Ordinary shares		100
HDSAP GP Limited	Guernsey	£ Ordinary shares		100
Henderson Limited	Cook Islands	$1.00 Ordinary shares		100
HFC Bank Limited	England and Wales	£1.00 Ordinary and £1.00 Ordinary-A shares		100
HFC Commercial Realty, Inc.	United States	$100.00 Common shares		100
HFC Company LLC	United States	Limited liability company – no shares		100
HFC Leasing Inc.	United States	$100.00 Ordinary shares		100
High Meadow Management, Inc.	United States	$1.00 Common shares		100
Hilaga Investments Limited	England and Wales	£1.00 Issued shares		100
HITG Administration GmbH	Germany	€25,000.00 Ordinary shares		100
HITG, Inc.	United States	$1.00 Common shares		100
Honey Green Enterprises Ltd.	Virgin Islands, British	$1.00 Ordinary shares		100
Hongkong International Trade Finance (Holdings) Limited	England and Wales	£1.00 Ordinary 'A' and £1.00 Ordinary 'B' shares		100
Hongkong International Trade Finance (U.S.A.) Inc.	United States	$1.00 Common shares		100
Household Capital Markets LLC	United States	Limited liability company – no shares		100
Household Commercial Financial Services, Inc.	United States	$100.00 Ordinary shares		100
Household Finance Consumer Discount Company	United States	$100.00 Common shares		100
Household Finance Corporation II	United States	$100.00 Common shares		100
Household Finance Corporation III	United States	$100.00 Common shares		100
Household Finance Corporation of Alabama	United States	$100.00 Common shares		100
Household Finance Corporation of California	United States	$100.00 Common shares		100
Household Finance Corporation of Nevada	United States	$100.00 Common shares		100
Household Finance Corporation of West Virginia	United States	$100.00 Common shares		100
Household Finance Industrial Loan Company of Iowa	United States	$100.00 Common shares		100
Household Finance Realty Corporation of Nevada	United States	$100.00 Common shares		100
Household Finance Realty Corporation of New York	United States	$100.00 Ordinary shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
Household Financial Center Inc.	United States	$100.00 Common shares		100
Household Industrial Finance Company	United States	$25.00 Common shares		100
Household Industrial Loan Company of Kentucky	United States	$100.00 Common shares		100
Household Insurance Group Holding Company	United States	$1.00 Ordinary shares		100
Household International Europe Limited	England and Wales	£1 Ordinary, £1 Red Vot Preference & £1 Red Vot shares		100
Household Pooling Corporation	United States	$1.00 Common shares		100
Household Realty Corporation	United States	$100.00 Common shares		100
HPUT A Limited	England and Wales	£1.00 Ordinary shares		100
HPUT B Limited	England and Wales	£1.00 Ordinary shares		100
HRMG Nominees Limited	Guernsey	£1.00 Ordinary shares		100
HSBC (BGF) Investments Limited	England and Wales	£1.00 Ordinary shares		100
HSBC (Brasil) Administradora de Consorcio Ltda.	Brazil	BRL Ordinary shares		100
HSBC (General Partner) Limited	Jersey	£1.00 Ordinary shares	100	100
HSBC (Kuala Lumpur) Nominees Sdn Bhd	Malaysia	RM10.00 Ordinary shares		100
HSBC (Malaysia) Trustee Berhad	Malaysia	RM10.00 Ordinary shares		100
HSBC (Singapore) Nominees Pte Ltd	Singapore	SGD Ordinary shares		100
HSBC Administracao de Servicos para Fundos de Pensao (Brasil) Ltda	Brazil	BRL0.01 and BRL1.00 Quota shares		100
HSBC Administradora de Inversiones S.A.	Argentina	ARS Ordinary shares		100
HSBC AFS (USA) LLC	United States	Limited liability company – no shares		100
HSBC Agency (India) Private Limited	India	INR1,000,000.00 Ordinary shares		100
HSBC Alpha Funding (UK) Holdings	Cayman Islands	$0.001 Limited and Unlimited. Liability shares		100
HSBC Alternative Investments Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Amanah Malaysia Berhad	Malaysia	RM0.50 Ordinary shares		100
HSBC Americas Corporation (Delaware)	United States	$1.00 Common shares		100
HSBC Argentina Holdings S.A.	Argentina	ARS1.00 Ordinary shares		100
HSBC Asia Holdings (UK) Limited	England and Wales	$1.00 Ordinary shares		100
HSBC Asia Holdings B.V.	Netherlands	€1,000 A, B, C, D, E, F. G & H Preference shares		100
		€50.00 Ordinary shares		
HSBC Asia Pacific Holdings (UK) Limited	England and Wales	£1.00 Ordinary and $100.00 Red Preference shares		100
HSBC Asset Finance (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Asset Finance Holdings Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Asset Finance M.O.G. Holdings (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Asset Management (India) Private Limited	India	INR10.00 Equity shares		100
HSBC Assistencia Previdenciaria	Brazil	BRL0.01 Quota shares		100
HSBC Assurances Vie (France)	France	€287.50 Actions shares		100
HSBC Australia Holdings Pty Limited	Australia	A$ Ordinary and A$ Preference shares		100
HSBC Bank (Chile)	Chile	CLP Ordinary shares		100
HSBC Bank (China) Company Limited	China	CNY1.00 Registered Capital shares		100
HSBC Bank (General Partner) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Bank (RR) (Limited Liability Company)	Russian Federation	Russian limited liability company shares NPV		100
HSBC Bank (Singapore) Limited	Singapore	SGD Ordinary shares		100
HSBC Bank (Taiwan) Limited	Taiwan	TWD10.00 Ordinary shares		100
HSBC Bank (Uruguay) S.A.	Uruguay	UYU1.00 Ordinary shares		100
HSBC Bank (Vietnam) Ltd.	Vietnam	VND1.00 Ordinary shares		100
HSBC Bank A.S.	Turkey	TRL1.00 A and TRL1.00B Common shares		100
HSBC Bank Australia Limited	Australia	A$ Ordinary shares		100
HSBC Bank Bermuda Limited	Bermuda	BMD1.00 Common shares		100
HSBC Bank Brasil S.A. - Banco Multiplo	Brazil	BRL Ordinary shares		100
HSBC Bank Canada	Canada	C$ Common and Class 1 Preferred Shares		100
HSBC Bank Capital Funding (Sterling 1) LP[1]	Jersey	Limited partnership – no shares		100
HSBC Bank Capital Funding (Sterling 2) LP[1]	Jersey	Limited partnership – no shares		100
HSBC Bank International Limited	Jersey	£1.00 Ordinary shares		100
HSBC Bank Malaysia Berhad	Malaysia	RM0.50 Ordinary shares		100
HSBC Bank Middle East Limited	Jersey	$1 Ordinary and $1 Cum Red Preference shares		100
HSBC Bank Nominee (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Bank Pension Trust (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Bank plc	England and Wales	£1.00 Ordinary and Preference Ordinary shares $0.01 Third Dollar and Series 2 Preference shares	100	100
HSBC Bank Polska S.A.	Poland	PLN1.00 Ordinary and PLN1.00 Preference shares		100
HSBC Bank USA, National Association	United States	$100 Common and $0.01 Preference shares		100
HSBC Branch Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Brasil Holding S.A.	Brazil	BRL Ordinary shares		100
HSBC Brasil S.A. Banco de Investmento	Brazil	BRL Ordinary shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
HSBC Broking Forex (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Broking Futures (Asia) Limited	Hong Kong	HK$10.00 Ordinary and $2.00 Deferred shares		100
HSBC Broking Futures (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Broking Nominees (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Broking Securities (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Broking Securities (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Broking Services (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Canada Holdings (UK) Limited	England and Wales	$1.00 Ordinary shares		100
HSBC Capital (Canada) Inc.	Canada	C$ Common shares		100
HSBC Capital (USA), Inc.	United States	$1.00 Common shares		100
HSBC Capital Funding (Dollar 1) L.P.	Jersey	Limited partnership – no shares		100
HSBC Capital Funding (Euro 3) L.P.	Jersey	Limited partnership – no shares		100
HSBC Capital Funding (Sterling 1) L.P.	Jersey	Limited partnership – no shares		100
HSBC Capital Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Capital Services Inc.	Canada	C$ Common shares		100
HSBC Card Services Inc.	United States	$100.00 Common shares		100
HSBC Casa de Bolsa, S.A. de C.V., Grupo Financiero HSBC	Mexico	MXN Share Class 1 and Class 2 shares		100
HSBC Cayman Services Limited	Cayman Islands	$1.00 Ordinary shares		100
HSBC City Funding Holdings	England and Wales	£1.00 Ordinary shares		100
HSBC Client Holdings Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Client Share Offer Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Columbia Funding, LLC	United States	Limited liability company – no shares		100
HSBC Consumer Lending (USA) Inc.	United States	$1.00 Common shares		100
HSBC Corporate Advisory (Malaysia) Sdn Bhd	Malaysia	RM1.00 Ordinary shares		100
HSBC Corporate Finance (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Corporate Trustee Company (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Credit Center, Inc.	United States	$1,000.00 Common shares		100
HSBC Custody Nominees (Australia) Limited	Australia	AUD1.00 Ordinary shares		100
HSBC Custody Services (Guernsey) Limited	Guernsey	£1.00 Ordinary shares		100
HSBC Daisy Investments (Mauritius) Limited	Mauritius	$10.00 Ordinary shares		100
HSBC Diamond (USA) LP	United States	Limited partnership – no shares		100
HSBC Electronic Data Processing (Guangdong) Limited	China	HK$1.00 Registered Capital shares		100
HSBC Electronic Data Processing (Malaysia) Sdn Bhd	Malaysia	RM1.00 Ordinary shares		100
HSBC Electronic Data Processing (Philippines), Inc.	Philippines	PHP100.00 Ordinary and Red Preference shares		100
HSBC Electronic Data Processing India Private Limited	India	INR100.00 Equity shares		100
HSBC Electronic Data Processing Lanka (Private) Limited	Sri Lanka	LKR10.00 Ordinary shares		100
HSBC Electronic Data Service Delivery (Egypt) S.A.E.	Egypt	EGP1.00 Ordinary shares		100
HSBC Enterprise Investment Company (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Epargne Entreprise (France)	France	€16.00 Actions shares		100
HSBC Equator (UK) Limited	England and Wales	$1.00 Ordinary and £1.00 Non-Vot Def shares		100
HSBC Equipment Finance (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Equities (Luxembourg) S.a r.l.	Luxembourg	€1.00 Ordinary shares		100
HSBC Equity (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Europe B.V.	Netherlands	€50.00 Ordinary and €50.00 Preference A & C shares		100
HSBC European Clients Depositary Receipts Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Executor & Trustee Company (UK) Limited	England and Wales	£1.00 Ordinary (£0.40 paid) shares		100
HSBC Factoring (France)	France	€16.00 Actions shares		100
HSBC Finance (Brunei) Berhad	Brunei Darussalam	BND1,000.00 Ordinary shares		100
HSBC Finance (Netherlands)	England and Wales	£1.00 Ordinary shares and £1.00 Ordinary Red shares	100	100
HSBC Finance Corporation	United States	$0.01 Common shares		100
HSBC Finance Holdings (Australia) Pty Limited	Australia	A$1.00 Ordinary shares		100
HSBC Finance Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Finance Mortgages Inc.	Canada	C$ Common shares		100
HSBC Finance Transformation (UK) Limited		£1.00 Ordinary shares	100	100
HSBC Financial Services (Middle East) Limited	United Arab Emirates	AED1,000.00 Ordinary shares		100
HSBC Fondo 1, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fondo 3, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fondo 4, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fondo 5, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fondo 6, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fondo Global 1, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Series A shares		100
HSBC Fund Administration (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Funding (UK) Holdings	England and Wales	£1.00 Ordinary shares		100
HSBC Funds Nominee (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Germany Holdings GmbH	Germany	€1.00 Common shares		100
HSBC Gestao de Recursos Ltda	Brazil	BRL1.00 Quota shares		100
HSBC Global Asset Management (Bermuda) Limited	Bermuda	BMD1.00 Common and BMD1.00 Preference shares		100
HSBC Global Asset Management (Canada) Limited	Canada	C$ Common shares		100
HSBC Global Asset Management (Deutschland) GmbH	Germany	€1.00 Common shares		100
HSBC Global Asset Management (France)	France	€16.00 Actions shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
HSBC Global Asset Management (Hong Kong) Limited	Hong Kong	HK$100.00 Ordinary shares		100
HSBC Global Asset Management (International) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Global Asset Management (Japan) K. K.	Japan	JPY Ordinary shares		100
HSBC Global Asset Management (Mexico), S.A. de C.V., Grupo Financiero HSBC	Mexico	MXN1,000.00 Ordinary shares		100
HSBC Global Asset Management (Oesterreich) GmbH	Austria	€1.00 GmbH Anteil shares		100
HSBC Global Asset Management (Singapore) Limited	Singapore	SGD Ordinary shares		100
HSBC GLOBAL ASSET MANAGEMENT (Switzerland) AG	Switzerland	CHF10.00 Actions shares		100
HSBC Global Asset Management (Taiwan) Limited	Taiwan	TWD10.00 Ordinary shares		100
HSBC Global Asset Management (UK) Limited	England and Wales	£0.25 Ordinary shares		100
HSBC Global Asset Management (USA) Inc.	United States	$1.00 Common shares		100
HSBC Global Asset Management Holdings (Bahamas) Limited	Bahamas	$1.00 Ordinary shares		100
HSBC Global Asset Management Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Global Custody Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Global Custody Proprietary Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Global Services (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Global Services Limited	England and Wales	$1.00 Ordinary shares	100	100
HSBC Global Shared Services (India) Private Limited	India	INR10.00 Ordinary shares		100
HSBC Group Management Services Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Group Nominees UK Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Guyerzeller Trust Company	Cayman Islands	$1.00 Ordinary shares		100
HSBC Holdings B.V.	Netherlands	€453.78 Ordinary and Preference C, D, E, H & I shares		100
HSBC Home Equity Loan Corporation I	United States	$1.00 Common shares		100
HSBC Home Equity Loan Corporation II	United States	$100.00 Common shares		100
HSBC IM Pension Trust Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Infrastructure Limited	England and Wales	£1.00 Ordinary shares		100
HSBC INKA Investment-AG TGV	Germany	€1.00 Stückaktien shares		100
HSBC Institutional Trust Services (Asia) Limited	Hong Kong	HK$100.00 Ordinary shares		100
HSBC Institutional Trust Services (Bermuda) Limited	Bermuda	BMD1.00 Common shares		100
HSBC Institutional Trust Services (Ireland) Limited	Ireland	$1.00 Ordinary shares		100
HSBC Institutional Trust Services (Mauritius) Limited	Mauritius	$1.00 Ordinary shares		100
HSBC Institutional Trust Services (Singapore) Limited	Singapore	SGD Ordinary shares		100
HSBC Insurance (Asia) Limited	Hong Kong	HK$1,000.00 Ordinary shares		100
HSBC Insurance (Asia-Pacific) Holdings Limited	Hong Kong	HK$10.00 Ordinary & Cum Red Class A Preference shares HK$10.00 Cum Red Class B and C Preference shares HK$10.00 Cum Red Class D and E Preference shares HK$10.00 Cum Red Class F and G Preference shares		100
HSBC Insurance (Bermuda) Limited	Bermuda	$1.96345 Ordinary shares		100
HSBC Insurance (Singapore) Pte. Limited	Singapore	SGD Ordinary NPV shares		100
HSBC Insurance Agency (USA) Inc.	United States	$1.00 Common shares		100
HSBC Insurance Brokers (Philippines) Inc	Philippines	PHP1.00 Ordinary shares		100
HSBC Insurance Brokers (Taiwan) Limited	Taiwan	TWD10.00 Ordinary shares		100
HSBC Insurance Holdings Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Insurance Services Holdings Limited	England and Wales	£0.10 Ordinary shares		100
HSBC Intermediate Leasing (UK) Limited	England and Wales	£1,000.00 Issued shares		100
HSBC International Finance Corporation (Delaware)	United States	$1.000.00 Common shares		100
HSBC International Financial Services (UK) Limited	England and Wales	£1.00 'A', 'B', 'C' and £1.00 Non-Vot Red shares		100
HSBC International Holdings (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC International Nominees Limited	Virgin Islands, British	$1.00 Ordinary shares		100
HSBC International Trade Finance Limited	England and Wales	£1.00 Ordinary shares		100
HSBC International Trustee (BVI) Limited	Virgin Islands, British	$0.01 Class A Non-Voting shares $6,000.00 Non-Part Voting shares		100
HSBC International Trustee (Holdings) Pte. Limited[1]	Singapore	SGD Ordinary shares		100
HSBC International Trustee Limited	Virgin Islands, British	$1.00 Ordinary shares		100
HSBC Inversiones S.A.	Chile	CLP402.14 Ordinary shares		100
HSBC Inversiones y Servicios Financieros Limitada	Chile	CLP Ordinary shares		100
HSBC InvestDirect Financial Services (India) Limited	India	INR10.00 Ordinary shares		100
HSBC InvestDirect Securities (India) Private Limited	India	INR10.00 Ordinary shares		100
HSBC Investment Asia Holdings Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Investment Bank Holdings B.V.	Netherlands	€50.00 Ordinary shares		100
HSBC Investment Bank Holdings Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Investment Funds (Canada) Inc.	Canada	C$ Common and C$ Red Preference shares		100
HSBC Investment Funds (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Investment Funds (Luxembourg) SA	Luxembourg	£1.00 Ordinary shares		100
HSBC Investment Holdings (Guernsey) Limited	Guernsey	$1.00 Ordinary shares		100
HSBC Investment Services (Africa) (Pty) Limited	South Africa	ZAR1.00 Ordinary shares		100
HSBC Investments (Bahamas) Limited	Bahamas	BSD100.00 Ordinary shares		100
HSBC Investments (North America) Inc.	United States	$1.00 Common shares		100
HSBC Invoice Finance (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Issuer Services Common Depositary Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Issuer Services Depositary Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Jade Limited Partnership	United States	Limited partnership – no shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
HSBC Latin America B.V.	Netherlands	Ordinary €500 Cl-A €250 Cl-B €50 Cl-C shares		100
HSBC Latin America Holdings (UK) Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Leasing (Asia) Limited	Hong Kong	HK$100.00 Ordinary shares		100
HSBC Leasing (France)	France	€9.57 Actions shares		100
HSBC Life (International) Limited	Bermuda	HK$1.00 Ordinary shares		100
HSBC Life (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Lodge Funding (UK) Holdings	England and Wales	£1.00 Ordinary shares		100
HSBC Logan Holdings USA, LLC	United States	Limited liability company – no shares		100
HSBC London Holdings Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC LU Nominees Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Management (Guernsey) Limited	Guernsey	£1.00 Ordinary shares		100
HSBC Markets (NY) Inc.	United States	$4.00 Common shares		100
HSBC Markets (USA) Inc.	United States	$1.00 Common shares		100
HSBC Marking Name Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Middle East Holdings B.V.	Netherlands	€500 Ordinary & €1,000 Preference – Class A shares		100
HSBC Middle East Leasing Partnership	United Arab Emirates	Partnership - no shares		100
HSBC Mortgage Corporation (Canada)	Canada	C$ Common & Class A Preferred Shares		100
HSBC Mortgage Corporation (USA)	United States	$1.00 Common shares		100
HSBC Mortgage Services Inc.	United States	$100.00 Common shares		100
HSBC Nominees (Asing) Sdn Bhd	Malaysia	RM1.00 Ordinary shares		100
HSBC Nominees (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Nominees (New Zealand) Limited	New Zealand	NZD1.00 Ordinary shares		100
HSBC Nominees (Tempatan) Sdn Bhd	Malaysia	RM1.00 Ordinary shares		100
HSBC North America Holdings Inc.	United States	$0.01 Common & Preferred Series B shares		100
HSBC North America Inc.	United States	$1.00 Common shares		100
HSBC Odeme Sistemleri Bilgisayar Teknolojileri Basin Yayin Ve Musteri Hizmetleri	Turkey	TRL1.00 Ordinary shares		100
HSBC Overseas Holdings (UK) Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Overseas Investments (UK) Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Overseas Investments Corporation (New York)	United States	$0.01 Common shares		100
HSBC Overseas Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Participaciones (Argentina) S.A.	Argentina	ARS1.00 Ordinary shares		100
HSBC Participacoes e Investimentos Ltda	Brazil	BRL0.01 Quota shares		100
HSBC PB Corporate Services 1 Limited	Jersey	£1.00 Ordinary shares		100
HSBC PB Corporate Services 2 Limited	Jersey	£1.00 Ordinary shares		100
HSBC PB Services (Suisse) SA	Switzerland	CHF1,000.00 Ordinary shares		100
HSBC Pension Trust (Ireland) Limited	Ireland	€1.26974 Ordinary shares		100
HSBC Pensiones, S.A.	Mexico	MXN Ordinary shares		100
HSBC Pensions (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC PH Investments (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC PI Holdings (Mauritius) Limited	Mauritius	$1.00 Ordinary shares		100
HSBC Portfoy Yonetimi A.S.	Turkey	TRL1.00 A Common shares		100
HSBC Preferential LP (UK)	England and Wales	£1.00 Ordinary shares		100
HSBC Private Bank (C.I.) Limited	Guernsey	$1.00 Ordinary shares		100
HSBC Private Bank (Luxembourg) S.A.	Luxembourg	€1,000.00 Ordinary shares		100
HSBC Private Bank (Monaco) SA	Monaco	€155.00 Actions shares		100
HSBC Private Bank (Suisse) SA	Switzerland	CHF1,000.00 Ordinary shares		100
HSBC Private Bank (UK) Limited	England and Wales	£10.00 Issued shares		100
HSBC Private Bank International	United States	$1,000.00 Common shares		100
HSBC Private Banking Holdings (Suisse) SA	Switzerland	CHF1,000.00 Ordinary shares		100
HSBC Private Banking Nominee 1 (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Private Banking Nominee 2 (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Private Banking Nominee 3 (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Private Equity Advisors LLC	United States	Limited liability company – no shares		100
HSBC Private Equity Investments (UK) Limited	England and Wales	£1.00 Issued shares		100
HSBC Private Trustee (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Private Wealth Services (Canada) Inc.	Canada	C$ Common and C$ Preference shares		100
HSBC Procyon Fund Ltd	Cayman Islands	BRL2,618.38127 Red Preference shares		100
HSBC Professional Services (India) Private Limited	India	INR10.00 Ordinary shares		100
HSBC Property (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Property Funds (Holding) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Property Funds Investment Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Property Investments Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Provident Fund Trustee (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC QUEST Trustee (UK) Limited	England and Wales	£1.00 Ordinary shares	100	100
HSBC Rail (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Real Estate Leasing (France)	France	€15.24 Actions shares		100
HSBC Realty Credit Corporation (USA)	United States	$1.00 Common & $500 Preferred shares		100
HSBC REIM (France)	France	€92.00 Actions shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
HSBC Representative Office (Nigeria) Limited	Nigeria	Ordinary shares no par value		100
HSBC Republic Management Services (Guernsey) Limited	Guernsey	$0.10 Ordinary shares		100
HSBC Retail Services Inc.	United States	$100.00 Common shares		100
HSBC Retirement Benefits Trustee (UK) Limited	England and Wales	£1.00 Issued shares	100	100
HSBC Savings Bank (Philippines) Inc.	Philippines	PHP10.00 Ordinary shares		100
HSBC Securities (Asia) Limited	Hong Kong	HK$10.00 Ordinary and HK$10.00 Deferred shares		100
HSBC Securities (B) Berhad	Brunei Darussalam	BND1.00 Ordinary shares		100
HSBC Securities (Canada) Inc.	Canada	Common – C$ Class A & $ Class B shares		100
HSBC Securities (Japan) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Securities (Philippines) Inc.	Philippines	PHP10.00 Nominal shares		100
HSBC Securities (Singapore) Pte Limited	Singapore	SGD Ordinary shares		100
HSBC Securities (South Africa) (Pty) Limited	South Africa	ZAR1.00 Ordinary shares		100
HSBC Securities (Taiwan) Corporation Limited	Taiwan	TWD10.00 Ordinary shares		100
HSBC Securities (USA) Inc.	United States	$0.05 Common shares		100
HSBC Securities and Capital Markets (India) Private Limited	India	INR100.00 Ordinary and INR100.00 Red Preference shares		100
HSBC Securities Asia International Nominees Limited	Virgin Islands, British	$1.00 Ordinary shares		100
HSBC Securities Asia Nominees Limited	Hong Kong	HK$1.00 Ordinary shares		100
HSBC Securities Brokers (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Securities Investments (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Securities Services (Bermuda) Limited	Bermuda	BMD1.00 Common shares		100
HSBC Securities Services (Guernsey) Limited	Guernsey	£1.00 Ordinary Shares		100
HSBC Securities Services (Ireland) Limited	Ireland	€1.25 and $1.00 Ordinary shares		100
HSBC Securities Services (Luxembourg) S.A.	Luxembourg	$100.00 Ordinary shares		100
HSBC Securities Services (USA) Inc.	United States	$0.001 Common shares		100
HSBC Securities Services Holding Limited	Virgin Islands, British	$1.00 Ordinary shares		100
HSBC Securities Services Holdings (Ireland) Limited	Ireland	€1.25 and $1.00 Ordinary shares		100
HSBC Seguros de Retiro (Argentina) S.A.	Argentina	ARS1.00 Ordinary A and Ordinary B shares		100
HSBC Seguros de Vida (Argentina) S.A.	Argentina	ARS1.00 Ordinary shares		100
HSBC Seguros, S.A de C.V., Grupo Financiero HSBC	Mexico	MXN Class I and Class II shares		100
HSBC Service Delivery (Polska) Sp. z o.o.	Poland	PLN500.00 Ordinary shares		100
HSBC Services (France)	France	€18.50 Actions shares		100
HSBC Services Japan Limited	Bahamas	$1.00 Ordinary shares		100
HSBC Servicios Financieros, S.A. de C.V	Mexico	MXN1.00 Share Class 1 and 2 shares		100
HSBC Servicios, S.A. DE C.V., Grupo Financiero HSBC	Mexico	MXN500 Series 'A' and MXN Ordinary B shares		100
HSBC Servicos e Participacoes Ltda	Brazil	BRL0.01 Ordinary shares		100
HSBC SFH (France)	France	€15.00 Actions shares		100
HSBC Software Development (Brasil) - Prestacao de Servicos Tecnologicos Ltda	Brazil	BRL1.00 Quota shares		100
HSBC Software Development (Canada) Inc	Canada	CAD1.00 Common shares		100
HSBC Software Development (Guangdong) Limited	China	$1.00 Registered Capital shares		100
HSBC Software Development (India) Private Limited	India	INR10.00 Equity shares		100
HSBC Software Development (Malaysia) Sdn Bhd	Malaysia	RM1.00 Ordinary shares		100
HSBC South Point Investments (Barbados) LLP	England and Wales	Limited liability partnership – no shares		100
HSBC Specialist Investments Limited	England and Wales	£1.00 Ordinary and £1.00 Red Preference shares		100
HSBC Stockbroker Services (Client Assets) Nominees Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Stockbrokers Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Structured Funds (Asia) Limited	Hong Kong	HK$10.00 Ordinary shares		100
HSBC Taxpayer Financial Services Inc.	United States	$100.00 Common shares		100
HSBC Technology & Services (China) Limited	China	$1.00 Registered Capital shares		100
HSBC Technology & Services (USA) Inc.	United States	$1.00 Common shares		100
HSBC TFS I 2005 LLC	United States	Limited liability company – no shares		100
HSBC TKM Limited	England and Wales	£0.01 Ordinary shares		100
HSBC Trust Company (BVI) Limited	Virgin Islands, British	$1.00 Ordinary-A shares		100
HSBC Trust Company (Canada)	Canada	C$ Common shares		100
HSBC Trust Company (Delaware), National Association	United States	$100.00 Ordinary shares		100
HSBC Trust Company (UK) Limited	England and Wales	£5.00 Ordinary shares		100
HSBC Trust Company AG	Switzerland	CHF1,000.00 Ordinary shares		100
HSBC Trustee (C.I.) Limited	Jersey	£1.00 Ordinary shares		100
HSBC Trustee (Cayman) Limited	Cayman Islands	$1,000.00 Ordinary shares		100
HSBC Trustee (Cook Islands) Limited	Cook Islands	NZD Ordinary shares		100
HSBC Trustee (Guernsey) Limited	Guernsey	$1.00 Ordinary shares		100
HSBC Trustee (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary (HK$5.00 pt pd) shares		100
HSBC Trustee (Mauritius) Limited	Mauritius	$1.00 Ordinary shares		100
HSBC Trustee (Singapore) Limited	Singapore	SGD Ordinary shares		100
HSBC Tulip Funding (UK)	England and Wales	£1.00 Ordinary shares		100
HSBC UK RFB Limited[1]	England and Wales	£1.00 Ordinary shares	100	100
HSBC USA Inc.	United States	$5.00 Common shares		100
HSBC Valores S.A. Sociedad de Bolsa	Argentina	ARS1.00 Ordinary shares		100
HSBC Vida e Previdencia (Brasil) SA	Brazil	BRL Ordinary shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
HSBC Violet Investments (Mauritius) Limited	Mauritius	$10.00 Ordinary shares		100
HSBC Wealth Advisory Israel Ltd	Israel	ILS1.00 Ordinary shares		100
HSBC Wealth Client Nominee Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Workplace Retirement Services Fund Platform Nominee Company Limited	England and Wales	£1.00 Ordinary shares		100
HSBC Yatirim Menkul Degerler A.S.	Turkey	TRL1.00 Ordinary-A shares		100
HSBC-D1, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN2.00 Ordinary shares		100
HSBC-D10, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.00 Ordinary-A shares		100
HSBC-D2, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.00 Ordinary shares		100
HSBC-D7, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN10.00 Ordinary shares		100
HSBC-D9, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.40 Ordinary shares		100
HSBC-DE, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.098 Ordinary shares		100
HSBC-DG, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN10.00 Ordinary shares		100
HSBC-DH, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.00 Ordinary A shares		100
HSBC-DL, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.00 Ordinary A shares		100
HSBC-E2, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Ordinary A shares		100
HSBC-E3, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda[1]	Mexico	MXN1.00 Ordinary A shares		100
HSBC-FF, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Ordinary shares		100
HSBC-V2, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.00 Ordinary shares		100
HSBC-V3, S.A. de C.V., Sociedad de Inversion de Renta Variable[1]	Mexico	MXN1.66 Ordinary shares		100
HSI Asset Securitization Corporation	United States	$0.01 Common shares		100
HSIL Investments Limited	England and Wales	£1.00 Ordinary shares		100
Hubei Macheng HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Hubei Suizhou Cengdu HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Hubei Tianmen HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Hunan Pingjiang HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Inmobiliaria Bisa, S.A. de C.V.	Mexico	MXN1.00 Serie 'A' and 'B' shares		100
Inmobiliaria Grufin, S.A. de C.V.	Mexico	MXN1.00 Serie 'A' and 'B' shares		100
Inmobiliaria Guatusi, S.A. de C.V.	Mexico	MXN10.00 Class I and II shares		100
IRERE French Offices 1	France	€0.10 Ordinary shares		100
IRERE French Offices 2	France	€0.10 Ordinary shares		100
IRERE French Offices 4	France	€0.10 Ordinary shares		100
IRERE French Offices Holdings	France	€1.00 Ordinary shares		100
IRERE French Offices Holdings 3	France	€1.00 Ordinary shares		100
IRERE Property Investments (French Offices) Sarl	Luxembourg	€25.00 Ordinary shares		100
James Capel & Co. Limited	England and Wales	£1.00 Issued shares		100
James Capel (Channel Islands) Nominees Limited	Jersey	£1.00 Ordinary shares		100
James Capel (Custodian) Nominees Limited	United Kingdom	£1.00 Issued shares		100
James Capel (Nominees) Limited	England and Wales	£1.00 Ordinary shares		100
James Capel (Second Nominees) Limited	England and Wales	£1.00 Issued shares		100
James Capel (Taiwan) Nominees Limited	England and Wales	£1.00 Issued shares		100
James Capel (Third Nominees) Limited	England and Wales	£1.00 Issued shares		100
John Lewis Financial Services Limited	England and Wales	£1.00 Ordinary shares		100
Katonah Close Corp.	United States	$1.00 Common shares		100
Keyser Ullmann Limited	England and Wales	£1.00 Ordinary shares		100
Kings Meadow Nominees Limited	England and Wales	£1.00 Ordinary shares		100
Legend Estates Limited	England and Wales	£1.00 Ordinary shares		100
Lemasco Nominees Limited	Jersey	£1.00 Ordinary shares		100
Lion Corporate Services Limited	Hong Kong	HK$10.00 Ordinary shares		100
Lion International Corporate Services Limited	Virgin Islands, British	$1.00 Ordinary shares		100
Lion International Management Limited	Virgin Islands, British	$1.00 Ordinary shares		100
Lion Management (Hong Kong) Limited	Hong Kong	HK$10.00 Ordinary shares		100
Lyndholme Limited	Hong Kong	HK$10.00 Ordinary shares		100
MAGIM Client HSBC GIS Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
Marks and Spencer Financial Services plc	England and Wales	£1.00 Ordinary shares		100
Marks and Spencer Retail Financial Services Holdings Limited	England and Wales	£1.00 Ordinary shares		100
Marks and Spencer Savings and Investments Limited	England and Wales	£1.00 Ordinary shares		100
Marks and Spencer Unit Trust Management Limited	England and Wales	£1.00 Ordinary shares		100
Maxima S.A. AFJP	Argentina	ARS0.25 Ordinary shares		100
Mercantile Company Limited	England and Wales	£1.00 Ordinary and £1.00 Deferred shares		100
Midcorp Limited	England and Wales	£1.00 Ordinary and £1.00 Non-Cum Red Preference shares	100	100
Midland Australia Pty Limited	Australia	AUD1.00 Ordinary shares		100
Midland Bank (Branch Nominees) Limited	England and Wales	£1.00 Ordinary shares		100
Midland Nominees Limited	England and Wales	£1.00 Ordinary shares		100
MIL (Cayman) Limited	Cayman Islands	$1.00 Ordinary shares		100
MIL (Jersey) Limited	Jersey	£1.00 Ordinary shares		100
MIL Properties (Cook Islands) Limited	Cook Islands	NZD1.00 Ordinary shares		100
MM Mooring #2 Corp.	United States	$1.00 Common shares		100
Mortgage One Corporation	United States	$100.00 Common shares		100
Mortgage Two Corporation	United States	$100.00 Common shares		100
MW Gestion SA	Argentina	ARS12,000.00 Ordinary shares		100
Neil Corporation	United States	$1.00 Common shares		100
Neuilly Valeurs	France	€15.24 Parts shares		100
Oakwood Holdings, Inc.	United States	$1.00 Common shares		100
One Main Street, Inc.	United States	$1.00 Common shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
Promocion en Bienes Raices, S.A. de C.V.	Mexico	MXN1 Class 'I' and 'II' and Preference shares		100
Prudential Client HSBC GIS Nominee (UK) Limited	England and Wales	£1.00 Ordinary shares		100
PTC New LLC	United States	Limited liability company – no shares		100
R/CLIP Corp.	United States	$100.00 Common shares		100
Real Estate Collateral Management Company	United States	$10.00 Ordinary shares		100
Republic Nominees Limited	Guernsey	£1.00 Ordinary shares		100
Republic Overseas Capital Corporation	United States	$10.00 Common shares		100
S.A.P.C. – Ufipro Recouvrement	France	€46.00 Parts shares		100
Saf Baiyun	France	€10.00 Actions shares		100
Saf Chang Jiang	France	€10.00 Actions shares		100
Saf Chang Jiang Ba	France	€10.00 Actions shares		100
Saf Chang Jiang Er	France	€10.00 Actions shares		100
Saf Chang Jiang Jiu	France	€10.00 Actions shares		100
Saf Chang Jiang Liu	France	€10.00 Actions shares		100
Saf Chang Jiang Qi	France	€10.00 Actions shares		100
Saf Chang Jiang San	France	€10.00 Actions shares		100
Saf Chang Jiang Shi	France	€10.00 Actions shares		100
Saf Chang Jiang Shi Liu	France	€1.00 Actions shares		100
Saf Chang Jiang Shi Wu	France	€1.00 Actions shares		100
Saf Chang Jiang Shi'Er	France	€10.00 Actions shares		100
Saf Chang Jiang Shiyi	France	€10.00 Actions shares		100
Saf Chang Jiang Wu	France	€10.00 Actions shares		100
Saf Chang Jiang Yi	France	€10.00 Actions shares		100
Saf Guangzhou	France	€10.00 Actions shares		100
Saf Palissandre	France	€10.00 Actions shares		100
Saf Zhu Jiang	France	€10.00 Actions shares		100
Saf Zhu Jiang Ba	France	€10.00 Actions shares		100
Saf Zhu Jiang Er	France	€10.00 Actions shares		100
Saf Zhu Jiang Jiu	France	€10.00 Actions shares		100
Saf Zhu Jiang Liu	France	€10.00 Actions shares		100
Saf Zhu Jiang Qi	France	€10.00 Actions shares		100
Saf Zhu Jiang San	France	€10.00 Actions shares		100
Saf Zhu Jiang Shi	France	€10.00 Actions shares		100
Saf Zhu Jiang Shi Ba	France	€1.00 Actions shares		100
Saf Zhu Jiang Shi Er	France	€1.00 Actions shares		100
Saf Zhu Jiang Shi Jiu	France	€1.00 Actions shares		100
Saf Zhu Jiang Shi Liu	France	€1.00 Actions shares		100
Saf Zhu Jiang Shi Qi	France	€1.00 Actions shares		100
Saf Zhu Jiang Shi Wu	France	€1.00 Actions shares		100
Saf Zhu Jiang Shiyi	France	€10.00 Actions shares		100
Saf Zhu Jiang Wu	France	€10.00 Actions shares		100
Saf Zhu Jiang Yi	France	€10.00 Actions shares		100
Samada Limited	Jersey	£1.00 Ordinary shares		100
Samuel Montagu & Co. Limited	England and Wales	£1.00 Ordinary shares		100
SCI Hervet Mathurins	France	€15.24 Parts shares		100
SCI HSBC Assurances Immo	France	€152.44 Parts shares		100
Second Corporate Director Inc.	Virgin Islands, British	$1.00 Ordinary shares		100
Secondary Club Deal I GP Limited	Guernsey	£ Ordinary shares		100
Secondary Club Deal II GP Limited	Guernsey	$ Ordinary shares		100
SFSS Nominees (Pty) Limited	South Africa	ZAR1.00 Ordinary shares		100
Shandong Rongcheng HSBC Rural Bank Company Limited	China	CNY1.00 Registered Capital shares		100
Shenfield Nominees Limited	England and Wales	£1.00 Ordinary shares		100
Shuttle Developments Limited	England and Wales	£1.00 Ordinary shares		100
Sico Limited	Virgin Islands, British	$1.00 Ordinary shares		100
Silliman Associates Limited Partnership	United States	Limited partnership – no shares		100
Silliman Corporation	United States	$1.00 Common shares		100
SNC Dorique	Reunion	€1.00 Parts shares		100
SNC Kerouan	France	€1.00 Parts shares		100
SNC Les Mercuriales	France	€1.00 Parts shares		100
SNC Makala	France	€1.00 Parts shares		100
SNC Nuku-Hiva Bail	France	€0.01 Parts shares		100
SNCB/M6-2008 A	France	€1.00 Actions shares		100
SNCB/M6-2007 A	France	€10.00 Actions shares		100
SNCB/M6-2007 B	France	€10.00 Actions shares		100
Société Financière et Mobilière	France	€16.00 Actions shares		100
Société Française et Suisse	France	€1.00 Actions shares		100
Societe Immobiliere Atlas S.A.	Switzerland	CHF1,000.00 Ordinary shares		100
Société Immobilière Malesherbes-Anjou	France	€70.00 Actions shares		100
Solandra 3	France	€100.00 Actions shares		100
Somers & Co	United States	Partnership – no shares		100
Somers (U.K.) Limited	England and Wales	£1.00 Ordinary shares		100
Somers Dublin Limited	Ireland	€1.25 Ordinary shares		100
Somers Nominees (Far East) Limited	Bermuda	$1.00 Common shares		100
Sopingest	France	Ordinary shares no par value		100
South Yorkshire Light Rail Limited	England and Wales	£0.10 Ordinary shares		100
SPE 1 2005 Manager Inc.	United States	$1.00 Common shares		100

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
St Cross Trustees Limited	England and Wales	£1.00 Ordinary shares		100
Sterling Credit Limited	England and Wales	£1.00 Ordinary shares		100
Sun Hung Kai Development (Lujiazui III) Limited	China	$1.00 Registered Capital shares		100
Swan National Leasing (Commercials) Limited	England and Wales	£1 Ordinary		100
Swan National Limited	England and Wales	£1 Ordinary		100
Tayside Holdings Limited	Bahamas	$1.00 Ordinary shares		100
Tempus Management AG	Switzerland	CHF100.00 Ordinary shares		100
Thasosfin	France	€15.00 Actions shares		100
The Hongkong and Shanghai Banking Corporation Limited	Hong Kong	HK$2.50 Ordinary and $1 Cumulative Redeemable Preference shares, $1 Cumulative and $1 Non-cumulative Irredeemable Preference shares		100
The Venture Catalysts Limited	England and Wales	£1.00 Ordinary shares		100
Third Corporate Director Inc.	Virgin Islands, British	$1.00 Ordinary shares		100
Timberlink Settlement Services (USA) Inc.	United States	$1.00 Common shares		100
TKM International Limited	England and Wales	£1.00 Ordinary shares		100
Tooley Street View Limited	United Kingdom	£1.00 Ordinary shares	100	100
Tower Investment Management	Cayman Islands	$1,000 Ordinary shares		100
TPBC Acquisition Corp.	United States	$1.00 Common shares		100
Trinkaus Canada 1 GP LTD	Canada	C$100 Common shares		100
Tropical Nominees Limited	Cayman Islands	KYD1.00 Ordinary shares		100
Trumball Management, Inc.	United States	$1.00 Common shares		100
Turnsonic (Nominees) Limited	England and Wales	£1.00 Ordinary shares		100
Vadep Holding AG	Switzerland	CHF1,000.00 Ordinary shares		100
Valeurs Mobilières Elysées	France	€16.00 Actions shares		100
Vintage I Secondary GP Limited	Guernsey	£ Ordinary shares		100
Vintage III Special Situations GP Limited	Guernsey	$ Ordinary shares		100
Wardley Limited	Hong Kong	HK$200.00 Ordinary shares		100
Wayfoong Credit Limited	Hong Kong	HK$100.00 Ordinary shares		100
Wayfoong Finance Limited	Hong Kong	HK$1,000.00 Ordinary shares		100
Wayfoong Nominees Limited	Hong Kong	HK$1.00 Ordinary shares		100
Westminster House, LLC	United States	Limited liability company – no shares		100
Woodex Limited	Bermuda	BMD1.00 Common shares		100
XDP, Inc.	United States	$1.00 Common shares		100
HSBC Bank Argentina S.A.	Argentina	ARS1.00 Ordinary A and Ordinary B shares		99.99
HSBC France	France	€5.00 Actions shares		99.99
HSBC Mexico, S.A., Institucion de Banca Multiple, Grupo Financiero HSBC	Mexico	MXN2.00 Ordinary shares		99.99
HSBC Empresa de Capitalizacao (Brasil) S.A.	Brazil	BRL Ordinary shares		99.97
HSBC Corretora de Titulos e Valores Mobiliarios S.A.	Brazil	BRL Ordinary shares		99.96
HSBC Inmobiliaria (Mexico), S.A. de C.V.	Mexico	MXN1,000.00 Series A and Series B shares		99.96
HSBC Seguros (Brasil) S.A.	Brazil	BRL Ordinary and BRL Preference shares		99.77
HSBC Corretora de Seguros (Brasil) S.A.	Brazil	BRL Ordinary shares		99.75
HSBC Financial Services (Lebanon) s.a.l.	Lebanon	LBP1,000,000.00 Ordinary B shares		99.65
HSBC InvestDirect (India) Limited	India	INR10.00 Ordinary shares		99.54
PT Bank Ekonomi Raharja	Indonesia	IRD100.00 and IRD1,000.00 Ordinary shares		98.81
SAS Orona	New Caledonia	Franc Pacific 10,000 Actions		94.93
HSBC Bank Egypt S.A.E.	Egypt	EGP84.00 Ordinary shares		94.53
SAS Bosquet -Audrain	New Caledonia	Franc Pacific 10,000 Actions		94.90
HSBC Securities (Egypt) S.A.E.	Egypt	EGP100.00 Ordinary shares		94.64
SAS Cyatheas Pasteur	France	€10.00 Action shares		94.00
HSBC Fund Services (Korea) Limited	Korea, Republic of	KRW5,000.00 Ordinary shares		92.96
HSBC Transaction Services GmbH	Germany	€1.00 GmbH Anteil shares		90.20
HSBC Gestion (Monaco) S.A.	Monaco	Ordinary shares		86.59
Beau Soleil Limited Partnership	Hong Kong	Limited partnership – no shares		85.00
PT HSBC Securities Indonesia	Indonesia	IDR1,000,000.00 Common shares		85.00
HSBC Trinkaus & Burkhardt (International) S.A.	Luxembourg	€1.00 Common shares		80.65
HSBC Trinkaus & Burkhardt AG	Germany	Stückaktien shares no par value		80.65
HSBC Trinkaus & Burkhardt Gesellschaft fur Bankbeteiligungen mbH	Germany	DEM1.00 Common shares		80.65
HSBC Trinkaus Consult GmbH	Germany	DEM1.00 Common shares		80.65
HSBC Trinkaus Europa Immobilien-Fonds Nr. 5 GmbH	Germany	Ordinary shares no par value		80.65
HSBC Trinkaus Family Office GmbH	Germany	€1.00 GmbH Anteil shares		80.65
HSBC Trinkaus Immobilien Beteiligungs KG	Germany	€1.00 Ordinary shares		80.65
HSBC Trinkaus Real Estate GmbH	Germany	DEM1.00 Common shares		80.65
Trinkaus Australien Immobilien Fonds Nr. 1 Brisbane GmbH & Co. KG	Germany	€1.00 Ordinary shares		80.65
Trinkaus Australien Immobilien Fonds Nr. 1 Treuhand-GmbH	Germany	€1.00 GmbH Anteil shares		80.65
Trinkaus Canada Immobilien-Fonds Nr. 1 Verwaltungs-GmbH	Germany	€1.00 Ordinary shares		80.65
Trinkaus Europa Immobilien-Fonds Nr.3 Objekt Utrecht Verwaltungs-GmbH	Germany	DEM1.00 Ordinary shares		80.65
Trinkaus Immobilien-Fonds Geschaeftsfuehrungs-GmbH	Germany	€1.00 GmbH Anteil shares		80.65
Trinkaus Immobilien-Fonds Verwaltungs-GmbH	Germany	€1.00 GmbH-Anteil shares		80.65
Trinkaus Private Equity Management GmbH	Germany	€1.00 Ordinary shares		80.65
Trinkaus Private Equity Verwaltungs GmbH	Germany	€1.00 GmbH Anteil shares		80.65

Subsidiaries *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
INKA Internationale Kapitalanlagegesellschaft mbH	Germany	€1.00 Common shares		80.65
GPIF Co-Investment, LLC	United States	Limited liability company – no shares		80.00
HSBC Middle East Finance Company Limited	United Arab Emirates	AED1.00 Ordinary shares		80.00
HSBC Bank (Mauritius) Limited	Mauritius	$ Ordinary No Par Value shares		72.96
HSBC Bank Malta p.l.c.	Malta	€0.30 Ordinary shares		70.03
HSBC Global Asset Management (Malta) Limited	Malta	€2.32937 Ordinary shares		70.03
HSBC Insurance Management Services (Europe) Limited	Malta	€1.00 Ordinary A and Ordinary B shares		70.03
HSBC Life Assurance (Malta) Limited	Malta	€1.16469 Ordinary shares		70.03
HSBC Bank Armenia cjsc	Armenia	AMD30,250.00 Ordinary shares		70.00
Mexanicana de Fomento S.A. de C.V.	Mexico	MXN1.00 Series A and B shares		69.80
HSBC Saudi Arabia Limited	Saudi Arabia	SAR50,000.00 Ordinary shares		69.40
Fulcher Enterprises Company Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng (Nominee) Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Bank (China) Limited	China	CNY1.00 Registered Capital shares		62.14
Hang Seng Bank (Trustee) Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng Bank Limited	Hong Kong	HK$5.00 Ordinary shares		62.14
Hang Seng Bullion Company Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Credit Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Data Services Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng Finance Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Financial Information Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng Futures Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Indexes Company Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng Insurance Company Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Hang Seng Investment Management Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Investment Services Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Life Limited	Hong Kong	HK$1,000.00 Ordinary shares		62.14
Hang Seng Real Estate Management Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Securities Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Hang Seng Security Management Limited	Hong Kong	HK$1.00 Ordinary shares		62.14
Haseba Investment Company Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
High Time Investments Limited	Hong Kong	HK$1.00 Ordinary shares		62.14
HSI International Limited	Hong Kong	HK$1.00 Ordinary shares		62.14
Imenson Limited	Hong Kong	HK$10.00 Ordinary shares		62.14
Yan Nin Development Company Limited	Hong Kong	HK$100.00 Ordinary shares		62.14
Fundacion HSBC, A.C.[1]	Mexico	Parts shares		60.00
SNC Les Oliviers D'Antibes	France	€15.00 Parts shares		60.00
HSBC Land Title Agency (USA) LLC	United States	Limited liability company – no shares		55.00
The Malta Development Fund Limited	Malta	€2.32937 Ordinary shares		53.07
HSBC Bank Oman S.A.O.G.	Oman	OMR0.10 Ordinary shares		51.00
Beneficial Homeowner Service Corporation	United States	$100.00 Common shares		50.00
Electronic Payment Services Company (Hong Kong) Limited	Hong Kong	HK$1.00 Ordinary shares		50.00
ProServe Bermuda Limited	Bermuda	BMD1.00 Common shares		50.00
REDUS Halifax Landing, LLC	United States	Limited liability company – no shares		50.00
Urban Solutions (Cardiff) Limited	England and Wales	£1 Ordinary shares		50.00
Vaultex Isle of Man Insurance Limited	Isle of Man	£1 Ordinary shares		50.00
Joint ventures				
HCM Holdings Limited	England and Wales	£0.01 Ordinary shares		51.00
GSI Retail Property Holdings Limited	Guernsey	€1.00 Ordinary shares		50.00
HSBC Life Insurance Company Limited	China	CNY1.00 Ordinary shares		50.00
HSBC Kingdom Africa Investments (Cayman) Limited	Cayman Islands	$1.00 Ordinary shares		50.00
Urban Solutions Cardiff Holdings Limited	England and Wales	£1.00 Ordinary B shares		50.00
Urban Solutions Greenwich Holdings Limited	England and Wales	£1.00 Ordinary B shares		50.00
Urban Solutions (Greenwich) Limited	England and Wales	£1.00 Ordinary shares		50.00
Vaultex UK Limited	England and Wales	£1.00 Ordinary shares		50.00
HSBC Jintrust Fund Management Company Limited	China	CNY1.00 Registered Capital shares		49.00
Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited	India	INR10.00 Ordinary shares		26.00
Associates				
HSBC Amanah Takaful (Malaysia) Berhad	Malaysia	RM50.00 Ordinary shares		49.00
HSBC Middle East Securities L.L.C	United Arab Emirates	AED1,000.00 Ordinary shares		49.00
Spire Topco Hotels Limited	England and Wales	£0.01 A and £0.01 B shares		46.79
SABB Takaful	Saudi Arabia	SAR10.00 Ordinary shares		45.50
AREIT Management Ltd	Cayman Islands	$1.00 Ordinary A shares		41.90
Rewards Management Middle East FZ LLC	United Arab Emirates	AED1,000.00 Ordinary shares		40.00
The Saudi British Bank	Saudi Arabia	SAR10.00 Ordinary shares		40.00
EPS Company (Hong Kong) Limited	Hong Kong	HK$250,000 Ordinary shares		38.66
Jeppe Star Limited	Virgin Islands, British	£1.00 Ordinary shares		34.00
Novo Star Limited	Virgin Islands, British	$100.00 Ordinary shares		34.00
Chemi & Cotex (Rwanda) Limited	Rwanda	RWF1,000 Ordinary shares		34.00
Chemi & Cotex Kenya Limited	Kenya	KES100 Ordinary shares		33.33
MENA Infrastructure Fund (GP) Ltd	United Arab Emirates	$1.00 Ordinary shares		33.33
SCI Karuvefa	Guadeloupe	€1.00 Parts shares		33.33

Associates *(continued)*	**Country**	**Security**	**Direct (%)**	**Total (%)**
CFAC Payment Scheme Limited	England and Wales	£1.00 Preference shares		33.33
Trinkaus Europa Immobilien-Fonds Nr. 7 Frankfurt Mertonviertel KG	Germany	Limited partnership with no shares		33.10
GZHS Research Co Ltd	China	RMB Common stock		33.00
Hampton Owners LLC	United States	Limited liability company – no shares		25.82
Trinkaus Europa Immobilien-Fonds Nr. 4 Objekte Basel Nauenstrasse KG	Germany	Limited partnership with no shares		25.11
Ashwood Energy Limited	Virgin Islands, British	US$1.00 Ordinary shares		25.00
House Network Sdn Bhd	Malaysia	RM1.00 Ordinary shares		25.00
Rosimian Limited	England and Wales	£0.01 B shares		25.00
The London Gold Market Fixing Limited	England and Wales	Limited by guarantee – no share capital		25.00
GIE GNIFI	New Caledonia	No shares		25.00
sino AG	Germany	€1.00 Common stock		25.00
Icon Brickell LLC	United States	Limited liability company – no shares		24.90
Business Growth Fund plc	England and Wales	£1.00 Ordinary shares		23.98
NAS Holding Limited	Virgin Islands, British	Ordinary share of no par value		22.13
NAS United Healthcare Services LLC	Virgin Islands, British	Ordinary share of no par value		22.13
Bank of Communications Co., Ltd	China	CNY1.00 H shares		19.03

1 *Management has determined that these subsidiaries are excluded from consolidation in the Group accounts as these entities do not meet the definition of subsidiaries in accordance with IFRSs. HSBC's consolidation policy is described in Note 1(g).*