

FINANCIAL PERFORMANCE

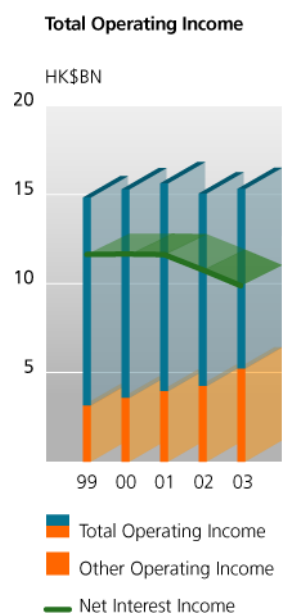
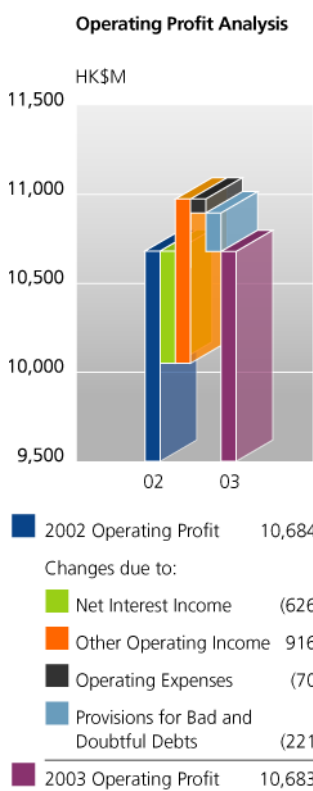
Profit and loss account

Summary of financial performance (HK\$M)	2003	2002
Operating profit before provisions	11,475	11,255
Profit on ordinary activities before tax	11,137	11,242
Profit attributable to shareholders	9,539	9,920
Earnings per share (HK\$)	4.99	5.19

Hang Seng Bank Limited (the Bank) and its subsidiary and associated companies (Hang Seng) reported a profit attributable to shareholders of HK\$9,539 million for 2003, a decrease of 3.8 per cent compared with 2002. Earnings per share of HK\$4.99 were 3.9 per cent lower than in 2002.

Operating profit before provisions rose by HK\$220 million, or 2.0 per cent, to HK\$11,475 million, attributable to the

encouraging 21.4 per cent growth in other operating income, which outweighed the fall of 5.8 per cent in net interest income. The net charge for bad and doubtful debts increased by HK\$221 million, or 38.7 per cent. This reflected a large release in general provisions of HK\$330 million in 2002 which was not repeated in 2003. Specific provisions were reduced by HK\$103 million, or 11.4 per cent. As a result, operating profit was maintained at the same level as in 2002. Profit before tax amounted to HK\$11,137 million, which was HK\$105 million, or 0.9 per cent, lower than in 2002. Attributable profit fell by HK\$381 million, or 3.8 per cent, taking into account the increase in the Hong Kong profits tax rate from 16.0 per cent to 17.5 per cent and after deducting the minority interest of Hang Seng Life Limited (HSL). Excluding the impact of the release in general provisions in 2002 and the increase in the profits tax rate, the attributable profit for 2003 would have increased by HK\$69 million, or 0.7 per cent, over 2002.



Economic profit

Economic profit is calculated from profit after tax, adjusted for non-cash items, and takes into account the cost of capital invested by Hang Seng's shareholders. Management uses economic profit to decide on the allocation of resources among businesses to achieve the best return for shareholders.

For the year 2003, the return on invested capital was HK\$9,649 million, or 31.1 per cent. The economic profit of HK\$5,001 million represented a return of 16.1 per cent to shareholders after deducting the 15.0 per cent benchmark cost of capital of HK\$4,648 million invested by shareholders. The benchmark cost of capital was, in

management's view, above the true cost of capital under the current low interest rate environment and has been used until the end of the current five year strategic plan period, which expired at the end of 2003, in order to ensure consistency and aid comparability. The sustainable trend of economic profit shows that Hang Seng continues to create value for its shareholders and contributed to the successful achievement of the total shareholders' return target.

<b>Economic profit (HK\$M)</b>	<b>2003</b>	<b>%</b>	2002	%
Average invested capital	<b>31,021</b>		31,946	
Return on invested capital*	<b>9,649</b>	<b>31.1</b>	10,043	31.5
Cost of capital	<b>(4,648)</b>	<b>(15.0)</b>	(4,785)	(15.0)
Economic profit	<b>5,001</b>	<b>16.1</b>	5,258	16.5

\*Return on invested capital represents profit after tax adjusted for non-cash items.

### Net interest income

<b>Net interest income (HK\$M)</b>	<b>2003</b>	2002
Interest income	<b>12,846</b>	14,960
Interest expense	<b>(2,667)</b>	(4,155)
Net interest income	<b>10,179</b>	10,805
Average interest-earning assets	<b>446,978</b>	439,736
Gross interest yield (% p.a.)	<b>2.87</b>	3.40
Net interest spread (% p.a.)	<b>2.21</b>	2.36
Net interest margin (% p.a.)	<b>2.28</b>	2.46

Net interest income decreased by HK\$626 million, or 5.8 per cent, compared with 2002. Average interest-earning assets rose by HK\$7.2 billion, or 1.6 per cent. Net interest margin narrowed by 18 basis points to 2.28 per cent with a reduction in net interest spread of 15 basis points to 2.21 per cent and a fall in contribution from net free funds of 3 basis points to 0.07 per cent.

The reduction in the average mortgage portfolio yield caused net interest spread to fall by 6 basis points. Decline in spreads on time deposits and interbank placings accounted for a fall of 8 and 6 basis points respectively. This was partly offset by the favourable impact of 5 basis points due to the increase in the lower cost current and savings accounts. The contribution from net free funds was affected by the further decline in market rates and fell by 3 basis points.

The average yield on the residential mortgage portfolio, excluding GHOS mortgages and staff loans, fell to 177 basis points below BLR for 2003 (149 basis points below BLR in 2002), before accounting for the effect of cash incentive payments. Cash incentive payments on new mortgage loans of HK\$130 million have been written off against interest income in 2003 (HK\$105 million in 2002).

Compared with the first half of 2003, net interest income in the second half of 2003 fell by HK\$261 million, or 5.0 per cent, with a 26 basis point fall in net interest margin to 2.15 per cent. Net interest spread narrowed by 24 basis points to 2.09 per cent. This was mainly affected by the decline in the average yield on the mortgage portfolio and narrower spreads on time deposits, fixed rate debt securities and interbank placings. The contribution from net free funds was 2 basis points lower at 0.06 per cent.

The average balance sheet analysis on page 66 shows the average balances, interest income/expense and average interest rates of individual assets and liabilities in 2003 as compared with 2002.

	Year ended 31 December 2003			Year ended 31 December 2002		
	Average balance HK\$M	Interest income HK\$M	Yield %	Average balance HK\$M	Interest income HK\$M	Yield %
<b>Assets</b>						
Short-term funds and placings with banks	90,811	1,816	2.00	130,572	3,464	2.65
Advances to customers	226,892	7,306	3.22	224,783	8,445	3.76
Debt securities	129,275	3,724	2.88	84,381	3,051	3.62
Total interest-earning assets	446,978	12,846	2.87	439,736	14,960	3.40
Provisions for bad and doubtful debts	(2,688)	–	–	(3,219)	–	–
Non interest-earning assets	29,518	–	–	24,187	–	–
Total assets and interest income	473,808	12,846	2.71	460,704	14,960	3.25
	Average balance HK\$M	Interest expense HK\$M	Cost %	Average balance HK\$M	Interest expense HK\$M	Cost %
<b>Liabilities</b>						
Current, savings and time deposit accounts	385,394	2,249	0.58	374,947	3,490	0.93
Debt securities in issue	10,893	279	2.56	16,765	506	3.02
Deposits from banks	2,551	31	1.22	1,414	25	1.77
Other interest-bearing liabilities	3,680	108	2.93	4,577	134	2.93
Total interest-bearing liabilities	402,518	2,667	0.66	397,703	4,155	1.04
Non interest-bearing current accounts	17,177	–	–	13,160	–	–
Shareholders' funds and other non interest-bearing liabilities	54,113	–	–	49,841	–	–
Total liabilities and interest expense	473,808	2,667	0.56	460,704	4,155	0.90

### Other operating income

Other operating income recorded a strong growth of HK\$916 million, or 21.4 per cent, and contributed 33.8 per cent of total operating income, compared with 28.4 per cent in 2002.

Income from retail investment funds rose by 31.6 per cent to HK\$921 million in 2003. Insurance commissions and underwriting profit together grew by 90.1 per cent, reflecting strong growth in life insurance premiums and

the embedded value of the long-term assurance business.

Securities/stockbroking fees rose by 48.0 per cent, benefiting from the buoyant market in the second half of the year.

Dealing profits grew by 30.2 per cent, mainly contributed by foreign exchange income.

Fee income from account services, cards and credit facilities, however, fell by 17.3 per cent, 6.1 per cent and 14.4 per cent respectively.

Analysis of income from wealth management business included in other operating income

<b>Income from wealth management business (HK\$M)</b>	<b>2003</b>	2002
Investment income		
• retail investment funds	<b>921</b>	700
• securities/stockbroking	<b>361</b>	244
• margin trading/private banking	<b>125</b>	68
Total investment income	<b>1,407</b>	1,012
Insurance income		
• life (including embedded value)*	<b>851</b>	562
• general and others	<b>282</b>	257
Total insurance income	<b>1,133</b>	819
<b>Total</b>	<b>2,540</b>	1,831

\*The embedded value and underwriting profit of Hang Seng Life Limited in 2002 which were reported as share of profits of associated companies instead of other operating income were re-grouped under this heading to conform with the current year's presentation for the purpose of comparison in this analysis.

Income from wealth management comprising income from investment and insurance grew strongly by 38.7 per cent to HK\$2,540 million in 2003, representing 48.9 per cent of total other operating income.

## Operating expenses

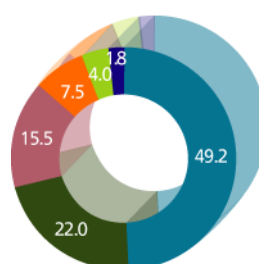
Operating expenses increased by HK\$70 million, or 1.8 per cent, to HK\$3,902 million. Staff costs decreased by HK\$16 million, or 0.8 per cent. Premises and equipment expenses were stable while other operating expenses increased by HK\$114 million, or 18.7 per cent. This was mainly due to the increase in marketing and advertising expenditure for investment and other personal financial services products, and the inclusion of the operating expenses of HSLI after it became a subsidiary of the Bank in November 2002.

The cost:income ratio in 2003 was maintained at the same level as 2002 at 25.4 per cent.

Headcount measured in full time equivalents was 7,280 at 31 December 2003 (7,279 at 31 December 2002).

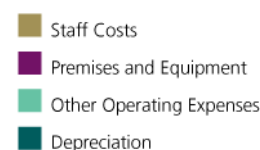
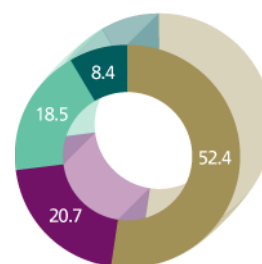
**Other Operating Income for 2003**

In Percentage



**Operating Expenses for 2003**

In Percentage



### Provisions for bad and doubtful debts

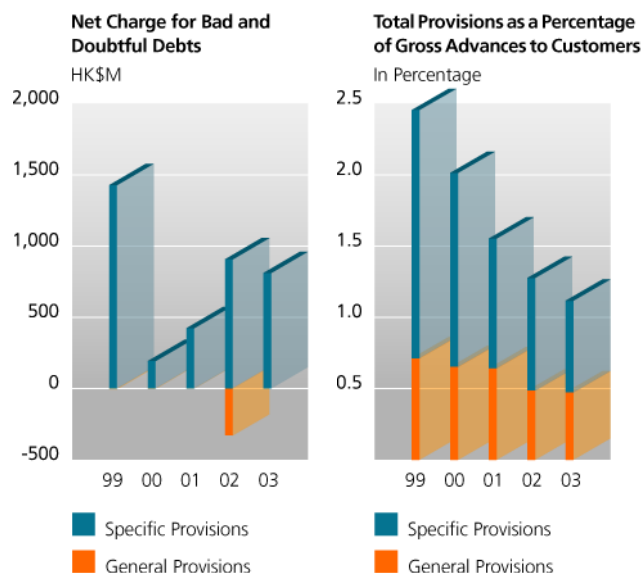
Net charge to profit and loss account (HK\$M)	2003	2002
Net charge/(release) for bad and doubtful debts		
Specific	798	901
General	(6)	(330)
Total	792	571
Average gross advances to customers	227,814	225,725
Net charge/(release) for bad and doubtful debts as a percentage of average gross advances to customers		
Specific	0.3%	0.4%
General	–	(0.1%)
Total	0.3%	0.3%

Compared with 2002, the net charge for bad and doubtful debts rose by HK\$221 million, or 38.7 per cent. This was attributable to the release of HK\$330 million in general provisions at the end of 2002 to recognise the reduction in estimated latent loan losses (a small release of HK\$6 million in general provisions was made in 2003). Specific provisions decreased by HK\$103 million, or 11.4 per cent, to HK\$798 million, with substantial improvement in the second half of the year. New and additional specific provisions fell by HK\$64 million, or 5.2 per cent, to HK\$1,167 million, with the reduction in provisions for credit card advances, corporate and personal loans partly offset by increased provisions for residential mortgages and commercial banking customers. Releases and recoveries rose by HK\$39 million, or 11.8 per cent, to HK\$369 million, mainly from commercial banking and corporate customers.

Advances to customers and provisions (HK\$M)	2003	2002
Gross advances to customers *	231,999	227,475
Specific provisions	(1,432)	(1,805)
General provisions	(1,101)	(1,108)
Advances to customers**	229,466	224,562
Gross non-performing advances*	5,243	6,081
Non-performing advances* as a percentage of gross advances to customers*	2.3%	2.7%
Provisions as a percentage of gross advances to customers*		
Specific provisions	0.62%	0.79%
General provisions	0.48%	0.49%
Total provisions	1.10%	1.28%
Specific provisions as a percentage of gross non-performing advances*	27.3%	29.7%

\* After deduction of interest in suspense.

\*\* After deduction of interest in suspense and provisions.



Gross non-performing advances (after deduction of interest in suspense) fell by HK\$838 million, or 13.8 per cent, to HK\$5,243 million, compared with the end of 2002. The ratio of gross non-performing advances to gross advances to customers further improved to 2.3 per cent from 2.7 per cent at the end of 2002.

### Profit on tangible fixed assets and long-term investments

Profit on disposal of tangible fixed assets and long-term investments, mainly from the profit on disposal of listed equities and debt securities, was maintained at the same level as 2002.

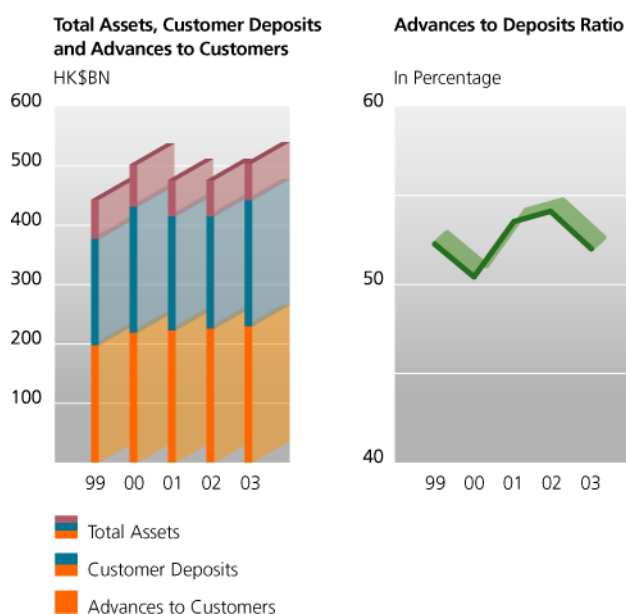
### Property revaluation

Hang Seng's premises and investment properties were revalued by Chesterton Petty Limited, an independent professional valuer, at 30 September 2003, who confirmed that there had been no material change in valuations at 31 December 2003. The valuations were carried out by qualified valuers who are members of the Hong Kong Institute of Surveyors. The basis of valuation of premises was open market value for existing use. The basis of the valuation for investment properties was open market value. The property revaluation has resulted in a fall in Hang Seng's revaluation reserves at 31 December 2003 by HK\$618 million and a charge of HK\$37 million to the profit and loss account for the year in respect of properties where the valuation has fallen below the depreciated historical cost.

## Balance sheet

### Total assets

Total assets grew by HK\$28.3 billion or 6.0 per cent, to HK\$503.0 billion compared with HK\$474.7 billion at 31 December 2002, driven by an increase of 6.3 per cent in customer deposits. There has been a further shift of time deposits to savings under a persistently low interest rate environment. Advances to customers recorded a growth of 2.2 per cent during 2003, mainly in corporate lending and trade advances, while mortgages under the Government Home Ownership Scheme (GHOS) continued to fall. Investment in debt securities also rose, mainly through the deployment of funds from customer deposits. The advances to deposits ratio fell to 52.2 per cent at 31 December 2003 compared with 54.3 per cent at 31 December 2002, the effect of a faster pace of growth in customer deposits than customer advances during 2003.



### Assets deployment

At 31 December (HK\$M)	2003	%	2002	%
Cash and short-term funds	71,903	14.3	77,784	16.4
Placings with banks maturing after one month	18,029	3.6	30,919	6.5
Certificates of deposit	28,683	5.7	30,120	6.4
Investment securities	115,113	22.9	80,367	16.9
Advances to customers	229,466	45.6	224,562	47.3
Other assets*	39,765	7.9	30,902	6.5
<b>Total assets</b>	<b>502,959</b>	<b>100.0</b>	474,654	100.0

\*Amounts due from immediate holding company and fellow subsidiary companies are included under other assets.

### Investment securities

Investment in held-to-maturity debt securities rose by HK\$34.9 billion, or 45.4 per cent, to HK\$111.8 billion, with funds from the growth in customer deposits and re-deployment of funds from interbank placings to enhance net interest yield. Over 95 per cent of the held-to-maturity debt securities will mature within five years.

The fair value of the held-to-maturity debt securities amounted to HK\$112.6 billion, showing an unrealised gain of HK\$0.9 billion at 31 December 2003.

Equity investments decreased by HK\$0.2 billion, or 7.9 per cent, to HK\$2.1 billion.

### Advances to customers

Advances to customers (after deduction of interest in suspense and provisions) recorded a growth of HK\$4,904 million, or 2.2 per cent, to HK\$229.5 billion at 31 December 2003.

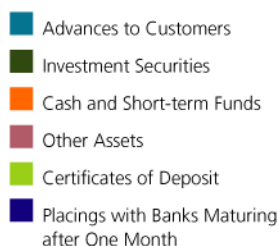
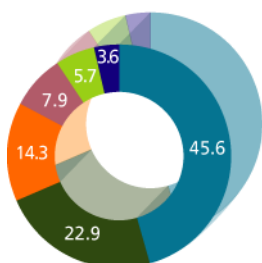
Lending to the industrial, commercial and financial sectors grew by HK\$4,682 million, or 5.3 per cent, since the end of 2002. The increase was mainly in lending to financial concerns which included the financing vehicles of large corporate groups and public sector entities engaged in financing activities. Lending to transport and transport equipment concerns also increased, mainly to public transport companies. Lending to the property sector was in line with 2002, whilst lending under the 'Other' sector fell, mainly due to the repayment of certain large corporate loans.

Lending to individuals fell by HK\$3,927 million, or 3.1 per cent. This was affected by the fall of HK\$4,619 million, or 13.2 per cent, in advances under the suspended Government Home Ownership Scheme and other Government subsidised home purchasing schemes, excluding which lending to individuals rose by HK\$692 million, or 0.8 per cent. Residential mortgages increased by HK\$1,312 million, or 1.7 per cent, following the pick-up in property market activities in the third and fourth quarters.

Trade finance rose by HK\$1,571 million, or 16.1 per cent, benefiting from the improvement in external trade.

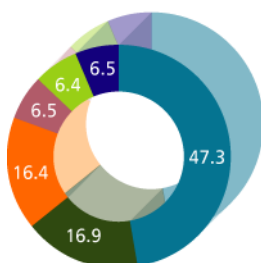
Assets Deployment for 2003

In Percentage



Assets Deployment for 2002

In Percentage



Gross advances for use outside Hong Kong grew by HK\$2,198 million, or 48.9 per cent, mainly reflecting the expansion in the loan portfolios of Mainland branches.

### Customer deposits

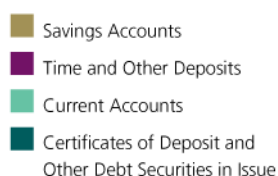
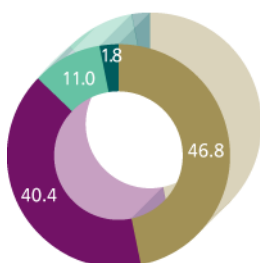
Current, savings and other deposit accounts increased by HK\$26.2 billion, or 6.3 per cent, to HK\$439.9 billion, compared with HK\$413.7 billion at 31 December 2002.

The growth was mainly in customer deposit accounts which grew by HK\$34.3 billion, or 8.6 per cent. During the year, customers continued to shift from time deposits to savings and current accounts in the prevailing low interest rate environment.

Certificates of deposit and other debt securities in issue fell by HK\$8.1 billion, or 50.4 per cent, to HK\$7.9 billion following the maturity of part of the certificates of deposit portfolio.

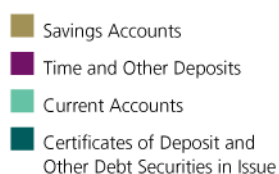
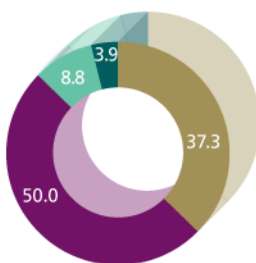
Customer Deposits for 2003

In Percentage



Customer Deposits for 2002

In Percentage



### Shareholders' funds

At 31 December (HK\$M)	2003	2002
Share capital	9,559	9,559
Retained profits	19,720	19,440
Premises and investment properties revaluation reserves	5,813	6,667
Long-term equity investment revaluation reserve	1,009	1,011
Capital redemption reserve	99	99
	<b>36,200</b>	36,776
Proposed dividends	3,441	6,309
Shareholders' funds	<b>39,641</b>	43,085
Return on average shareholders' funds (% p.a.)	<b>23.4</b>	23.1

Shareholders' funds (excluding proposed dividends) fell by HK\$576 million, or 1.6 per cent, to HK\$36,200 million at 31 December 2003. Retained profits rose by HK\$280 million. Premises and investment properties revaluation reserves fell by HK\$854 million, reflecting the decline in property value compared with the year-end 2002 and the provision for deferred tax on the property revaluation surplus following the adoption of the HKSSAP 12.

The return on average shareholders' funds was 23.4 per cent, compared with 23.1 per cent in 2002.

There was no purchase, sale or redemption of the Bank's listed securities by the Bank or any of its subsidiaries during the year.

### Funds under management

Funds under management (HK\$M)	2003	2002
At 1 January	40,608	25,366
Additions	48,069	35,590
Withdrawals	(33,526)	(18,165)
Value change	1,855	(2,218)
Exchange adjustments	855	35
At 31 December	<b>57,861</b>	40,608



Funds under management of HK\$57,861 million were HK\$17,253 million, or 42.5 per cent, higher than

at 31 December 2002, due to expansion of our asset management and private banking businesses.

## CAPITAL MANAGEMENT

### Capital resources management

Analysis of capital base and risk-weighted assets (HK\$M)	2003	2002
<i>Capital base</i>		
Tier 1 capital		
Share capital	9,559	9,559
Retained profits	19,084	18,795
Capital redemption reserve	99	99
Total	28,742	28,453
Tier 2 capital		
Premises and investment properties revaluation reserves	4,096	5,153
Long-term equity investment revaluation reserve	688	705
General loan provisions	1,101	1,108
Total	5,885	6,966
Unconsolidated investments and other deductions	(1,283)	(1,376)
Total capital base after deductions	33,344	34,043
<i>Risk-weighted assets</i>		
On-balance sheet	234,251	222,758
Off-balance sheet	15,047	16,262
Total risk-weighted assets	249,298	239,020
Total risk-weighted assets adjusted for market risk	253,326	239,426
<i>Capital adequacy ratios</i>		
After adjusting for market risk		
Tier 1*	11.3%	11.9%
Total*	13.2%	14.2%
Before adjusting for market risk		
Tier 1	11.5%	11.9%
Total	13.4%	14.2%

\* The capital ratios take into account market risks in accordance with the relevant Hong Kong Monetary Authority guideline under the Supervisory Policy Manual.

The total capital ratio fell by 100 basis points to 13.2 per cent at 31 December 2003, compared with 14.2 per cent at 31 December 2002. The capital base recorded a reduction of 2.1 per cent, mainly due to the fall in premises and investment properties revaluation reserves. Risk-weighted assets adjusted for market risk, on the other hand, grew by 5.8 per cent, mainly attributable to the rise in total assets which included advances to customers and debt securities.

The tier 1 capital ratio dropped by 60 basis points to 11.3 per cent, as a result of the growth in risk-weighted assets adjusted for market risk.

## RISK MANAGEMENT

Risk management is an integral part of Hang Seng's business management. The most important types of risks to which Hang Seng is exposed to are credit risk, liquidity risk, market risk and operational risk. Hang Seng's risk management policy is designed to identify and analyse risks, to set appropriate risk limits and to monitor these risks and limits continually by means of reliable and up-to-date management information systems. Hang Seng's risk management policies and major control limits are approved by the Board of Directors and they are monitored and reviewed regularly by the Executive Committee and Audit Committee.

### Credit risk

Credit risk is the risk that financial loss arises from the failure of a customer or counterparty to meet its obligations under a contract. It arises principally from lending, trade

finance, treasury and leasing activities. Hang Seng has dedicated standards, policies and procedures in place to control and monitor all such risks.

Credit Risk Management (CRM) is mandated to provide centralised management of credit risk. CRM is headed by the Chief Credit Officer who reports to the Chief Executive and functionally reports to the HSBC Group Credit and Risk. Hang Seng conforms with the HSBC Group standards in establishing its credit policies. The responsibilities of CRM include the following:

- Formulating high level credit policies which are embodied in the Credit Risk Manual as approved by the Board of Directors;
- Establishing and maintaining Hang Seng's Large Credit Exposure Policy. This policy sets controls over the maximum level of Hang Seng's exposure to customers and customer groups and other risk concentrations in an approach which is designed to be more conservative than internationally accepted regulatory standards;
- Issuing Lending Guidelines to provide business units with clear guidance on Hang Seng's attitude towards and appetite for lending to, inter alia, specified market sectors, industries, and products. They are regularly updated and provided to all credit and marketing executives;
- Undertaking an independent review and objective assessment of risk. CRM assesses all commercial non-bank credit facilities over designated limits originated by business units, prior to the facilities being offered to the customer.

Renewals and reviews of commercial non-bank facilities over designated levels are also subject to such independent review and assessment;

- Controlling exposures to banks and financial institutions. As full authority has been devolved to HSBC Group Credit and Risk to approve Hang Seng's credit and settlement risk limits to counterparties in the financial and government sectors, Hang Seng CRM co-ordinates with the dedicated unit within Group Credit and Risk which controls and manages these exposures on a global basis using centralised systems and automated processes;
- Controlling cross-border exposures. Similar to the control of exposures to banks and financial institutions, CRM co-ordinates with the dedicated unit within Group Credit and Risk to control country and cross-border risk using centralised systems, through the imposition of country limits with sub-limits by maturity and type of business. Country limits are determined taking into account economic and political factors together with local business knowledge. Transactions with countries deemed to be higher risk are considered on a case-by-case basis;
- Controlling exposure to selected industries. CRM controls Hang Seng's exposure to the shipping and aviation industries, and closely monitors exposures to other industries such as telecommunications, insurance and commercial real estate. Controls and restrictions on new business or the capping of exposure may be introduced where necessary;

- Maintaining facility grading process. Hang Seng adopts HSBC's grading structure which contains seven grades, the first three of which are applied to differing levels of satisfactory risk. Of the four unsatisfactory grades, grades 6 and 7 are non-performing loans. For banks, the grading structure involves ten tiers, six of which cover satisfactory risk. It is the responsibility of the final approving executive to approve the facility grade. Facility grades are subject to frequent review and amendments, where necessary, are required to be undertaken promptly;
- Reporting to senior executives on aspects of the Hang Seng loan portfolio. Credit Committee, Executive Committee, Audit Committee, the Board of Directors and Group Credit and Risk also receive regular reports;
- Managing and directing credit-related systems initiatives; and
- Providing advice and guidance to business units on various credit-related issues.

Special attention is paid to problem loans. Recovery units are established by Hang Seng to provide customers with intensive support in order to maximise recoveries of doubtful debts.

Provisions for bad and doubtful debts are made promptly where necessary and on a prudent and consistent basis with established guidelines. Management regularly performs an assessment of the adequacy of the established provisions for bad and doubtful debts by conducting a detailed review of the loan portfolio, comparing performance and

delinquency statistics against historical trends and undertaking an assessment of current economic conditions. Management also focuses particularly on the appropriateness of grades assigned to facilities to those borrowers and portfolio segments classified below satisfactory grades.

### Liquidity risk

Liquidity management is essential to ensure the Bank has the ability to meet its obligations as they fall due. It is Hang Seng's policy to maintain a strong liquidity position by properly managing the liquidity structure of its assets, liabilities and commitments so that cash flows are appropriately balanced and all funding obligations are comfortably met.

Hang Seng is required to comply with the regulatory liquidity requirement, mainly to maintain the liquidity ratio in accordance with the Fourth Schedule of the Hong Kong Banking Ordinance. Hang Seng's average liquidity ratio in 2003 of 46.2 per cent (44.4 per cent in 2002) which well exceeded the minimum requirement of 25%. In addition, Hang Seng also complies with the HSBC Group's liquidity requirements, which impose stricter criteria for the holding of liquid assets, as prescribed by the HSBC Group Executive Committee.

Hang Seng has established policies and procedures to monitor and control its liquidity position on a daily basis by adopting a cash flow management approach. Hang Seng always maintains a stock of high quality liquid assets to ensure the availability of sufficient cash flow to meet its

financial commitments, including customer deposits on maturity and undrawn facilities, over a specified future period. The liquidity management process is monitored by the Asset and Liability Management Committee and is reported to the Executive Committee and the Board of Directors.

As a major source of funding, Hang Seng maintains a diversified and stable customer deposit base, both by maturity and market segment. Hang Seng is active in the local money and capital markets to manage the maturity profile of assets and liabilities and to secure the availability of interbank and wholesale deposits at market rates.

### Market risk

Market risk is the risk that foreign exchange rates, interest rates or equity and commodity prices will move and result in profits or losses to Hang Seng. Market risk arises on financial instruments which are valued at current market prices (mark-to-market basis) and those valued at cost plus any accrued interest (accrual basis). Hang Seng's market risk arises from customer-related business and from position taking.

Market risk is managed within risk limits approved by the Board of Directors. Risk limits are set by product and risk type with market liquidity being a principal factor in determining the level of limits set. Limits are set using a combination of risk measurement techniques, including position limits, sensitivity limits, as well as value at risk (VAR) limits at a portfolio level.

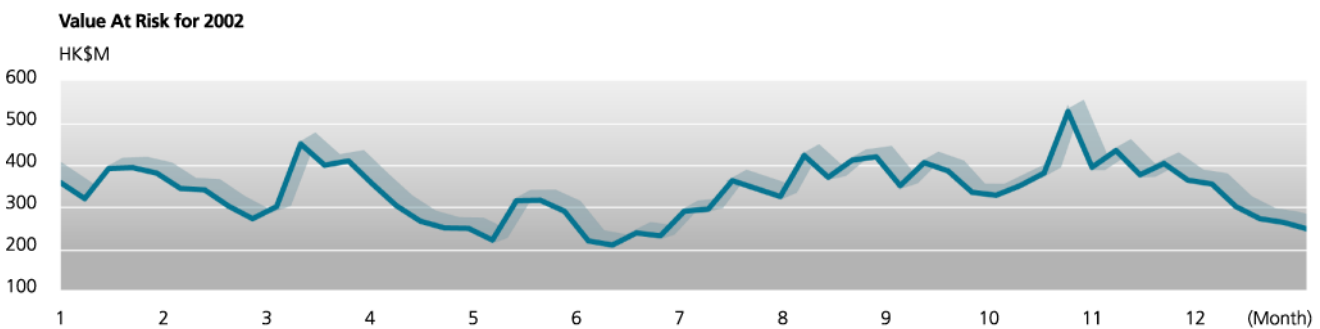
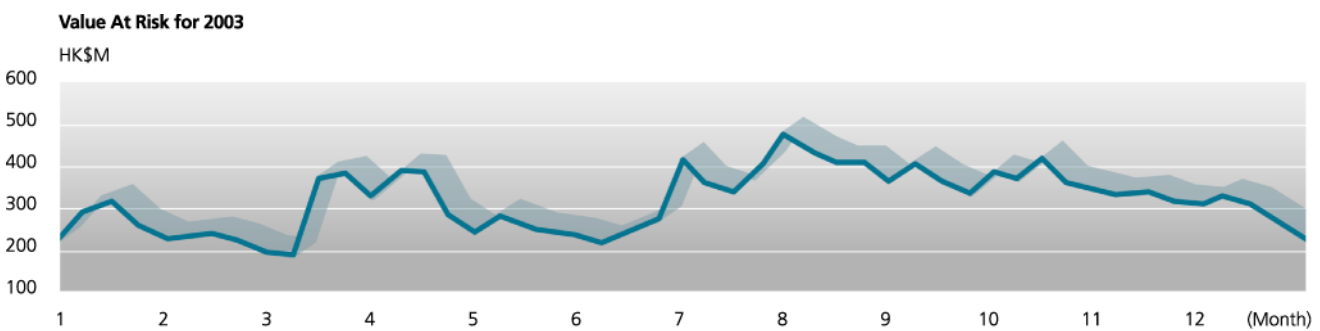
Hang Seng adopts the risk management policies and risk measurement techniques developed by the HSBC Group. The daily risk monitoring process measures actual risk exposures against approved limits and triggers specific action to ensure the overall market risk is managed within an acceptable level.

VAR is a technique which estimates the potential losses that could occur on risk positions taken due to movements in market rates and prices over a specified time horizon and to a given level of confidence. The model used by Hang Seng calculates VAR on a variance/covariance basis, using historical movements in market rates and prices, a 99 per cent confidence level and a 10-day holding period, and generally takes account of correlations between different markets and rates. The movement in market

prices is calculated by reference to market data for the last two years. Aggregation of VAR from different risk types is based upon the assumption of independence between risk types. In recognition of the inherent limitations of VAR methodology, stress testing is performed to assess the impact of extreme events on market risk exposures.

Hang Seng has obtained approval from the Hong Kong Monetary Authority (HKMA) for the use of its VAR model to calculate market risk for capital adequacy reporting and the HKMA has expressed itself satisfied with Hang Seng's market risk management process.

Hang Seng's VAR for all interest rate risk and foreign exchange risk positions and on individual risk portfolios for 2003 and 2002 is shown in the tables on page 77.



**VAR (HK\$M)**

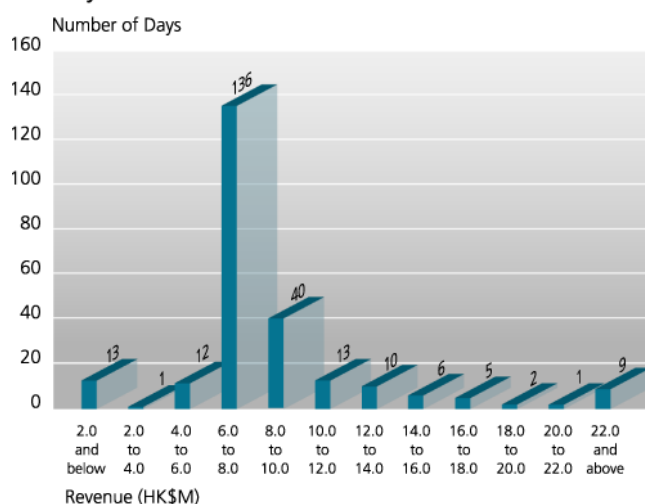
	At 31 December 2003	Minimum during the year	Maximum during the year	Average for the year
VAR for all interest rate risk and foreign exchange risk	271	186	473	321
VAR for foreign exchange risk (trading)	57	2	156	32
VAR for interest rate risk				
• trading	1	1	11	4
• accrual	264	186	472	315

**VAR (HK\$M)**

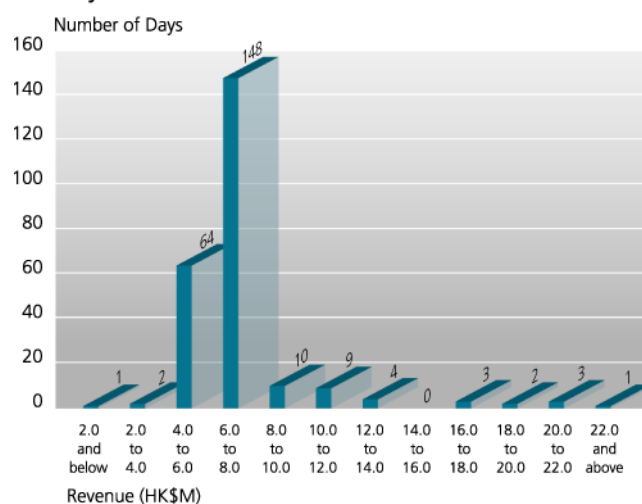
	At 31 December 2002	Minimum during the year	Maximum during the year	Average for the year
VAR for all interest rate risk and foreign exchange risk	234	194	520	326
VAR for foreign exchange risk (trading)	3	3	5	4
VAR for interest rate risk				
• trading	1	–	9	2
• accrual	233	192	515	325

The average daily revenue earned from market risk-related treasury activities in 2003, including accrual book net interest income and funding related to dealing positions, was HK\$8 million (HK\$7 million for 2002). The standard deviation of these daily revenues was HK\$7 million (HK\$3 million for 2002). An analysis of the frequency distribution of daily revenues shows that out of 248 trading days in 2003, losses were recorded on only eight days and the maximum daily loss was HK\$67 million. The most frequent result was a daily revenue of between HK\$6 million and HK\$10 million, with 176 occurrences. The highest daily revenue was HK\$43 million.

**Daily Distribution of Market Risk Revenues for 2003**



**Daily Distribution of Market Risk Revenues for 2002**



### Foreign exchange exposure

Hang Seng's foreign exchange exposures mainly comprise foreign exchange dealing by Treasury and currency exposures originated by its banking business. The latter are transferred to Treasury where they are centrally managed within foreign exchange position limits approved by the Board of Directors. The average one-day foreign exchange profit for 2003 was HK\$2 million (HK\$2 million for 2002). Structural foreign exchange positions arising from capital investment in subsidiaries and branches outside Hong Kong, mainly in US dollar and renminbi, are managed by the Asset and Liability Management Committee (ALCO).

At 31 December 2003, the US dollar was the only currency in which Hang Seng had a non-structural foreign currency position which exceeded 10 per cent of the total net position in all foreign currencies.

#### Total foreign currency positions (HK\$M)

	2003		Total foreign currencies
	USD	Other foreign currencies	
Spot assets	162,330	106,939	269,269
Spot liabilities	(151,706)	(95,157)	(246,863)
Forward purchases	40,537	11,665	52,202
Forward sales	(35,587)	(23,305)	(58,892)
Net long non-structural position	15,574	142	15,716
Net structural position	841	386	1,227

### Interest rate exposure

Interest rate risks comprise those originating from treasury activities, both trading positions and accrual books and structural interest rate exposures. Structural interest rate risk arises from the differing repricing characteristics of commercial banking assets and liabilities, including non-interest bearing liabilities, such as shareholders' funds and some current accounts. Structural interest rate risks were transferred to Treasury based on contractual or behavioural maturity directly or through the ALCO book.

Treasury manages interest rate risks within the limits approved by the Board of Directors and under the monitor of ALCO. The average daily revenue earned from treasury-related interest rate activities for 2003 was HK\$6 million (HK\$5 million for 2002).

Interest rate sensitivity analysis is useful in managing the interest rate risk of the accrual portfolio. The table on page 79 discloses the mismatching of the dates on which interest receivable on assets and payable on liabilities are next reset to market rates on a contractual basis, or, if earlier, the dates on which the instruments mature. Actual reset dates may differ from contractual dates owing to prepayments and the exercise of options. In addition, contractual terms may not be representative of the behaviour of assets and liabilities. For these reasons, Hang Seng takes into account behavioural characteristics in the management of its interest rate risk, rather than on the contractual basis set out in the table on page 79.

A positive interest rate sensitivity gap exists where more assets than liabilities re-price in a given period. Although a positive gap position tends to benefit net interest income in a rising interest rate environment, the actual effect will depend on a number of factors, including the extent to which repayments are made earlier or later than the contracted date and variations in interest rates within

re-pricing periods and among currencies. Similarly, a negative interest rate sensitivity gap exists where more liabilities than assets re-price during a given period. In this case, a negative gap position tends to benefit net interest income in a declining interest rate environment, but again the actual effect will depend on the same factors as for positive interest rate gaps.

#### Interest rate sensitivity analysis (HK\$M)

	2003					Total
	Up to 3 months	More than 3 months and up to 6 months	More than 6 months and up to 12 months	More than 12 months	Non- interest earning/ bearing	
<b>Assets</b>						
Cash and short-term funds	63,365	4,183	200	–	4,155	71,903
Placings with banks maturing after one month	15,726	2,050	253	–	–	18,029
Certificates of deposit	16,878	1,551	3,358	6,896	–	28,683
Investment securities	52,886	10,924	8,171	40,984	2,148	115,113
Advances to customers	199,322	15,614	4,722	5,377	4,431	229,466
Other assets*	11,687	158	226	383	27,311	39,765
Total assets	359,864	34,480	16,930	53,640	38,045	502,959
<b>Liabilities</b>						
Current, savings and other deposit accounts	400,045	7,040	2,518	6,734	23,576	439,913
Deposits from banks	791	100	–	–	311	1,202
Other liabilities*	773	764	1,059	902	18,061	21,559
Minority interests	–	–	–	–	644	644
Shareholders' funds	–	–	–	–	39,641	39,641
Total liabilities	401,609	7,904	3,577	7,636	82,233	502,959
Off-balance sheet items	29,830	(1,425)	(10,382)	(18,023)	–	–
Net gap position	(11,915)	25,151	2,971	27,981	(44,188)	–
Cumulative gap position	(11,915)	13,236	16,207	44,188	–	–

\* Amounts due from / to immediate holding company and fellow subsidiary companies are included under other assets and other liabilities.



## Equities exposure

Hang Seng's equities exposure in 2003 is mainly in long-term equity investments which are set out in note 20 of the financial statements.

## Derivatives

### Positions of derivative contracts outstanding (HK\$M)

	2003		Mark-to-market values	
	Contract amount Dealing	Contract amount Non-dealing	Positive	Negative
Foreign exchange contracts				
Spot and forward	76,408	–	742	764
Currency swaps	778	310	25	18
Currency options	32,072	–	109	109
Interest rate contracts				
Interest rate swaps	35,605	56,024	956	1,412
Interest rate options	5,506	12,072	41	49
Equity contracts				
Equity futures	5	–	–	–
Equity options	292	–	–	–
Analysis of mark-to-market values				
Trading contracts			1,528	1,465
Non-trading contracts			345	887

Derivatives are financial contracts whose value and characteristics are derived from underlying assets, exchange and interest rates, and indices. They mainly include futures, forwards, swaps and options in foreign exchange, interest rate, equity and equity indices and commodities. Derivative positions arise from transactions with customers as well as Hang Seng's own dealing and asset

and liability management activities. These positions are managed carefully to ensure that they are within acceptable risk levels.

Derivative instruments are subject to both market risk and credit risk. Market risk from derivative positions is controlled individually and in combination with on-balance sheet market risk positions within Hang Seng's market risk limits regime as described on page 75. The credit risk relating to a derivative contract is principally the replacement cost of the contract when it has a positive mark-to-market value and the estimated potential future change in value over the residual maturity of the contract. The nominal value of the contracts does not represent the amount of Hang Seng's exposure to credit risk. All activities relating to derivatives are subject to the same credit approval and monitoring procedures used for other credit transactions.

The table to the left provides an analysis of derivatives by product at 31 December 2003, showing those contracts undertaken for dealing and non-dealing purposes. Hang Seng's derivative positions are mainly in foreign exchange and interest rate contracts. Option contracts are mainly undertaken for option-linked investment/deposit products provided to customers and the related hedges. Mark-to-market values of derivatives designated for dealing purposes are included in "Other assets" for positive amounts and "Other liabilities" for negative amounts.

## Operational risk

Operational risk is the risk of economic loss arising through fraud, unauthorised activities, error, omission, inadequate or failed internal process, people and systems or from external events. The management of operational risk comprises the identification, assessment, monitoring, control and mitigation of the risks. Hang Seng's operational risk management framework includes the assignment of responsibility at senior management level; identification of operational risks inherent in processes, activities and products; adequate information systems to record the identification and assessment of operational risks and generate regular management reporting; and rigorous collection and reporting of operational risk losses incurred.

The risk of losses caused by human error and fraud is mitigated under a well-established internal control environment in which processes are documented, authorisation is independent and where transactions are reconciled and monitored. Details of the internal control system are described in the "Corporate Governance and Other Information" on pages 94 and 95. Adequate insurance cover is taken to minimise losses in business operation and on the holding of fixed assets. To reduce the impact of and interruptions to business activities caused

by system failure or natural disaster, back-up systems and contingency business resumption plans are in place for all business and critical back-office functions. Back-up computer systems and business resumption back-up sites are maintained. Detailed contingency recovery procedures are clearly documented, with periodic drills conducted to ensure the procedures are current and correct.