The Hongkong and Shanghai Banking Corporation Limited
Annual Report and Accounts 2016

HSBC

Annual Report and Accounts 2016

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Certain defined terms

This document comprises the *Annual Report and Accounts* 2016 for The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group'). References to 'HSBC', 'the Group' or 'the HSBC Group' within this document mean HSBC Holdings plc together with its subsidiaries. Within this document the Hong Kong Special Administrative Region of the People's Republic of China is referred to as 'Hong Kong'. The abbreviations 'HK$m' and 'HK$bn' represent millions and billions (thousands of millions) of Hong Kong dollars respectively.

Cautionary statement regarding forward-looking statements

This *Annual Report and Accounts* contains certain forward-looking statements with respect to the financial condition, results of operations and business of the group.

Statements that are not historical facts, including statements about the Bank's beliefs and expectations, are forward-looking statements. Words such as 'expects', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', variations of these words and similar expressions are intended to identify forward-looking statements. These statements are based on current plans, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made, and it should not be assumed that they have been revised or updated in the light of new information or future events.

Forward-looking statements involve inherent risks and uncertainties. Readers are cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward-looking statement.

Chinese translation

A Chinese translation of the *Annual Report and Accounts* is available upon request from: Communications (Asia), Level 32, HSBC Main Building, 1 Queen's Road Central, Hong Kong. The report is also available, in English and Chinese, on the Bank's website at www.hsbc.com.hk.

本《*年報及賬目*》備有中譯本，如欲查閱可向下列部門索取：香港皇后大道中 1 號滙豐總行大廈 32 樓企業傳訊部（亞太區）。本年報之中英文本亦載於本行之網站 www.hsbc.com.hk。

Financial Highlights

	2016 HK$m	2015 HK$m
For the year		
Net operating income before loan impairment charges	**168,152**	183,514
Profit before tax	**102,707**	117,279
Profit attributable to shareholders	**78,646**	89,533
At the year-end		
Total shareholders' equity	**628,006**	584,201
Total equity	**679,136**	635,886
Total capital	**491,302**	468,863
Customer accounts	**4,900,004**	4,640,076
Total assets	**7,548,952**	6,953,683
Ratios	**%**	%
Return on average ordinary shareholders' equity	**13.0**	15.9
Post-tax return on average total assets	**1.14**	1.40
Cost efficiency ratio	**44.5**	42.0
Net interest margin	**1.75**	1.78
Advance-to-deposits ratio	**57.8**	59.5
Capital ratios		
– Common equity tier 1 capital	**16.0**	15.6
– Tier 1 capital	**17.2**	16.6
– Total capital	**19.0**	18.6

Established in Hong Kong and Shanghai in 1865, The Hongkong and Shanghai Banking Corporation Limited is the founding member of the HSBC Group – one of the world's largest banking and financial services organisations. It is the largest bank incorporated in Hong Kong and one of Hong Kong's three note-issuing banks. It is a wholly-owned subsidiary of HSBC Holdings plc, the holding company of the HSBC Group, which has an international network organised into five geographical regions: Europe, Asia, Middle East and North Africa, North America and Latin America.

The Hongkong and Shanghai Banking Corporation Limited
Incorporated in the Hong Kong SAR with limited liability
Registered Office and Head Office: HSBC Main Building, 1 Queen's Road Central, Hong Kong
Telephone: (852) 2822 1111   Facsimile: (852) 2810 1112   Web: www.hsbc.com.hk

Report of the Directors

Principal Activities

The group provides a comprehensive range of domestic and international banking and related financial services, principally in the Asia-Pacific region.

Asia Strategy

HSBC Group's aim is to be the world's leading international bank. As a subsidiary of the HSBC Group, the group applies a disciplined approach in managing its portfolio of businesses to focus on areas where it has a clear competitive advantage. The Group has set clear strategic actions to capture growth opportunities arising from (i) fast-growing trade corridors and (ii) increasing wealth creation in our priority growth markets. These include delivering growth from our international network, extending our market-leading capability in renminbi products, and specific plans to prioritise and accelerate investments in Association of Southeast Asian Nations countries, the Pearl River Delta, and our Insurance and Asset Management businesses in the region. We will continue to implement HSBC Global Standards as a competitive advantage and to increase the quality of earnings.

The group's strong presence across the Asia-Pacific region will help maintain its competitive advantage in connecting business opportunities within the region, as well as between Asia-Pacific and other parts of the world.

Financial Statements

The state of affairs of the Bank and the group, and the consolidated profit of the group, are shown on pages 65 to 143.

Share Capital

Details of the movements in share capital of the Bank during the financial year, are set out in notes 27 and 28 on the Financial Statements.

Dividends

The interim dividends paid in respect of 2016 are set out in note 6 on the Financial Statements.

Directors

The names of the Directors at the date of this report are set out below:

Stuart T Gulliver, *Chairman*
Peter Tung Shun Wong, *Deputy Chairman & Chief Executive*
Laura May Lung Cha*, GBS, *Deputy Chairman*
Zia Mody*, *Deputy Chairman*
Graham John Bradley*
Dr Christopher Wai Chee Cheng*, GBS, OBE
Dr Raymond Kuo Fung Ch'ien*, GBS, CBE
Irene Yun-lien Lee*
Rose Wai Mun Lee
Jennifer Xinzhe Li*
Victor Tzar Kuoi Li#
John Robert Slosar*
Kevin Anthony Westley*
Dr Rosanna Yick-ming Wong*, DBE
Marjorie Mun Tak Yang*, GBS
Tan Sri Dr Francis Sock Ping Yeoh*, CBE

* *independent non-executive Director*
\# *non-executive Director*

All the Directors served throughout the year save for Kevin Westley who was appointed on 1 September 2016. James Riley retired on 18 April 2016.

A list of the directors of the Bank's subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2016 to the date of this report is available on the Bank's website https://www.personal.hsbc.com.hk/1/2/hk/regulatory-disclosures.

Permitted Indemnity Provision

The Bank's Articles of Association provide that the Directors and other officers for the time being of the Bank shall be indemnified out of the Bank's assets against any liability incurred by them or any of them as the holder of any such office or appointment to a person other than the Bank or an associated company of the Bank in connection with any negligence, default, breach of duty or breach of trust in relation to the Bank or associated company (as the case may be).

In addition, the Bank's ultimate holding company, HSBC Holdings plc, has maintained directors' and officers' liability insurance providing appropriate cover for the directors and officers within the Group, including the Directors of the Bank and its subsidiaries.

Directors' Interests in Transactions, Arrangements or Contracts

No transactions, arrangements or contracts that were significant in relation to the Bank's business and in which a Director or his or her connected entities had, directly or indirectly, a material interest were entered into by or subsisted with the Bank's holding companies, its subsidiaries or any fellow subsidiaries during the year.

Directors' Rights to Acquire Shares or Debentures

To help align the interests of employees with shareholders, executive Directors are eligible to be granted conditional awards over ordinary shares in HSBC Holdings plc by that company (being the ultimate holding company) under the HSBC Share Plan 2011 and the HSBC International Employee Share Purchase Plan.

Executive Directors, Group Managing Directors and Group General Managers of HSBC Holdings plc are eligible to receive an annual incentive award based on the outcome of the performance measures set out in the annual scorecard. The maximum opportunity for executive Director's annual incentive award is up to 215% of base salary. The annual incentive awards are discretionary and for the executive Directors, these are generally delivered in the form of shares.

Effective from 1 January 2016, executive Directors of HSBC Holdings plc are eligible to receive Long-term incentives ('LTI'). The maximum opportunity for LTI award is up to 320% of base salary. The awards are strongly aligned to the business strategy and are tied to long-term financial and non-financial measures. The awards are discretionary and subject to a forward-looking three-year performance period from the start of the financial year in which the awards are granted. Awards will commence vesting after the end of the three-year performance period and will vest in five equal instalments. On vesting, the shares (net of shares sold to cover any income tax and social security) will be subject to a minimum retention period of six months if required by regulators. The first award of the LTI is scheduled in the first quarter of 2017.

For Group Managing Directors and Group General Managers of HSBC Holdings plc, annual incentive awards are normally delivered in cash and/or shares, subject to a minimum six-month retention period. Group Managing Directors are also eligible to receive LTI, however, it is not anticipated that any such award will be made to them for the 2016 performance year. The total of any annual incentive awards and any LTI which may be awarded will be capped by the maximum of 200% of their overall fixed pay. For the annual incentive awards, these generally have a deferral rate of 60% or 40%. The period over which annual incentive awards would be deferred will be in accordance with the requirements of the Prudential Regulation Authority ('PRA') Remuneration Rules, i.e. 7 years for Senior Managers, 5 years for Risk Managers, and 3 years for other Material Risk Takers ('MRTs'). On vesting, the shares (net of shares sold to cover any income tax and social security) will be subject to a minimum retention period of at least six months.

All unvested deferred awards made under the HSBC Share Plan 2011 are subject to application of malus, i.e. the cancellation and reduction of unvested deferred awards. All paid or vested variable pay awards made to Identified Staff and MRTs will be subject to clawback for a period of 7 years from the date of award. For Senior Managers, this may be extended to ten years in the event of an ongoing internal or regulatory investigation at the end of the seven-year period.

The HSBC International Employee Share Purchase Plan is an employee share purchase plan offered to employees in Hong Kong since 2013 and has been extended to further countries in the HSBC Group from 2014. For every three shares in HSBC Holdings plc purchased by an employee ('Investment Shares'), a conditional award to acquire one share is granted ('Matching Shares'). The employee becomes entitled to the Matching Shares subject to continued employment with HSBC and retention of the Investment Shares until the third anniversary of the start of the relevant plan year.

The last awards granted under the Group Performance Share Plan ('GPSP') were made in respect of the 2015 performance year. The GPSP award is subject to a five year vesting period. These awards will continue to form part of the remuneration policy until final vesting which is scheduled in 2021. The vesting of conditional deferred awards over shares in HSBC Holdings plc granted to executive Directors under the HSBC Share Plan 2011 are generally subject to the individual remaining an employee on the vesting date.

Changes were made to the Fixed Pay Allowance policy ('FPA') in 2016. For executive Directors of HSBC Holdings plc, the FPA will continue to be granted in shares and be subject to a retention period. Under the Remuneration Policy approved at the HSBC Holdings plc AGM in April 2016, the FPA will be capped at 150% of base salary levels for the executive Directors. These share awards will be released on a pro rata basis over five years starting from the March immediately following the end of the financial year in which the shares are granted. For all other employees including Group Managing Directors and Group General Managers of HSBC Holdings plc who are receiving FPA, the entire allowance is to be delivered in cash through payroll with effect from 1 July 2016.

Executive Directors and other senior executives of the Bank are subject to the Group's minimum shareholding requirements on shares in HSBC Holdings plc. Individuals are given five years from 2014 or their appointment, if later, to build up the recommended levels of shareholding.

During the year, Stuart Gulliver, Rose Lee and Peter Wong acquired or were awarded shares of HSBC Holdings plc under the terms of the HSBC Share Plan 2011, which includes GPSP and FPA share awards.

Apart from these arrangements, at no time during the year was the Bank, its holding companies, its subsidiaries or any fellow subsidiaries a party to any arrangements to enable the Directors to acquire benefits by means of the acquisition of shares in or debentures of the Bank or any other body corporate.

Donations

Donations made by the Bank and its subsidiaries during the year amounted to HK$344m (2015: HK$783m).

Compliance with the Banking (Disclosure) Rules

The Directors are of the view that the *Annual Report and Accounts* 2016, and Supplementary Notes on the Financial Statements 2016, which will be published separately, fully comply with the Banking (Disclosure) Rules made under section 60A of the Banking Ordinance.

Auditor

The *Annual Report and Accounts* have been audited by PricewaterhouseCoopers ('PwC'). A resolution to reappoint PwC as auditor of the Bank will be proposed at the forthcoming AGM.

Corporate Governance

The Bank is committed to high standards of corporate governance. As an Authorised Institution, the Bank is subject to and complies with the Hong Kong Monetary Authority ('HKMA') Supervisory Policy Manual CG-1 'Corporate Governance of Locally Incorporated Authorised Institutions'.

Board of Directors

The Board, led by the Chairman, provides entrepreneurial leadership of the Bank within a framework of prudent and effective controls which enables risks to be assessed and managed. The Directors are collectively responsible for the long-term success of the Bank and delivery of sustainable value to shareholders. The Board sets the strategy and risk appetite for the group and approves capital and operating plans presented by management for the achievement of the strategic objectives it has set.

Report of the Directors (continued)

Directors

The Bank has a unitary Board. The authority of each Director is exercised in Board meetings where the Board acts collectively. As at 21 February 2017, the Board comprised the Chairman, Deputy Chairman and Chief Executive, two Deputy Chairmen who are independent non-executive Directors, one other Director with executive responsibilities for a subsidiary's operations, one non-executive Director and another ten independent non-executive Directors.

Independence of non-executive Directors

Non-executive Directors are not HSBC employees and do not participate in the daily business management of the Bank. They bring an external perspective, constructively challenge and help develop proposals on strategy, scrutinise the performance of management in meeting agreed goals and objectives, and monitor the risk profile and reporting of performance of the Bank. The non-executive Directors bring experience from a number of industries and business sectors, including the leadership of large complex multinational enterprises. The Board has determined that each non-executive Director is independent in character and judgement and that twelve Directors are independent for the purpose of notification to the HKMA. In making this determination, it was agreed that there are no relationships or circumstances likely to affect the judgement of the independent non-executive Directors, with any relationships or circumstances that could appear to do so not considered to be material.

Chairman and Chief Executive

The roles of Chairman and Chief Executive are separate and held by experienced full-time employees of the HSBC Group. There is a clear division of responsibilities between leading the Board and the executive responsibility for running the Bank's business.

The Chairman provides leadership to the Board and is responsible for the overall effective functioning of the Board. The Chairman is responsible for the development of strategy and the oversight of implementation of Board approved strategies and direction. The Chief Executive is responsible for ensuring implementation of the strategy and policy as established by the Board and the day-to-day running of operations. The Chief Executive is chairman of the Executive Committee. Each Asia-Pacific Global Business and Global Function head reports to the Chief Executive.

Board Committees

The Board has established various committees consisting of Directors and senior management. The Board and each Board committee have terms of reference to document their responsibilities and governance procedures. The key roles of the committees are described in the paragraphs below. The chairman of each Board committee reports to each subsequent Board meeting when presenting the meeting minutes of the relevant committee.

Executive Committee

The Executive Committee meets monthly and is responsible for the exercise of all of the powers, authorities and discretions of the Board in so far as they concern the management, operations and day-to-day running of the group, in accordance with such policies and directions as the Board may from time to time determine, with power to sub-delegate. A schedule of items that require the approval of the Board is maintained.

The Bank's Deputy Chairman and Chief Executive, Peter Wong, is Chairman of the Committee. The current members of the Committee are: Diana Cesar *(Chief Executive Officer Hong Kong)*, Pui Mun Chan *(Head of Regulatory Compliance Asia-Pacific)*, Raymond Cheng *(Chief Operating Officer Asia-Pacific)*, Gordon French *(Head of Global Banking and Markets Asia-Pacific)*, Kathleen Gan *(Chief Financial Officer Asia-Pacific)*, Guy Harvey-Samuel *(Chief Executive Officer Singapore)*, Mukhtar Hussain *(Chief Executive Officer Malaysia)*, Vincent Li *(Head of Financial Crime Compliance, Asia-Pacific)*, David Liao *(Chief Executive Officer China)*, Kevin Martin *(Regional Head of Retail Banking and Wealth Management Asia-Pacific)*, Mark McKeown *(Chief Risk Officer, Asia-Pacific)*, Stuart Milne *(Chief Executive Officer India)*, Siew Meng Tan *(Regional Head of Global Private Banking Asia-Pacific)*, Jayant Rikhye *(Head of Strategy and Planning, Asia-Pacific and Head of International Asia-Pacific)*, Susan Sayers *(Regional General Counsel, Asia-Pacific)*, Stuart Tait *(Regional Head of Commercial Banking, Asia-Pacific)*, Donna Wong *(Head of Human Resources Asia-Pacific)*, Helen Wong *(Chief Executive Officer Greater China)*. Paul Stafford *(Corporation Secretary)* is the Committee Secretary. In attendance are: Malcolm Wallis *(Head of Communications Asia-Pacific)* and William Tam *(Deputy Secretary)*.

Asset and Liability Management Committee

The Asset and Liability Management Committee is chaired by the Chief Financial Officer and is responsible for providing direction on and monitoring of the group's balance sheet composition and capital (including Economic Capital), liquidity and funding structure, and structural exposures under normal and stressed conditions. The Committee consists of senior executives of the Bank, most of whom are members of the Executive Committee.

Risk Management Meeting

The Risk Management Meeting (formerly named the Risk Management Committee) is chaired by the Chief Risk Officer and is a formal governance committee established to provide recommendations and advice requested to the Chief Risk Officer on enterprise-wide management of all risks and the policies and guidelines for the management of risk within the Bank. The Meeting consists of senior executives of the Bank, most of whom are members of the Executive Committee.

Audit Committee

The Audit Committee meets at least four times a year and has non-executive responsibility for oversight of and advice to the Board on matters relating to financial reporting.

The current members of the Committee, all being independent non-executive Directors, are Kevin Westley (Chairman of the Committee), Graham Bradley, Irene Lee and Jennifer Li.

Governance structure

The Audit Committee monitors the integrity of the Financial Statements and oversees the internal control systems over financial reporting, covering all material controls. The Committee reviews the adequacy of resources, qualifications and experience of staff of the accounting and financial reporting function and their training programmes and budget. The Committee also reviews the Financial Statements before submission to the Board. It also monitors and reviews the effectiveness of the internal audit function and reviews the Bank's financial and accounting policies and practices. The Committee advises the Board on the appointment of the external auditor and is responsible for oversight of the external auditor. As part of the monitoring process, the Committee reviews minutes of meetings of subsidiaries' Audit Committees and the Asset and Liability Management Committee.

Risk Committee

The Risk Committee meets at least four times a year and has non-executive responsibility for oversight of and advice to the Board on high-level risk-related matters and risk governance. The current members of the Committee, all being independent non-executive Directors, are Graham Bradley (Chairman of the Committee), Dr Christopher Cheng, Irene Lee, Zia Mody and Kevin Westley.

Financial System Vulnerabilities Committee for India

A Financial System Vulnerabilities Committee for India was established by the Board as a sub-committee of the Risk Committee effective from 1 January 2017. The Committee is expected to meet six times in 2017 and is responsible for the review, monitoring and advice on the effectiveness of the policies, procedures and the controls framework established relating to financial crime and financial system abuse risks specific to India.

Governance structure

All of the Bank's activities involve, to varying degrees, the measurement, evaluation, acceptance and management of risk or combinations of risks. The Board, advised by the Risk Committee, requires and encourages a strong risk governance culture which shapes the Bank's attitude to risk. The Bank's risk governance is supported by the Group's enterprise-wide risk management framework which provides a clear policy of risk ownership and accountability of all staff for identifying, assessing and managing risks within the scope of their assigned responsibilities. This personal accountability, reinforced by clear and consistent employee communication on risk that sets the tone from senior leadership, the governance structure, mandatory learning and remuneration policy, helps to foster a disciplined and constructive culture of risk management and control throughout the group.

Report of the Directors (continued)

Risk management

The Board and the Risk Committee oversee the maintenance and development of a strong risk management framework by continually monitoring the risk environment, top and emerging risks facing the group and mitigating actions planned and taken. The Risk Committee recommends the approval of group's risk appetite statement to the Board and monitors performance against the key performance/risk indicators included within the statement. The Risk Committee monitors the risk profiles for all of the risk categories within the group's business. The Committee also monitors the effectiveness of the Bank's risk management and internal controls, including operational and compliance controls, and risk management systems. Regular reports from the Risk Management Meeting, which is the executive body responsible for overseeing risk, are also presented at each Risk Committee meeting to report on these items.

Nomination Committee

The Nomination Committee meets at least twice a year and is responsible for leading the process for Board appointments and for identifying and nominating, for the approval of the Board, candidates for appointment to the Board. Appointments to the Board are subject to the approval of the HKMA. The Committee considers plans for orderly succession to the Board and the appropriate balance of skills and experience on the Board.

The current members of the Committee, being a majority of independent non-executive Directors, are Stuart Gulliver (Chairman of the Committee), Laura Cha and Marjorie Yang. Peter Wong attends each meeting of the Committee.

Chairman's Committee

The Chairman's Committee acts on behalf of the Board either in accordance with authority delegated by the Board from time to time, or as specifically set out within its terms of reference. The Committee meets with such frequency and at such times as it may determine, and can implement previously agreed strategic decisions, approve specified matters subject to their prior review by the full Board, and act exceptionally on urgent matters within its terms of reference.

The current members of the Committee comprise the Chairman of the Board, the Deputy Chairman and Chief Executive, the non-executive Deputy Chairmen and the Chairmen of the Audit and Risk Committees.

Group Remuneration Committee

The Board of the Bank's ultimate holding company, HSBC Holdings plc, has established a Group Remuneration Committee comprising independent non-executive Directors. The Committee is responsible for determining and approving the Group's remuneration policy. The Committee also determines the remuneration of Directors, other senior Group employees, employees in positions of significant influence and employees whose activities have or could have an impact on the Bank's risk profile, and in doing so takes into account the pay and conditions across the HSBC Group. Having a Group Remuneration Committee is consistent with the principles set out in the HKMA Supervisory Policy Manual CG-5 'Guideline on a Sound Remuneration System'.

Remuneration policy

The remuneration policy for the HSBC Group, approved by the Group Remuneration Committee and applicable to the Bank, aims to reward success, not failure, and to be properly aligned with the risk management framework and risk outcomes. In order to ensure alignment between remuneration and business strategy, individual remuneration is determined through assessment of performance, delivered against both annual and long-term objectives summarised in performance scorecards, as well as adherence to HSBC Values of being 'open, connected and dependable' and acting with 'courageous integrity'. Altogether, performance is judged not only on what is achieved over the short and long term, but also on how it is achieved, as the latter contributes to the sustainability of the organisation. The financial and non-financial measures incorporated in the annual and long-term scorecards are carefully considered to ensure alignment with the long-term strategy of the HSBC Group.

An annual review of the Bank's remuneration strategy and its operation is commissioned externally and carried out independently of management. The review confirms that the Bank's remuneration policy is consistent with the principles set out in the HKMA Supervisory Policy Manual CG-5 'Guideline on a Sound Remuneration System'.

In accordance with the 'Guideline on a Sound Remuneration System', details of the remuneration strategy are contained within the *Annual Report and Accounts* 2016 of HSBC Holdings plc.

Banking structural reform and recovery and resolution planning

Globally there have been a number of developments relating to banking structural reform and the introduction of recovery and resolution regimes.

The Financial Institutions (Resolution) Ordinance (‘FIRO’) was enacted by the Hong Kong Legislative Council in June 2016. The FIRO provides the legal basis for the establishment of a resolution regime for financial institutions in Hong Kong to mitigate the risks posed by the non-viability of systemically important financial institutions to the stability and effective working of the financial system of Hong Kong. The FIRO is expected to commence operation during 2017 following the Legislative Council's passing of the protected arrangements regulations to be made as subsidiary legislation under the FIRO. Details of certain key aspects, including operation of bail-in and requirements for total loss-absorbing capacity (‘TLAC’), will follow the rules and regulations that are expected to be progressed by the HKMA in 2017.

The HSBC Group is working with our primary regulators to develop and agree a resolution strategy for the HSBC Group. The preferred resolution strategy for the group is a bail-in by the HKMA at an intermediate holding company (‘IHC’) in Hong Kong to recapitalise the group as a whole. Given the above, considerations are being progressed for the establishment of an IHC in Hong Kong as the resolution entity for the group whereby adequate loss absorbing capacity will be available in a form that will be bailed in with certainty at the point of resolution.

Similar to all Global Systemically Important Banks (‘G-SIBs’), the Group is working with our regulators to mitigate or remove critical inter-dependencies between our subsidiaries to further facilitate the resolution of the HSBC Group. In particular, in order to remove operational dependencies (where one subsidiary bank provides critical services to another), the HSBC Group is in the process of transferring critical services from our subsidiary banks to a separate internal group of service companies (‘ServCo Group’). Transfers of employees, critical shared services and assets in Hong Kong will be considered in due course.

Business review

The Bank is exempt from the requirement to prepare a business review under section 388(3) of the Companies Ordinance Cap. 622 since it is a wholly-owned subsidiary of HSBC Holdings plc.

On behalf of the Board
Stuart Gulliver, *Chairman*
21 February 2017

Financial Review

Summary of Financial Performance

Results for 2016

Profit before tax for 2016 reported by The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') decreased by HK$14,572m, or 12%, to HK$102,707m.

Consolidated income statement by global business *(audited)*

	Retail Banking and Wealth Management HK$m	Commercial Banking HK$m	Global Banking & Markets HK$m	Global Private Banking HK$m	Corporate Centre[1] HK$m	Total HK$m
Year ended 31 December 2016						
Net interest income	**43,632**	**26,945**	**17,367**	**1,444**	**7,520**	**96,908**
Net fee income	**17,949**	**10,355**	**9,502**	**1,278**	**218**	**39,302**
Net trading income	**1,377**	**2,450**	**17,168**	**1,007**	**2,062**	**24,064**
Net income/(expense) from financial instruments designated at fair value	**3,591**	**(276)**	**91**	**–**	**164**	**3,570**
Gains less losses from financial investments	**335**	**249**	**33**	**–**	**615**	**1,232**
Dividend income	**67**	**1**	**–**	**–**	**166**	**234**
Net insurance premium income/(expense)	**52,954**	**3,004**	**–**	**–**	**(46)**	**55,912**
Other operating income	**7,792**	**473**	**1,143**	**15**	**2,093**	**11,516**
Total operating income	**127,697**	**43,201**	**45,304**	**3,744**	**12,792**	**232,738**
Net insurance claims and benefits paid and movement in liabilities to policyholders	**(61,280)**	**(3,306)**	**–**	**–**	**–**	**(64,586)**
Net operating income before loan impairment charges and other credit risk provisions	**66,417**	**39,895**	**45,304**	**3,744**	**12,792**	**168,152**
Loan impairment (charges)/releases and other credit risk provisions	**(2,133)**	**(2,469)**	**(874)**	**4**	**(82)**	**(5,554)**
Net operating income	**64,284**	**37,426**	**44,430**	**3,748**	**12,710**	**162,598**
Operating expenses	**(32,520)**	**(14,971)**	**(19,413)**	**(2,332)**	**(5,567)**	**(74,803)**
Operating profit	**31,764**	**22,455**	**25,017**	**1,416**	**7,143**	**87,795**
Share of profit in associates and joint ventures	**148**	**–**	**–**	**–**	**14,764**	**14,912**
Profit before tax	**31,912**	**22,455**	**25,017**	**1,416**	**21,907**	**102,707**
Net loans and advances to customers	**936,310**	**996,772**	**791,522**	**91,574**	**17,936**	**2,834,114**
Customer accounts	**2,537,128**	**1,286,368**	**857,583**	**192,163**	**26,762**	**4,900,004**

Consolidated income statement by global business *(continued)*

	Retail Banking and Wealth Management HK$m	Commercial Banking HK$m	Global Banking & Markets HK$m	Global Private Banking HK$m	Corporate Centre[1] HK$m	Total HK$m
Year ended 31 December 2015						
(Re-presented)						
Net interest income	40,373	26,389	17,684	1,356	8,575	94,377
Net fee income	22,191	11,450	10,174	1,658	186	45,659
Net trading income/(expense)	1,532	2,527	18,788	990	(221)	23,616
Net income/(expense) from financial instruments designated at fair value	(2,542)	(241)	51	–	172	(2,560)
Gains less losses from financial investments	333	116	26	–	11,136	11,611
Dividend income	12	–	4	–	194	210
Net insurance premium income/(expense)	49,161	3,456	–	–	(24)	52,593
Other operating income	5,421	604	1,119	33	3,262	10,439
Total operating income	116,481	44,301	47,846	4,037	23,280	235,945
Net insurance claims and benefits paid and movement in liabilities to policyholders	(48,684)	(3,746)	–	–	(1)	(52,431)
Net operating income before loan impairment charges and other credit risk provisions	67,797	40,555	47,846	4,037	23,279	183,514
Loan impairment (charges)/releases and other credit risk provisions	(2,370)	(3,079)	385	(5)	(5)	(5,074)
Net operating income	65,427	37,476	48,231	4,032	23,274	178,440
Operating expenses	(33,448)	(15,229)	(20,434)	(2,438)	(5,442)	(76,991)
Operating profit	31,979	22,247	27,797	1,594	17,832	101,449
Share of profit in associates and joint ventures	177	–	–	–	15,653	15,830
Profit before tax	32,156	22,247	27,797	1,594	33,485	117,279
Net loans and advances to customers	913,038	979,438	751,518	101,873	16,423	2,762,290
Customer accounts	2,352,493	1,243,696	801,441	222,320	20,126	4,640,076

1 *Includes inter-segment elimination*

During 2016, segmental reporting has been changed from geographical region to global business. Details on the change in reportable segment are set out in note 37 ‘Segmental analysis’.

During the year, management has also made the decision to realign certain functions to a Corporate Centre. These include balance sheet management, certain interests in associates and joint ventures, as well as results of our financing operations and central support costs with associated recoveries. In addition, a portfolio of customers has been transferred from CMB to GB&M during the year to align customer requirements to those global businesses best suited to service their respective needs. Comparative figures have been re-presented to conform to current year presentation.

Financial Review (continued)

Results Commentary *(unaudited)*

The group reported profit before tax of HK$102,707m, a decrease of 12% compared with 2015, mainly reflecting the non-recurrence of the gain on partial disposal of Hang Seng's shareholding in Industrial Bank of HK$10,636m in 2015. Excluding this gain, profit before tax decreased by HK$3,936m, or 4%, mainly driven by lower net fee income from wealth management as the strong equity market performance in the first half of 2015 was not repeated in 2016.

Net interest income increased by HK$2,531m, or 3%, compared with 2015, mainly in Hong Kong driven by growth in financial investments from increased commercial surplus and insurance fund size, coupled with improved deposit spreads. This was partly offset by lower net interest income in mainland China due to successive rate cuts by the Central Bank throughout 2015.

Net fee income decreased by HK$6,537m, or 14%, compared with 2015, mainly in Hong Kong from lower securities broking income, unit trust and global custody fees, as the strong market performance in the first half of 2015 was not repeated in 2016. Net fee income also decreased in Singapore and mainland China from lower unit trust fees and lower trade-related fees.

Net trading income increased by HK$448m, or 2%, driven by mainland China from lower revaluation losses and interest expense on structured deposits, and in India from higher Rates trading income. These increases were partly offset by lower trading income in Hong Kong from equities trading, coupled with lower foreign exchange income, partly offset by higher Rates trading income.

Net income from financial instruments designated at fair value increased by HK$6,130m, driven by revaluation gains on the equity portfolio held by the insurance business in Hong Kong in 2016, compared with revaluation losses in 2015. To the extent that revaluation is attributable to policyholders, there is an offsetting movement reported under 'Net insurance claims and benefits paid and movement in liabilities to policyholders'.

Gains less losses from financial investments decreased by HK$10,379m, mainly reflecting the non-recurrence of the gain on partial disposal of Hang Seng's shareholding in Industrial Bank.

Other operating income increased by HK$1,077m, or 10%, mainly driven by the movement in the present value of in-force insurance business as a result of a favourable interest rate assumption update. This was partly offset by the non-recurrence of a gain from the 150th anniversary banknotes issuance in 2015 (fully offset by a corresponding decrease in operating expenses), coupled with lower revaluation gains on investment properties in Hong Kong.

Loan impairment charges and other credit risk provisions increased by HK$480m, or 9%, mainly due to an increase in individually assessed impairment charges in Hong Kong, mainly in GB&M due to the non-recurrence of an impairment release in 2015, and higher charges in CMB. Increases were also noted to a lesser extent in Singapore and mainland China, partly offset by a decrease in Indonesia, mainly in CMB. These were partly offset by lower collectively assessed impairment charges.

Total operating expenses decreased by HK$2,188m, or 3%, mainly due to lower staff costs, and also from the non-recurrence of charitable donations and other expenses in relation to the 150th anniversary banknotes issuance in 2015, partly offset by higher professional and consultancy expenses on regulatory and compliance programmes, Global Standards and transformation initiatives, coupled with higher IT-related costs and rental expenses.

Share of profit in associates and joint ventures decreased by HK$918m, or 6%, mainly from the impact of foreign exchange translation.

Net interest income *(unaudited)*

	2016 HK$m	2015 HK$m
Net interest income	**96,908**	94,377
Average interest-earning assets	**5,527,461**	5,311,284
Net interest margin	**%**	%
Spread	**1.67**	1.67
Contribution from net free funds	**0.08**	0.11
Total	**1.75**	1.78

Net interest income ('NII') increased by HK$2,531m compared with 2015. Excluding the impact from foreign exchange translation, NII rose by HK$3,879m, or 4%, mainly in Hong Kong driven by growth in financial investments from increased commercial surplus and insurance fund size, coupled with improved deposit spreads. This was partly offset by lower NII in mainland China due to successive rate cuts by the Central Bank throughout 2015.

Average interest-earning assets increased by HK$216bn, or 4%, compared with 2015, driven by Hong Kong mainly due to an increase in financial investments from the deployment of increased commercial surplus.

Net interest margin decreased by three basis points compared with 2015, mainly from mainland China, partly offset by an increase in Hong Kong.

In **Hong Kong,** the net interest margin for the Bank increased by three basis points, mainly due to improved customer deposit spreads, although the impact was partly offset by a change in portfolio mix as commercial surplus continued to increase, which was deployed in relatively lower yielding financial investments.

At **Hang Seng Bank,** the net interest margin decreased by three basis points, mainly from compressed customer lending spreads, notably in term lending, partly offset by improved customer deposit spreads.

In mainland China**,** the net interest margin decreased from compressed customer lending spreads and lower reinvestment yields in Balance Sheet Management, coupled with lower contribution from net free funds. To a lesser extent, decreases in the net interest margin were also noted in Australia and India, although these were partly offset by an increase in Singapore.

Insurance income *(unaudited)*

Included in net operating income are the following revenues earned by the insurance business:

	2016 HK$m	2015 HK$m
Net interest income	**11,543**	10,486
Net fee income	**2,044**	1,941
Net trading loss	**(1,126)**	(656)
Net income/(expense) from financial instruments designated at fair value	**3,315**	(2,783)
Net insurance premium income	**55,912**	52,593
Movement in PVIF	**7,306**	4,689
Other operating income	**771**	760
	79,765	67,030
Net insurance claims and benefits paid and movement in liabilities to policyholders	**(64,586)**	(52,431)
Net operating income	**15,179**	14,599

Financial Review (continued)

Insurance income (continued)

Net interest income increased by 10% from growth in insurance fund size, reflecting net inflows from new and renewal of life insurance premiums.

Net trading loss increased due to higher revaluation losses on cross currency swaps supporting non-linked insurance contracts in Hong Kong.

Net income from financial instruments designated at fair value increased, driven by Hong Kong, with revaluation gains on the equity portfolio in 2016 compared with revaluation losses in 2015. To the extent that revaluation is attributable to policyholders, there is an offsetting movement reported under 'Net insurance claims and benefits paid and movement in liabilities to policyholders'.

Net insurance premium income increased, mainly in Hong Kong, driven by an increase in new business sales. The movement in present value of in-force business increased by HK$2,617m, mainly in Hong Kong as a result of a favourable interest rate assumption update. These increases were partly offset by a corresponding increase in 'Net insurance claims and benefits paid and movement in liabilities to policyholders'.

Balance sheet *(unaudited)*

The consolidated balance sheet at 31 December 2016 is set out in the Financial Statements.

Gross loans and advances to customers grew by HK$73bn, or 3%, to HK$2,847bn. Gross loans and advances in Hong Kong increased by HK$114bn, or 7%, largely from increases in corporate and commercial lending, lending to non-bank financial institutions and residential mortgages. Gross loans and advances to customers in Australia and India also increased, although these were partly offset by decreases in Singapore, mainland China and Malaysia.

Overall credit quality remained strong, with total gross impaired loans and advances as a percentage of gross loans and advances standing at 0.68% at the end of 2016, compared with 0.66% at the end of December 2015. Loan impairment charges as a percentage of average gross customer advances remained low at 0.20% for 2016 (2015: 0.18%).

Interest in associates and joint ventures

At 31 December 2016, an impairment review on the group's investment in Bank of Communications Co., Ltd ('BoCom') was carried out and it was concluded that the investment was not impaired based on our value in use calculation (see note 15 on the Financial Statements for further details). In future periods, the value in use may increase or decrease depending on the effect of changes to model inputs. It is expected that the carrying amount will increase in 2017 due to retained profits earned by BoCom. At the point where the carrying amount exceeds the value in use, the group would continue to recognise its share of BoCom's profit or loss, but the carrying amount would be reduced to equal the value in use, with a corresponding reduction in income, unless the market value has increased to a level above the carrying amount.

Customer deposits rose by HK$260bn, or 6%, to HK$4,900bn. At 31 December 2016, the advances-to-deposits ratio was 57.8%, compared with 59.5% at 31 December 2015.

Shareholders' equity grew by HK$44bn to HK$628bn at 31 December 2016. Retained profits rose by HK$33bn, mainly reflecting current year's profit, net of dividend payments. Share capital also increased by HK$18bn due to the issuance of ordinary shares during the year for general corporate purposes and to further strengthen the capital base.

Risk Report

Risk Management

(Unaudited)

All the group's activities involve to varying degrees, the measurement, evaluation, acceptance and management of risk or combinations of risks.

As a provider of banking and financial services, we actively manage risk as a core part of our day-to-day activities.

Risk management framework

The HSBC Group Head Office formulates high-level risk management policies for the HSBC Group worldwide. We use an enterprise-wide risk management framework at all levels of the organisation and across all risk types. It is underpinned by a strong risk culture and is reinforced by HSBC Values and our Global Standards.

The framework fosters continuous monitoring of the risk environment and an integrated evaluation of risks and their interactions. It also ensures a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities.

The following diagram and descriptions summarise key aspects of the framework: the governance and structure; the risk management tools; and our risk culture, which together help align employee behaviour with our risk appetite.

Key aspects of risk management framework

HSBC Values and Risk Culture

Governance and Structure	The Board and its Committees Risk Committee	The Board approves risk appetite, plans and performance targets which sets the 'tone from the top'. Risk Committee advises on risk appetite, risk governance and other high-level risk related matters.
	The Risk Management Meeting	Responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk within the group
	Risk governance framework	Ensures appropriate oversight of and accountability for management of risk
Responsibilities	Three lines of defence model People Independent Risk function	Our 'Three lines of defence' model defines roles and responsibilities for risk management. Our risk culture empowers our people to do the right thing for our customers, reinforced by our approach to remuneration. An Independent Risk function ensures the necessary balance in risk/return decisions.
Processes	Risk management tools Risk Appetite Top and emerging risks Risk map Stress testing	Processes to identify, monitor and mitigate risks to ensure we remains within our risk appetite.
Controls	Banking and insurance risks	Material risks arising from our business activities that are measured, monitored and managed.
	Risk policies and practices	Set by Risk stewards for each of our principal banking and insurance risks
	Internal Controls	The operational risk management framework defines minimum standards and processes for managing operational risks and internal controls

Systems and tools

Our risk culture

HSBC has long recognised the importance of a strong risk culture, the fostering of which is a key responsibility of senior executives. Our risk culture is reinforced by HSBC Values and our Global Standards. It is instrumental in aligning the behaviours of individuals with our attitude to assuming and managing risk, which helps to ensure that our risk profile remains in line with our risk appetite.

We use clear and consistent employee communications on risk to convey strategic messages and set the tone from senior management. A suite of mandatory training on risk and compliance topics is deployed to embed skills and understanding in order to strengthen our risk culture and reinforce the attitude to risk in the behaviour expected of employees, as described in our risk policies. Mandatory training materials are updated regularly, describing technical, cultural and ethical aspects of the various risks assumed by the group and how they should be managed effectively. Staff are supported in their roles by a disclosure line which enables them to report matters of concern confidentially.

Our risk culture is reinforced by our approach to remuneration. Individual awards, including those for executives, are based on compliance with HSBC Values and the achievement of financial and non-financial objectives which are aligned to our risk appetite and global strategy.

Risk governance structure

The Board has ultimate responsibility for the effective management of risk and approves the group's risk appetite. It is advised by the Risk Committee on risk appetite and its alignment with strategy, risk governance and internal controls, and high-level risk related matters.

Executive accountability for the ongoing monitoring, assessment and management of risk resides with the group's Chief Risk Officer, supported by the Risk Management Meeting ('RMM').

Day-to-day responsibility for risk management is delegated to senior management with individual accountability. These managers are supported by global functions as described under 'Three lines of defence' below.

Responsibilities

All employees are required to identify, assess and manage risk within the scope of their responsibilities as part of the three lines of defence model.

Three lines of defence

We use the three lines of defence model to delineate management accountabilities and responsibilities over risk management and the control environment, thereby creating a robust control environment to manage inherent risks. The model underpins our approach to strong risk management by defining responsibilities, encouraging collaboration and enabling efficient coordination of risk and control activities.

The three lines consist of:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them and ensuring that the right controls and assessments are in place to mitigate these risks.
- The second line of defence sets the policy and guidelines for managing the risks and provides advice, guidance and challenge to the first line of defence on effective risk management.
- The third line of defence is Internal Audit which helps the Board and Executive Management to protect the assets, reputation and sustainability of the group.

Independent Risk function

- The group's Risk function, headed by the group's Chief Risk Officer, is responsible for enterprise-wide risk oversight. This includes establishing and monitoring of risk profiles and forward-looking risk identification and management. The group's Risk function is made up of sub-functions covering all risks to our operations and forms part of the second line of defence. They are independent from the sales and trading functions, ensuring the necessary balance in risk/return decisions.

Risk management tools

The Group uses a range of tools to identify, monitor and manage risk. The key tools are summarised below.

Risk appetite

The group's risk appetite defines its desired forward-looking risk profile and informs the strategic and financial planning process. It is also integrated within other risk management tools such as stress testing and our top and emerging risks report to ensure consistency in risk management practices.

The group sets out the aggregated level and risk types it accepts in order to achieve its business objectives in a Risk Appetite Statement ('RAS'). This is reviewed on an ongoing basis, with formal approval from the Board on an annual basis on the recommendation of the group's Risk Committee.

The group's actual risk appetite position is reported to the group's RMM on a monthly basis to enable senior management to monitor the risk profile and guide business activities in order to balance risk and return. This allows risks to be promptly identified and mitigated, and inform risk-adjusted remuneration to drive a strong risk culture across the group.

The RAS is established and monitored as part of the Global Risk Appetite Framework ('GRAF'), which provides a globally consistent and structured approach to the management, measurement and control of risk by detailing the processes, governance and other features of how risk appetite is cascaded to drive day-to-day decision-making through policies, limits and the control framework.

Global businesses and strategic countries are required to have their own RASs, which are subject to assurance to ensure they remain directionally aligned to the group's RAS. All RASs and business activities are guided and underpinned by a set of qualitative principles. Additionally, quantitative metrics are defined along with appetite and tolerance thresholds for key risk areas.

Risk map

The group uses a risk map to provide a point-in-time view of its risk profile across a suite of risk categories, including our material banking and insurance risks (see page 18). This highlights the potential for these risks to materially affect our financial results, reputation or business sustainability on current and projected bases. Risk stewards assign 'current' and 'projected' risk ratings, supported by commentary. Risks that have an 'Amber' or 'Red' risk rating require monitoring and mitigating action plans being either in place or initiated to manage the risk down to acceptable levels.

Top and emerging risks

We use a top and emerging risks process to provide a forward-looking view of issues that have the potential to threaten the execution of our strategy or operations over the medium to long term.

We define a 'top risk' as a thematic issue arising across any combination of risk map categories, countries or global businesses which has the potential to have a material effect on the group's financial results, reputation or long-term business model, and which may form and crystallise between six months and one year. The risk impact may be well understood by senior management, with some mitigating actions already in place. Stress tests of varying granularity may also have been carried out to assess the effect.

An 'emerging risk' is defined as a thematic issue that has large unknown components which may form and crystallise beyond a one year time horizon. If it were to materialise, it could have a significant material effect on a combination of the group's long-term strategy, profitability and reputation. Existing management action plans are likely to be minimal, reflecting the uncertain nature of these risks at this stage. Some high-level analysis and/or stress testing may have been carried out to assess the impact.

Our top and emerging risks are discussed on page 21.

Stress testing

Our stress testing programme examines the sensitivities and resilience of our capital plans and unplanned demand for regulatory capital under a number of scenarios and ensures that top and emerging risks are appropriately considered. These scenarios include, but are not limited to, adverse macroeconomic events, failures at country, sector and counterparty levels, geopolitical occurrences and a variety of projected major operational risk events. Scenarios are translated into financial impacts to assess the sensitivities and resilience of our capital demand. Action plans are developed to mitigate identified risks. The group's Risk Committee is informed and consulted on the group's stress testing activities, as appropriate.

Reverse stress testing is run annually on both Group and, where required, subsidiary entity bases. Reverse stress testing is used to strengthen our resilience by identifying potential stresses and vulnerabilities which the group might face and helping to inform early-warning triggers, management actions and contingency plans designed to mitigate their effect, were they to occur.

Risks managed by HSBC

The principal risks associated with our banking and insurance manufacturing operations are described in the tables below.

Description of risks - banking operations
(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
The risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	• Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.	Credit risk: • is measured as the amount which could be lost if a customer or counterparty fails to make repayments; • is monitored within limits approved by individuals within a framework of delegated authorities; and • is managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.
Liquidity and funding risk		
The risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we can only do so at excessive cost.	• Liquidity risk arises from mismatches in the timing of cash flows. • Funding risk arises when illiquid asset positions cannot be funded at the expected terms and when required.	Liquidity and funding risk: • is measured using a range of different metrics including liquidity coverage ratio and net stable funding ratio; • is monitored against the Group's liquidity and funding risk framework; and • is managed on a stand-alone basis with no reliance on any Group entity (unless pre-committed) or central bank unless this represents routine established business-as-usual market practice.
Market risk		
The risk that movements in market factors will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: • Trading portfolios • Non-trading portfolios	Market risk: • is measured in terms of value at risk ('VaR'), which is used to estimate potential losses on risk positions over a specified time horizon for a given level of confidence. It is augmented with stress testing; • is monitored using VaR, stress testing and other measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and • is managed using risk limits approved by the RMM for the group and the various global businesses.

Risks	Arising from	Measurement, monitoring and management of risk
Operational risk		
The risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events.	• Operational risk arises from day to day operations or external events, and is relevant to every aspect of our business. • Regulatory compliance risk and financial crime risk are discussed below.	Operational risk: • is measured using the risk and control assessment process, which assesses the level of risk and effectiveness of controls; • is monitored using key indicators and other internal control activities; and • is primarily managed by global business and functional managers who identify and assess risks, implement controls to manage them and monitor the effectiveness of these controls using the operational risk management framework.
Regulatory compliance risk		
The risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.	• Regulatory compliance risk is part of operational risk, and arises from the provision of products and services to clients and counterparties.	Regulatory compliance risk: • is measured by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our Regulatory Compliance teams; • is monitored against our compliance risk assessments and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • is managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to assure their observance. Proactive risk control and/or remediation work is undertaken where required.
Financial crime risk		
The risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity through HSBC.	• Financial crime risk is part of operational risk and arises from day to day banking operations.	Financial crime risk: • is measured by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our Financial Crime Compliance teams; • is monitored against the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • is managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to assure their observance. Proactive risk control and/or remediation work is undertaken where required.
Other material risks		
Reputational risk		
The risk of failure to meet stakeholder's expectations as a result of any event, behaviour, action or inaction, either by HSBC itself, our employees or those with whom we are associated, that might cause stakeholders to form a negative view of the Group.	• Primary reputational risks arise directly from an action or inaction by HSBC, its employees or associated parties that are not the consequence of another type of risk. Secondary reputational risks are those arising indirectly and are a result of a failure to control any other risks.	Reputational risk: • is measured by reference to our reputation as indicated by our dealings with all relevant stakeholders, including media, regulators, customers and employees; • is monitored through a reputational risk management framework that is integrated into the Group's broader risk taxonomy; and • is managed by every member of staff and is covered by a number of policies and guidelines. There is a clear structure of committees and individuals charged with mitigating reputational risk.
Pension risk		
The risk that the performance of assets held in pension plans is insufficient to cover existing pension liabilities resulting in an increase in obligation to support the plans.	• Pension risk arises from investments delivering an inadequate return, adverse changes in interest rates or inflation, or members living longer than expected. Pension risk includes operational risks listed above.	Pension risk: • is measured in terms of the schemes' ability to generate sufficient funds to meet the cost of their accrued benefits; • is monitored through the specific risk appetite; and • is managed through the appropriate pension risk governance structure.

Risk Report (continued)

Risks	Arising from	Measurement, monitoring and management of risk
Sustainability risk		
The risk that financial services provided to customers by the group indirectly result in unacceptable impacts on people or on the environment.	• Sustainability risk arises from the provision of financial services to companies or projects which indirectly result in unacceptable impacts on people or on the environment.	Sustainability risk: • is measured by assessing the potential sustainability effect of a customer's activities and assigning a Sustainability Risk Rating to all high risk transactions; • is monitored by the RMM and by Group Sustainability Risk; and • is managed using sustainability risk policies covering project finance lending and sector-based sustainability policies for sectors and themes with potentially high environmental or social impacts.

Our insurance manufacturing subsidiaries are separately regulated from our banking operations. Risks in the insurance entities are managed using methodologies and processes appropriate to insurance manufacturing operations, but remain subject to oversight at group level. Our insurance operations are also subject to the operational and other material risks presented in relation to the banking operations, and these are covered by the group's respective risk management processes.

Description of risks - insurance manufacturing operations

Risks	Arising from	Measurement, monitoring and management of risk
Insurance risk		
The risk that, over time, the cost of acquiring and administering an insurance contract and paying claims and benefits may exceed the aggregate amount of premiums received and investment income.	• The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, lapse and surrender rates and, if the policy has a savings element, the performance of the assets held to support the liabilities.	Insurance risk: • is measured in terms of economic capital; • is monitored by the Risk Management Meeting of the Insurance operations; and • is managed both centrally and locally using asset and liability matching, product design, underwriting, reinsurance and claims-handling procedures.
Financial risks		
Our ability to effectively match the liabilities arising under insurance contracts with the asset portfolios that back them are contingent on the management of financial risks such as market, credit and liquidity risks, and the extent to which these risks are borne by the policyholders. *Contracts with discretionary participation features share the performance of the underlying assets between policyholders and the shareholder in line with the type of contract and the specific contract terms.*	Exposure to financial risks arises from: • market risk of changes in the fair values of financial assets or their future cash flows from fluctuations in variables such as interest rates, foreign exchange rates and equity prices; • credit risk and the potential for financial loss following the default of third parties in meeting their obligations; and • liquidity risk of entities not being able to make payments to policyholders as they fall due as there are insufficient assets that can be realised as cash within the required timeframe.	Financial risks: • are measured separately for each type of risk: – market risks are measured in terms of exposure to fluctuations in key financial variables; – credit risk is measured as the amount which could be lost if a counterparty fails to make repayments; and – liquidity risk is measured using internal metrics including stressed operational cash flow projections; • are monitored within limits approved by individuals within a framework of delegated authorities; • are managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers. Subsidiaries manufacturing products with guarantees are usually exposed to falls in market interest rates and equity prices to the extent that the market exposure cannot be managed by using any discretionary participation (or bonus) features within the policy contracts they issue; and • can be mitigated through sharing of risk with policyholders under the discretionary participation features for participating products.

Top and emerging risks

(Unaudited)

Our approach to identifying and monitoring top and emerging risks is described on page 17. Our current key top and emerging risks are as follows:

- Deferred Prosecution Agreement and related agreements and consent orders
- Adverse credit risk outlook
- Cyber threat and unauthorised access to systems
- Elevated regional political risk
- Impact of organisational change and regulatory demand on employees

Deferred Prosecution Agreement and related agreements and consent orders

HSBC is subject to a deferred prosecution agreement ('US DPA'). The US DPA and the work of the independent compliance monitor ('the Monitor') are discussed on page 42.

The design and execution of the anti-money laundering ('AML') and sanctions remediation plans to address the findings of the US DPA are complex and require major investments in people, systems and other infrastructure. This complexity creates significant execution risk, which could affect our ability to effectively identify and manage financial crime risk and remedy AML and sanctions compliance deficiencies in a timely manner. If HSBC were to breach the US DPA, potential consequences 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. A breach could also result in restrictions on performing dollar-clearing functions through HSBC Bank USA or revocation of bank licences.

Regulatory scrutiny of financial crime risks that may arise from clearing payments on behalf of HSBC affiliates, particularly US dollar transactions, has increased. If clearing banks fail to conduct adequate due diligence on clients, including affiliates, or the affiliates do not remediate with urgency any control deficiencies in this regard, it could result in the curtailment of currency clearing services for certain Group affiliates.

Mitigating actions

- We continued to make progress during 2016 towards putting in place a robust and sustainable AML and sanctions compliance programme, including the on-going development of the Financial Crime Compliance sub-function, rolling out improved systems and infrastructure to manage financial crime risk and improve transaction monitoring, and enhancing internal audits.
- We are working to implement the agreed recommendations flowing from the Monitor's previous reviews, and will implement the agreed recommendations from the 2016 review.
- We are remediating customer due diligence processes and controls in certain affiliates and have increased scrutiny of higher-risk payments.

Adverse credit risk outlook

The long-anticipated move by the US Federal Reserve Board to raise interest rates and the slowdown in mainland China's economy, which is expected to continue, have increased risk aversion in global markets.

Sentiment towards mainland China could also deteriorate amid concerns over its increasing debt burden, and political events in the US, UK and EU could deliver negative economic outcomes.

Impairment allowances or losses could begin to rise if the credit quality of our customers is affected by less favourable global economic conditions in some markets. There may be impacts on delinquency and losses in some portfolios which may be impacted by worsening macroeconomic conditions and their possible effects on particular geographies or industry sectors.

Mitigating actions

- We closely monitor economic developments in key markets and sectors, taking portfolio actions where necessary including enhanced monitoring or reducing limits and exposures.
- We stress test those portfolios of particular concern to identify sensitivity to loss, with management actions taken to control appetite where necessary.
- Reviews of key portfolios are undertaken regularly to ensure that individual customer or portfolio risks are understood and that the level of facilities offered and our ability to manage through any downturn are appropriate.

Cyber threat and unauthorised access to systems

Like other public and private organisations, we continue to be a target of increasing and more sophisticated cyber attacks which may disrupt customer services.

Mitigating actions

- We continue to strengthen and invest significantly in our ability to prevent, detect and respond to the ever-increasing and sophisticated threat of cyber-attacks. Specifically, we continue to enhance our capabilities to protect against increasingly sophisticated malware, denial of service attacks and data leakage prevention as well as enhancing our security event detection and incident response processes.
- We participate in intelligence sharing with both law enforcement and industry schemes to help improve our understanding of, and ability to respond to, the evolving threats faced by ourselves and our peers within our industry.

Elevated regional political risk

The new US administration could exacerbate an already volatile Asia-Pacific geopolitical landscape. Potential political crisis scenarios on the Korean peninsula, the Taiwan Strait or the South China Sea could disrupt trade flows and impact our operations.

Mitigating actions

- We continuously monitor the geopolitical outlook, in particular in countries where we have material exposures and/or a physical presence.
- We incorporate geopolitical scenarios, such as conflicts in countries where we have a significant presence or political developments that could disrupt our operations, into our internal stress tests to assess their potential effect on our portfolios and businesses.

Impact of organisational change and regulatory demand on employees

Significant demands continue to be placed on our staff. The cumulative workload arising from regulatory reform and remediation programmes together with those related to the delivery of our strategy, continues to place increasingly complex and conflicting demands on a workforce that operates in an employment market where expertise in key markets is often in short supply and mobile.

Mitigating actions

- We continue to increase the level of specialist resource in key areas, and to engage with our regulators as they finalise new regulations.
- We use a broad array of talent sourcing channels, succession planning for key management roles, and heightened promotion of opportunities internally, with particular attention in our more challenging markets.

Credit Risk

(Audited)

Credit risk generates the largest regulatory capital requirement of the risks we incur. The group has standards, policies and procedures dedicated to controlling and monitoring risk from all such activities. The group's principal credit risk management procedures and policies, which follow policies established by HSBC Group Head Office, include the following:

- Formulating credit policies which are consistent with the Group credit policy and documenting these in detail in dedicated manuals.
- Establishing and maintaining the group's large credit exposure policy. This policy delineates the group's maximum exposures to individual customers, customer groups and other risk concentrations.
- Establishing and complying with lending guidelines on the group's attitude towards, and appetite for, lending to specified market sectors and industries.
- Undertaking an objective assessment of risk. All commercial non-bank credit facilities originated by the group in excess of designated limits are subject to review prior to the facilities being committed to customers.
- Controlling exposures to banks and other financial institutions. The group's credit and settlement risk limits to counterparties in the finance and government sectors are designed to optimise the use of credit availability and avoid excessive risk concentration.
- Managing exposures to debt securities by establishing controls in respect of the liquidity of securities held for trading and setting issuer limits for financial investments. Separate portfolio limits are established for asset-backed securities and similar instruments.
- Controlling cross-border exposures to manage country and cross-border risk through the imposition of country limits, with sub-limits by maturity and type of business.
- Controlling exposures to selected industries. When necessary, restrictions are imposed on new business, or exposures in the group's operating entities are capped.
- Maintaining and developing risk ratings in order to categorise exposures meaningfully and facilitate focused management of the attendant risks. Rating methodology is based upon a wide range of financial analytics together with market data-based tools which are core inputs to the assessment of counterparty risk. Although automated risk-rating processes are increasingly used for the larger facilities, ultimate responsibility for setting risk grades rests in each case with the final approving executive. Risk grades are reviewed frequently and amendments, where necessary, are implemented promptly.

Both the group's Risk Management Meeting ('RMM') and HSBC Group Head Office receive regular reports on credit exposures. These include information on large credit exposures, concentrations, industry exposures, levels of impairment provisioning and country exposures.

RMM has the responsibility for risk approval authorities and approving definitive risk policies and controls. It monitors risk inherent to the financial services business, receives reports, determines action to be taken and reviews the efficacy of the risk management framework.

The Executive Committee ('EXCO') and RMM are supported by a dedicated group risk function headed by the Chief Risk Officer, who is a member of both EXCO and RMM and reports to the Chief Executive.

The Risk Committee also has responsibility for oversight and advice to the Board on risk matters. The key responsibilities of the Risk Committee in this regard include preparing advice to the Board on the overall risk appetite tolerance and strategy within the group, and seeking such assurance as it may deem appropriate that account has been taken of the current and prospective macroeconomic and financial environment. The Risk Committee is also responsible for the periodic review of the effectiveness of the internal control and risk management frameworks and advising the Board on all high level risk matters. The Risk Committee approves the appointment and removal of the group Chief Risk Officer.

(i) Credit exposure

Maximum exposure to credit risk
(Audited)

Our credit exposure is spread across a broad range of asset classes, including derivatives, trading assets, loans and advances to customers, placings with and advances to banks and financial investments.

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

Maximum exposure to credit risk before collateral held or other credit enhancements

	2016 HK$m	2015 HK$m
Cash and sight balances at central banks	**213,783**	151,103
Items in the course of collection from other banks	**21,401**	25,020
Hong Kong Government certificates of indebtedness	**242,194**	220,184
Trading assets	**299,719**	257,851
Derivatives	**479,807**	380,955
Financial assets designated at fair value	**17,853**	18,825
Reverse repurchase agreements – non-trading	**271,567**	212,779
Placings with and advances to banks	**463,211**	421,221
Loans and advances to customers	**2,834,114**	2,762,290
Financial investments	**1,826,640**	1,706,981
Amounts due from Group companies	**242,773**	244,396
Other assets	**84,162**	76,035
Financial guarantees and other credit-related contingent liabilities	**64,017**	63,812
Loan commitments and other credit-related commitments[1]	**2,655,816**	2,545,291
At 31 December	**9,717,057**	9,086,743

1 *Includes both revocable and irrevocable commitments.*

Total exposure to credit risk remained broadly unchanged in 2016, with loans and advances continuing to be the largest element.

(ii) Credit quality of financial instruments
(Audited)

Five broad classifications describe the credit quality of the group's lending and debt securities portfolios. Each of these classifications encompasses a range of more granular, internal credit rating grades assigned to wholesale and retail lending businesses, as well as ratings attributed by external agencies to debt securities.

For debt securities and certain other financial instruments, external ratings have been aligned to five credit quality classifications based on the mapping of related customer risk ratings ('CRR') to external credit ratings. The mapping is reviewed on a regular basis and the most recent review resulted in sovereign exposures of 'BBB+ and BBB' previously mapped to credit quality classification 'Good' being remapped to 'Strong'. Sovereign exposures of 'BB+ and BB' previously mapped to 'Satisfactory' being remapped to 'Good'. This represents a change in internal mapping unrelated to changes in counterparty creditworthiness. Had this mapping been applied in 2015, the change in credit quality classification of sovereign exposures would have been as follows: 'Strong' – increase of HK$25.0bn; 'Good' – decrease of HK$14.4bn; and 'Satisfactory'– decrease of HK$10.6bn.

There is no direct correlation between internal and external ratings at the granular level, except insofar as both fall within one of the five classifications.

	Sovereign debt securities and bills	Other debt securities and bills	Wholesale lending and derivatives		Retail lending	
	External credit rating	External credit rating	Internal credit rating	12 month probability of default %	Internal credit rating[1]	Expected loss %
Credit quality classification						
Strong	**BBB and above**	**A- and above**	**CRR1 to CRR2**	**0 – 0.169**	**EL[2]1 to EL2**	**0 – 0.999**
Good	**BBB- to BB**	**BBB+ to BBB-**	**CRR3**	**0.170 – 0.740**	**EL3**	**1.000 – 4.999**
Satisfactory	**BB- to B, and unrated**	**BB+ to B, and unrated**	**CRR4 to CRR5**	**0.741 – 4.914**	**EL4 to EL5**	**5.000 – 19.999**
Sub-standard	**B- to C**	**B- to C**	**CRR6 to CRR8**	**4.915 – 99.999**	**EL6 to EL8**	**20.000 – 99.999**
Impaired	**Default**	**Default**	**CRR9 to CRR10**	**100**	**EL9 to EL10**	**100+ or defaulted[3]**

1 *We observe the disclosure convention that, in addition to those classified as EL9 to EL10, retail accounts classified EL1 to EL8 that are delinquent by 90 days or more are considered impaired, unless individually they have been assessed as not impaired (see page 27, 'Ageing analysis of past due but not impaired financial instruments').*

2 *Expected loss.*

3 *The EL percentage is derived through a combination of PD and LGD, and may exceed 100% in circumstances where the LGD is above 100%, reflecting the cost of recoveries. Please refer to note 39 for definitions of PD and LGD.*

Credit quality classification definitions
(Audited)

- Strong: Exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss. Retail accounts operate within product parameters and only exceptionally show any period of delinquency.
- Good: Exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk. Retail accounts typically show only short periods of delinquency, with any losses expected to be minimal following the adoption of recovery processes.
- Satisfactory: Exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk. Retail accounts typically show only short periods of delinquency, with any losses expected to be minor following the adoption of recovery processes.
- Sub-standard: Exposures require varying degrees of special attention and default risk of greater concern. Retail portfolio segments show longer delinquency periods of generally up to 90 days past due and/or expected losses are higher due to a reduced ability to mitigate these through security realisation or other recovery processes.
- Impaired: Exposures have been assessed, individually or collectively, as impaired. The group observes the convention, reflected in the credit quality classification definitions above, that all retail accounts delinquent by 90 days or more are considered impaired. Such accounts may occur in any retail EL grade, whereby in the higher credit quality grades, the grading assignment will reflect the offsetting of the impact of delinquency status by credit risk mitigation in one form or another.

Granular risk rating scales
(Audited)

The CRR 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All HSBC wholesale customers are rated using the 10 or 23-grade scale, depending on the degree of sophistication of the Basel II approach adopted for the exposure.

The EL 10-grade scale for retail business summarises a more granular underlying EL scale for these customer segments; this combines obligor and facility/product risk factors in a composite measure. The external ratings cited above have, for clarity of reporting, been assigned to the credit quality classifications defined for internally-rated exposures.

The basis of reporting reflects risk rating systems under the HSBC Group's Basel II programme and extends the range of financial instruments covered in the presentation of portfolio credit quality.

Risk Report (continued)

Impairment is not measured for financial instruments held in trading portfolios or designated at fair value, as assets in such portfolios are managed according to movements in fair value, and the fair value movement is taken directly through the income statement.

Distribution of financial instruments by credit quality
(Audited)

	Neither past due nor impaired							
31 December 2016	**Strong HK$m**	**Good HK$m**	**Satisfactory HK$m**	**Sub-standard HK$m**	**Past due not impaired HK$m**	**Impaired HK$m**	**Impairment allowances HK$m**	**Total HK$m**
Items in the course of collection from other banks	**19,557**	**103**	**1,740**	**1**	**–**	**–**	**–**	**21,401**
Trading assets	**248,523**	**23,449**	**27,348**	**399**				**299,719**
Derivatives	**404,360**	**62,446**	**11,923**	**1,078**				**479,807**
Financial assets designated at fair value	**16,741**	**463**	**649**	**–**				**17,853**
Reverse repurchase agreements – non-trading	**204,144**	**49,580**	**17,835**	**8**	**–**	**–**	**–**	**271,567**
Placings with and advances to banks held at amortised cost	**427,060**	**31,786**	**4,031**	**334**	**–**	**–**	**–**	**463,211**
Loans and advances to customers held at amortised cost	**1,406,265**	**741,754**	**624,632**	**28,304**	**26,473**	**19,378**	**(12,692)**	**2,834,114**
– personal	**894,151**	**80,243**	**46,548**	**1,120**	**18,230**	**4,388**	**(2,198)**	**1,042,482**
– corporate and commercial	**441,340**	**608,415**	**551,446**	**26,923**	**7,864**	**14,777**	**(10,419)**	**1,640,346**
– non-bank financial institutions	**70,774**	**53,096**	**26,638**	**261**	**379**	**213**	**(75)**	**151,286**
Financial investments	**1,716,823**	**71,072**	**38,745**	**–**	**–**	**–**	**–**	**1,826,640**
Other assets	**33,048**	**17,873**	**30,598**	**2,105**	**382**	**156**	**–**	**84,162**
Total	**4,476,521**	**998,526**	**757,501**	**32,229**	**26,855**	**19,534**	**(12,692)**	**6,298,474**
31 December 2015								
Items in the course of collection from other banks	23,122	138	1,758	2	–	–	–	25,020
Trading assets	196,284	33,923	27,548	96				257,851
Derivatives	331,119	32,973	16,442	421				380,955
Financial assets designated at fair value	16,119	635	2,071	–				18,825
Reverse repurchase agreements – non-trading	152,464	33,441	26,842	32	–	–	–	212,779
Placings with and advances to banks held at amortised cost	385,484	32,197	3,050	487	3	–	–	421,221
Loans and advances to customers held at amortised cost	1,381,933	737,571	585,852	23,674	26,386	18,403	(11,529)	2,762,290
– personal	882,961	75,931	44,963	729	19,940	3,998	(1,978)	1,026,544
– corporate and commercial	454,541	619,577	520,073	22,424	6,122	14,315	(9,454)	1,627,598
– non-bank financial institutions	44,431	42,063	20,816	521	324	90	(97)	108,148
Financial investments	1,578,353	80,329	48,299	–	–	–	–	1,706,981
Other assets	24,151	20,765	29,800	1,051	162	106	–	76,035
Total	4,089,029	971,972	741,662	25,763	26,551	18,509	(11,529)	5,861,957

1 *The above table does not include balances due from Group companies.*

(iii) Ageing analysis of past due but not impaired financial instruments
(Audited)

The amounts in the following table reflect exposures designated as past due but not impaired. Examples of exposures designated as past due but not impaired include loans that have missed the most recent payment date but on which there is no evidence of impairment, and short-term trade facilities past due more than 90 days for technical reasons, such as delays in documentation, but where there is no concern over the creditworthiness of the counterparty.

	Up to 29 days HK$m	30-59 days HK$m	60-89 days HK$m	90-180 days HK$m	Over 180 days HK$m	Total HK$m
31 December 2016						
Loans and advances to customers held at amortised cost[1]	**21,182**	**3,865**	**1,421**	**5**	**–**	**26,473**
– personal	**14,402**	**2,818**	**1,010**	**–**	**–**	**18,230**
– corporate and commercial	**6,499**	**949**	**411**	**5**	**–**	**7,864**
– non-bank financial institutions	**281**	**98**	**–**	**–**	**–**	**379**
Other assets	**206**	**42**	**28**	**51**	**55**	**382**
	21,388	**3,907**	**1,449**	**56**	**55**	**26,855**
31 December 2015						
Loans and advances to customers held at amortised cost[1]	20,868	4,182	1,321	15	–	26,386
– personal	15,161	3,594	1,185	–	–	19,940
– corporate and commercial	5,385	586	136	15	–	6,122
– non-bank financial institutions	322	2	–	–	–	324
Placings with and advances to banks held at amortised cost	3	–	–	–	–	3
Other assets	66	26	27	33	10	162
	20,937	4,208	1,348	48	10	26,551

1 *The majority of the loans and advances to customers that are operating within revised terms following restructuring are excluded from this table.*

(iv) Impaired loans and advances
(Audited)

The group's policy for recognising and measuring impairment allowances on both individually assessed loans and advances and those which are collectively assessed on a portfolio basis is described in note 1(b)(iv) on the Financial Statements.

Analyses of impairment allowances at 31 December 2016, and the movement of such allowances during the year, are disclosed in note 11 on the Financial Statements.

Impaired loans and advances are those that meet any of the following criteria:

- wholesale loans and advances classified as CRR 9 or CRR 10. These grades are assigned when the bank considers that either the customer is unlikely to pay its credit obligations in full, without recourse to security, or when the customer is past due 90 days or more on any material credit obligation to the group;
- retail loans and advances:
  - classified as EL 9 or EL 10; or
  - classified as EL 1 to EL 8 with 90 days and over past due

- renegotiated loans and advances that have been subject to a change in contractual cash flows as a result of a concession which the lender would not otherwise consider, and where it is probable that without the concession the borrower would be unable to meet its contractual payment obligations in full, unless the concession is insignificant and there are no other indicators of impairment. Renegotiated loans remain classified as impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, and there are no other indicators of impairment. For loans that are assessed for impairment on a collective basis, the evidence to support reclassification as no longer impaired typically comprises a history of payment performance against the original or revised terms, depending on the nature and volume of renegotiation and the credit risk characteristics surrounding the renegotiation. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case by case basis.

(v) Impairment assessment
(Audited)

It is the group's policy that each operating entity in the group creates impairment allowances for impaired loans promptly and appropriately.

For details of our impairment policies on loans and advances and financial investments, see notes 1(b)(iv) and 1(b)(v) on the Financial Statements.

Impairment and credit risk mitigation

The existence of collateral has an impact when calculating impairment on individually assessed impaired loans. If exposures are secured, the current net realisable value of the collateral will be taken into account when assessing the need for an impairment allowance. No impairment allowance is recognised in cases where all amounts due are expected to be settled in full on realisation of the security.

Personal lending portfolios are generally assessed for impairment on a collective basis as the portfolios typically consist of large groups of homogeneous loans. Two methods are used to calculate allowances on a collective basis: a roll rate methodology or a more basic formulaic approach based on historical losses. We continue to review the impairment allowance methodology used for retail banking and small business portfolios to ensure that the assumptions used in our collective assessment models continue to appropriately reflect the period of time between a loss event occurring and the account proceeding to delinquency and eventual write-off.

- The historical loss methodology is typically used to calculate collective impairment allowances for secured, or low default portfolios, until the point at which they are individually identified and assessed as impaired. For loans which are collectively assessed using historical loss methodology, the historical loss rate is derived from the average contractual write-off net of recoveries over a defined period. The net contractual write-off rate is the actual amount of loss experienced after the realisation of collateral and receipt of recoveries.
- A roll rate methodology is more commonly adopted for unsecured portfolios when there are sufficient volumes of empirical data to develop robust statistical models.

The nature of the collective allowance assessment prevents individual collateral values or loan-to-value ('LTV') ratios from being included within the calculation. However, the loss rates used in the collective assessment are adjusted for the collateral realisation experiences which will vary depending on the LTV composition of the portfolio.

For wholesale collectively assessed loans and secured personal lending, historical loss methodologies are applied to estimate impairment losses which have been incurred but not individually identified. Loss rates are derived from the observed contractual write-off net of recoveries over a defined period of at least 60 months. The net contractual write-off rate is the actual amount of loss experienced after realisation of collateral and receipt of recoveries. These historical loss rates are adjusted by an economic factor which adjusts the historical averages to better represent current economic conditions affecting the portfolio. In order to reflect the likelihood of a loss event not being identified and assessed, an emergence period assumption is applied. This reflects the period between a loss occurring and its identification. The emergence period is estimated by the group, and in some cases by local management for each identified portfolio. The factors that may influence this estimation include economic and market conditions, customer behaviour, portfolio management information, credit management techniques and collection and recovery experiences in the market. A fixed range for the period between a loss occurring and its identification is not defined across the group and as it is assessed empirically on a periodic basis, it may vary over time as these factors change.

(vi) Collateral and other credit enhancements
(Audited)

Loans and advances

Although collateral can be an important mitigant of credit risk, it is the group's general practice to lend on the basis of the customer's ability to meet their obligations out of their cash flow resources rather than rely on the value of security offered. Depending on the customer's standing and the type of product, facilities may be provided unsecured. For other lending, a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the bank may use the collateral as a source of repayment.

Depending on its form, collateral can have a significant financial effect in mitigating our exposure to credit risk. The tables below provide a quantification of the value of fixed charges we hold over a borrower's specific asset (or assets) where we have a history of enforcing, and are able to enforce the collateral in satisfying a debt in the event of the borrower failing to meet its contractual obligations, and can be realised by sale in an established market or where the collateral is cash. The collateral valuation in the tables below excludes any adjustments for obtaining and selling the collateral.

We may also manage our risk by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees, but the valuation of such mitigants is less certain and their financial effect has not been quantified. In particular, loans shown in the tables below as not collateralised may benefit from such credit mitigants.

Personal lending
(Audited)

Residential mortgages including loan commitments by level of collateral

	At 31 December	
	2016	2015
	HK$m	HK$m
Unimpaired loans		
Fully collateralised	**807,534**	775,823
Partially collateralised		
– Greater than 100% LTV (A)	**320**	1,300
– Collateral value on A	**206**	1,199
Not collateralised	**15**	839
	807,869	777,962
Impaired loans		
Fully collateralised	**1,913**	1,721
– Less than 70% LTV	**1,410**	1,330
– 71% to 90% LTV	**372**	333
– 91% to 100% LTV	**131**	58
Partially collateralised		
– Greater than 100% LTV (B)	**51**	64
– Collateral value on B	**42**	50
Not collateralised	**1**	8
	1,965	1,793
Total residential mortgages	**809,834**	779,755

The above table shows residential mortgage lending including off-balance sheet loan commitments, by level of collateral. The collateral included in the table above consists of fixed first charges on real estate.

The LTV ratio is calculated as the gross on-balance sheet carrying amount of the loan and any off-balance sheet loan commitment at the balance sheet date divided by the value of collateral. The methodologies for obtaining residential property collateral values vary throughout the group, but are typically determined through a combination of professional appraisals, house price indices or statistical analysis. Valuations are updated on a regular basis and, as a minimum, at intervals of every three years. Valuations are conducted more frequently when market conditions or portfolio performance are subject to significant change or where a loan is identified and assessed as impaired.

Other personal lending

Other personal lending consists primarily of personal loans, overdrafts and credit cards, all of which are generally unsecured, except lending to private banking customers which are generally secured.

Corporate, commercial and non-bank financial institutions lending
(Audited)

Collateral held is analysed below separately for commercial real estate and for other corporate, commercial and non-bank financial institutions lending. This reflects the difference in level of collateral held on the portfolios. In each case, the analysis includes off-balance sheet loan commitments, primarily undrawn credit lines.

Commercial real estate loans and advances including loan commitments by level of collateral

	At 31 December	
	2016	2015
	HK$m	HK$m
Rated CRR/EL 1 to 7	**318,874**	314,069
Not collateralised	**98,601**	95,551
Fully collateralised	**211,694**	203,603
Partially collateralised (A)	**8,579**	14,915
– collateral value on A	**4,283**	9,104
Rated CRR/EL 8	**3**	45
Not collateralised	**–**	–
Fully collateralised	**2**	37
Partially collateralised (B)	**1**	8
– collateral value on B	**1**	3
Rated CRR/EL 9 to 10	**168**	570
Not collateralised	**25**	395
Fully collateralised	**101**	137
Partially collateralised (C)	**42**	38
– collateral value on C	**46**	22
Total commercial real estate loans and advances	**319,045**	314,684

The collateral included in the table above consist of fixed first charges on real estate and charges over cash for the commercial real estate sector. The table includes lending to major property developers which is typically secured by guarantees or is unsecured.

The value of commercial real estate collateral is determined through a combination of professional and internal valuations and physical inspection. Due to the complexity of collateral valuations for commercial real estate, local valuation policies determine the frequency of review based on local market conditions. Revaluations are sought with greater frequency where, as part of the regular credit assessment of the obligor, material concerns arise in relation to the transaction which may reflect on the underlying performance of the collateral, or in circumstances where an obligor's credit quality has declined sufficiently to cause concern that the principal payment source may not fully meet the obligation (i.e. the obligor's credit quality classification indicates it is at the lower end e.g. sub-standard, or approaching impaired).

Other corporate, commercial and non-bank financial institutions loans and advances rated CRR/EL 8 to 10 only, including loan commitments, by level of collateral
(Audited)

	At 31 December	
	2016	2015
	HK$m	HK$m
Rated CRR/EL 8	**3,258**	1,954
Not collateralised	**3,139**	1,274
Fully collateralised	**24**	316
Partially collateralised (A)	**95**	364
– collateral value on A	**25**	131
Rated CRR/EL 9 to 10	**15,033**	14,197
Not collateralised	**6,581**	6,869
Fully collateralised	**3,472**	3,408
Partially collateralised (B)	**4,980**	3,920
– collateral value on B	**2,081**	1,827
Total	**18,291**	16,151

The collateral used in the assessment of the above primarily includes first legal charges over real estate and charges over cash in the commercial and industrial sector, and charges over cash and marketable financial instruments in the financial sector.

It should be noted that the table above excludes other types of collateral which are commonly taken for corporate and commercial lending such as unsupported guarantees and floating charges over the assets of a customer's business. While such mitigants have value, and often provide rights in insolvency, their assignable value is insufficiently certain. They are assigned no value for disclosure purposes.

As with commercial real estate, the value of real estate collateral included in the table above is generally determined through a combination of professional and internal valuations and physical inspection. The frequency of revaluation is undertaken on a similar basis to commercial real estate loans and advances; however, for lending activities that are not predominantly commercial real estate-oriented, collateral value is not as strongly correlated to principal repayment performance. Collateral values will generally be refreshed when an obligor's general credit performance deteriorates and it is necessary to assess the likely performance of secondary sources of repayment should reliance upon them prove necessary. For this reason, the table above reports values only for customers with CRR 8 to 10, reflecting that these loans and advances generally have valuations which are comparatively recent. For the purposes of the table above, cash is valued at its nominal value and marketable securities at their fair value.

Placings with and advances to banks
(*Audited)*

Placings with and advances to banks are typically unsecured. At 31 December 2016, 4% of the placings with and advances to banks rated CRR/EL 1 to 7, including loan commitments, are fully collateralised (2015: 3%).

Derivatives
(Audited)

The International Swaps and Derivatives Association ('ISDA') Master Agreement is our preferred agreement for documenting derivatives activity. It provides the contractual framework within which dealing activity across a full range of over the counter ('OTC') products is conducted, and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or another pre-agreed termination event occurs. It is common, and our preferred practice, for the parties to execute a Credit Support Annex ('CSA') in conjunction with the ISDA Master Agreement. Under a CSA, collateral is passed between the parties to mitigate the counterparty risk inherent in outstanding positions. The majority of our CSAs are with financial institution clients. Please refer to note 36 'Offsetting of financial assets and liabilities' for further details.

Other credit risk exposures

(Audited)

In addition to collateralised lending described above, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are described in more detail below.

Government, bank and other financial institution-issued securities may benefit from additional credit enhancement, notably through government guarantees that reference these assets. Corporate-issued debt securities are primarily unsecured. Debt securities issued by banks and financial institutions include asset-backed securities (‘ABS’) and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABS is reduced through the purchase of credit default swap (‘CDS’) protection.

The group’s maximum exposure to credit risk includes financial guarantees and similar arrangements that it issues or enters into, and loan commitments to which it is irrevocably committed. Depending on the terms of the arrangement, the bank may have recourse to additional credit mitigation in the event that a guarantee is called upon, or a loan commitment is drawn and subsequently defaults. Further information about these arrangements is provided in note 34 ‘Contingent liabilities and commitments’.

Liquidity and Funding Risk

(Audited)

Liquidity and funding risk management framework

HSBC has an internal liquidity and funding risk management framework (‘LFRF’) which aims to allow it to withstand very severe liquidity stresses. It is designed to be adaptable to changing business models, markets and regulations.

The management of liquidity and funding is primarily undertaken locally (by country) in our operating entities in compliance with the Group’s LFRF, and with practices and limits set by the Group Management Board (‘GMB’) through the RMM and approved by the Board. Our general policy is that each defined operating entity should be self-sufficient in funding its own activities. Where transactions exist between operating entities, they are reflected symmetrically in both entities.

As part of the HSBC Group’s Asset, Liability and Capital Management (‘ALCM’) structure, we have established Asset and Liability Management Committees (‘ALCOs’) at the group and operating entity level. The terms of reference of all ALCOs include the monitoring and control of liquidity and funding.

The primary responsibility for managing liquidity and funding within the Group’s framework and risk appetite resides with the local operating entities’ ALCOs. All operating entities are overseen by the group ALCO, with appropriate escalation of significant issues to the HSBC Group ALCO and the RMM of the GMB.

Operating entities are predominately defined on a country basis to reflect our local management of liquidity and funding. Typically, an operating entity will be defined as a single branch or legal entity. However, to take account of the situation where operations in a country are booked across multiple subsidiaries or branches:

- an operating entity may be defined as a wider sub-consolidated group of legal entities if they are incorporated in the same country, liquidity and funding are freely fungible between the entities and permitted by local regulation, and the definition reflects how liquidity and funding are managed locally; or
- an operating entity may be defined more narrowly as a principal office (branch) of a wider legal entity operating in multiple countries, reflecting the local country management of liquidity and funding.

The Board is ultimately responsible for determining the types and magnitude of liquidity risk that the group is able to take and ensuring that there is an appropriate organisation structure for managing this risk. Under authorities delegated by the Board, the group ALCO is responsible for managing all ALCM issues including liquidity and funding risk management.

The group ALCO delegates to the group Tactical Asset and Liability Management Committee (‘TALCO’) the task of reviewing various analyses of the group pertaining to sites’ liquidity and funding. TALCO's primary responsibilities include but are not limited to:

- reviewing the funding structure of operating entities and the allocation of liquidity among them; and

- monitoring liquidity and funding limit breaches and providing direction to those operating entities that have not been able to rectify breaches on a timely basis.

Compliance with liquidity and funding requirements is monitored by local ALCO who report to the group ALCO on a regular basis. This process includes:

- maintaining compliance with relevant regulatory requirements of the operating entity;
- projecting cash flows under various stress scenarios and considering the level of liquid assets necessary in relation thereto;
- monitoring liquidity and funding ratios against internal and regulatory requirements;
- maintaining a diverse range of funding sources with adequate back-up facilities;
- managing the concentration and profile of term funding;
- managing contingent liquidity commitment exposures within pre-determined limits;
- maintaining debt financing plans;
- monitoring of depositor concentration in order to avoid undue reliance on large individual depositors and ensuring a satisfactory overall funding mix; and
- maintaining liquidity and funding contingency plans. These plans identify early indicators of stress conditions and describe actions to be taken in the event of difficulties arising from systemic or other crises, while minimising adverse long-term implications for the business.

Development in 2016

On 1 January 2016, the Group implemented a new LFRF. It uses the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR') regulatory framework as a foundation, but adds extra metrics, limits and overlays to address the risks that we consider are not adequately reflected by the regulatory framework.

The LFRF is delivered using the following key aspects:

- standalone management of liquidity and funding by operating entity;
- operating entity classification by inherent liquidity risk ('ILR') categorisation;
- minimum LCR requirement depending on ILR categorisation;
- minimum NSFR requirement depending on ILR categorisation;
- legal entity depositor concentration limit;
- three-month and 12-month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financial institutions and securities issued;
- annual individual liquidity adequacy assessment ('ILAA') by principal operating entity;
- minimum LCR requirement by currency;
- intraday liquidity; and
- forward-looking funding assessments.

The new internal LFRF and the risk tolerance limits were approved by the Board on the basis of recommendations made by the Group Risk Committee.

Our ILAA process aims to:

- identify risks that are not reflected in the LFRF, and, where required, to assess additional limits required locally; and
- validate the risk tolerance at the operating entity level by demonstrating that reverse stress testing scenarios are acceptably remote and ensuring vulnerabilities have been assessed through the use of severe stress scenarios.

Management of liquidity and funding risk

Inherent liquidity risk categorisation
(Audited)

We place our operating entities into one of two categories to reflect our assessment of their inherent liquidity risk, considering political, economic and regulatory factors within the host country and factors specific to the operating entities themselves, such as their local market, market share and balance sheet strength. The categorisation involves management judgement and is based on the perceived liquidity risk of an operating entity relative to other entities in the group. The categorisation is intended to reflect the possible impact of a liquidity event, not the probability of an event, and forms part of our risk appetite. It is used to determine the prescribed stress scenario that we require our operating entities to be able to withstand and manage to.

Liquidity coverage ratio
(Unaudited)

The LCR aims to ensure that a bank has sufficient unencumbered high-quality liquid assets ('HQLA') to meet its liquidity needs in a 30-calendar-day liquidity stress scenario. HQLA consist of cash or assets that can be converted into cash at little or no loss of value in markets.

As at 31 December 2016, all the group's operating entities were within the LCR risk tolerance level established by the Board and applicable under the LFRF.

Net stable funding ratio
(Unaudited)

The NSFR requires institutions to maintain sufficient stable funding relative to required stable funding, and reflects a bank's long-term funding profile (funding with a term of more than a year). It is designed to complement the LCR. The European calibration of NSFR is pending following the Basel Committee's final recommendation in October 2014. We calculate NSFR in line with the Basel Committee on Banking Supervision publication 295, pending its implementation in Europe.

As at 31 December 2016, all the group's operating entities were within the NSFR risk tolerance level established by the Board and applicable under the LFRF.

Depositor concentration and term funding maturity concentration
(Unaudited)

The LCR and NSFR metrics assume a stressed outflow based on a portfolio of depositors within each deposit segment. The validity of these assumptions is challenged if the underlying depositors do not represent a large enough portfolio so that a depositor concentration exists. Operating entities are also exposed to term re-financing concentration risk if the current maturity profile results in future maturities being overly concentrated in any defined period.

As at 31 December 2016, all the group's operating entities were within the risk tolerance levels established by the Board and applicable under the LFRF.

Sources of funding
(Audited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We also access wholesale funding markets by issuing senior secured and unsecured debt securities (publicly and privately) and borrowing from the secured repo markets against high quality collateral, in order to obtain funding for non-banking subsidiaries that do not accept deposits, to align asset and liability maturities and currencies and to maintain a presence in local wholesale markets. Ordinary share capital and retained reserves, and non-core capital instruments are also a source of stable funding.

Currency mismatch
(Audited)

The group allows currency mismatches to provide some flexibility in managing the balance sheet structure and to carry out foreign exchange trading, on the basis that there is sufficient liquidity in the swap market to support currency conversion in periods of stress. The group sets limits on LCR by currency for all material currencies based on liquidity in the swap markets. These limits are approved and monitored by ALCO.

Additional contractual obligations
(Unaudited)

Under the terms of our current collateral obligations under derivative contracts (which are ISDA compliant CSA contracts), the additional collateral required to post in the event of one-notch and two-notch downgrade in credit ratings is immaterial.

Liquidity regulation
(Unaudited)

The Banking (Liquidity) Rules were introduced by the HKMA in 2014 and became effective from 1 January 2015. Under rule 11(1), the group is required to calculate its LCR on a consolidated basis. During 2016 the group is required to maintain an LCR of not less than 70%, increasing in steps of 10% each year to not less than 100% by January 2019. The NSFR is expected to be implemented in Hong Kong from 1 January 2018.

The average LCRs for the period are as follows:

	Quarter ended							
	31 December 2016	**30 September 2016**	**30 June 2016**	**31 March 2016**	31 December 2015	30 September 2015	30 June 2015	31 March 2015
	%	**%**	**%**	**%**	%	%	%	%
Average LCRs ..	**184.9**	**189.6**	**193.6**	**186.6**	159.8	156.7	142.5	137.4

The liquidity position of the group remained strong in 2016. The average LCR increased by 25.1% from 159.8% for the quarter ended on 31 December 2015 to 184.9% for the quarter ended on 31 December 2016, mainly as a result of the refinement of reporting of deposits which are operational in nature. In addition, the increase in customer deposits exceeded the growth in loans and advances to customers, resulting in an increase in HQLA.

The majority of HQLA included in the LCR are Level 1 assets as defined in the Banking (Liquidity) Rules, which consist mainly of government debt securities.

	Weighted amount (average value) at quarter ended							
	31 December 2016	**30 September 2016**	**30 June 2016**	**31 March 2016**	31 December 2015	30 September 2015	30 June 2015	31 March 2015
	HK$m	**HK$m**	**HK$m**	**HK$m**	HK$m	HK$m	HK$m	HK$m
Level 1 assets ..	**1,580,397**	**1,533,814**	**1,512,512**	**1,510,252**	1,443,350	1,405,245	1,368,320	1,324,230
Level 2A assets	**59,571**	**64,572**	**64,381**	**55,134**	58,026	49,916	41,658	35,956
Level 2B assets	**10,954**	**12,250**	**10,136**	**7,266**	6,267	7,729	7,992	7,314
Total	**1,650,922**	**1,610,636**	**1,587,029**	**1,572,652**	1,507,643	1,462,890	1,417,970	1,367,500

Further details of the group's liquidity information disclosures can be viewed in the Supplementary Notes on the Financial Statements 2016, which will be available in the Regulatory Disclosure Section of our website: www.hsbc.com.hk.

Risk Report (continued)

Market Risk

(Audited)

Market risk is the risk that movements in market factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices, will reduce our income or the value of our portfolios.

There were no significant changes to our policies and practices for the management of market risk in 2016.

Exposure to market risk

Exposure to market risk is separated into two portfolios:

- *Trading portfolios* comprise positions arising from market-making and warehousing of customer-derived positions.
- *Non-trading portfolios* comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments designated as available-for-sale and held to maturity, and exposures arising from our insurance operations.

The diagram below illustrates the main business areas where trading and non-trading market risks reside and market risk measures to monitor and limit exposures.

	Trading Risk	Non-Trading Risk			
Risk Types	- Foreign exchange & Commodities - Interest rates - Credit spreads - Equities	- Structural foreign exchange - Interest rates - Credit spreads			
Global Businesses	GB&M, incl BSM	GB&M, incl BSM	GPB	CMB	RBWM
Risk Measure	VaR / Sensitivity / Stress testing	VaR / Sensitivity / Stress testing			

Note – *Balance Sheet Management ('BSM'), for external reporting purposes, forms part of Corporate Centre while daily operations and risk are managed within GB&M.*

Where appropriate, the group applies similar risk management policies and measurement techniques to both trading and non-trading portfolios. The group's objective is to manage and control market risk exposures in order to optimise return on risk while maintaining a market profile consistent with the status as a member of one of the world's largest banking and financial services organisations.

The nature of the hedging and risk mitigation strategies performed across the group corresponds to the market risk management instruments available within each operating jurisdiction. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

Market risk governance

(Audited)

Market risk is managed and controlled through limits approved by the Risk Management Meeting of the GMB for HSBC Holdings plc and the various global businesses. These limits are allocated across business lines and to the Group's legal entities. The management of market risk is principally undertaken in Global Markets through risk limits. Value at Risk limits are set for portfolios, products, and risk types, with market liquidity and business need being the primary factors in determining the level of limits set.

Each major operating entity has an independent market risk management and control function which is responsible for measuring market risk exposures in accordance with the policies defined by Group Risk, and monitoring and reporting these exposures against the prescribed limits on a daily basis. Each operating entity is required to assess the market risks arising on each product in its business and to transfer them to either its local Markets unit for management, or to separate books managed under the supervision of the local ALCO.

Our aim is to ensure that all market risks are consolidated within operations that have the necessary skills, tools, management and governance to manage them. In certain cases where the market risks cannot be fully transferred, we identify the impact of varying scenarios on valuations or on net interest income resulting from any residual risk positions.

Model risk is governed through Model Oversight Committees ('MOC's) at the regional and Global Wholesale Credit and Market Risk ('WCMR') level. They have direct oversight and approval responsibility for all traded risk models utilised for risk measurement and management and stress testing. The MOCs prioritise the development of models, methodologies and practices used for traded risk management and ensure that they remain within our risk appetite and business plans. The Markets MOC reports into the Group MOC, which oversees all risk types at Group level. Group MOC informs the Risk Management Meeting of the GMB about material issues at least on a bi-annual basis. The Risk Management Meeting is the Group's 'Designated Committee' according to the regulatory rules and it has delegated day-to-day governance of all traded risk models to the Global WCMR MOC.

Our control of market risk in the trading and non-trading portfolios is based on a policy of restricting individual operations to trading within a list of permissible instruments authorised for each site by Group Risk, of enforcing new product approval procedures, and of restricting trading in the more complex derivative products only to sites with appropriate levels of product expertise and robust control systems.

Market risk measures
(Audited)

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite. We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis
(Unaudited)

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios including interest rates, foreign exchange rates and equity prices, for example, the impact of a one basis point change in yield. We use sensitivity measures to monitor the market risk positions within each risk type.

Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

Value at risk

VaR is a technique that estimates the potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and is calculated for all trading positions regardless of how the group capitalises those exposures. Where there is no approved internal model, the group uses the appropriate local rules to capitalise exposures.

In addition, the group calculates VaR for non-trading portfolios in order to have a complete picture of market risk. Where VaR is not calculated explicitly, alternative tools are used as summarised in the Market Risk stress testing section below.

Our models are predominantly based on historical simulation which incorporate the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates and commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements utilised for VaR are calculated with reference to data from the past two years; and
- VaR measures are calculated to a 99 per cent confidence level and use a one-day holding period.

The models also incorporate the effect of the option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;

- the use of a holding period assumes that all positions can be liquidated or the risks offset during that period. This may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99 per cent confidence level, by definition does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

Backtesting

We routinely validate the accuracy of our VaR models by back-testing them against both actual and hypothetical profit and loss against the trading VaR numbers. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions.

We would expect on average to see two to three profits, and two or three losses, in excess of VaR at the 99% confidence level over a one-year period. The actual number of profits or losses in excess of VaR over this period can therefore be used to gauge how well the models are performing. We back-test our group-level VaR which reflects the full scope of HSBC, including entities that do not have local permission to use VaR for regulatory purposes.

Risk not in VaR framework
(Unaudited)

The RNIV framework aims to manage and capitalise material market risks that are not adequately covered in the VaR model. On average in 2016, the capital requirement derived from these stress tests represented 4.2% of the total internal model-based market risk requirement.

Risk factors are reviewed on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through the VaR-based RNIV approach or a stress test approach within the RNIV framework. The outcome of the VaR-based RNIV is included in the VaR calculation and back-testing; a stressed VaR RNIV is also computed for the risk factors considered in the VaR-based RNIV approach. Stress-type RNIVs include a gap risk exposure measure to capture risk on non-recourse margin loans and a de-peg risk measure to capture risk to pegged and heavily-managed currencies.

Stress testing
(Audited)

Stress testing is an important tool that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such abnormal scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at the legal entity, regional, sites and the overall group levels. A standard set of scenarios is utilised consistently across all sites within the group. Scenarios are tailored to capture the relevant events or market movements at each level. The risk appetite around potential stress losses for the region is set and monitored against referral limits.

Market risk reverse stress tests are undertaken based upon the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios which are beyond normal business settings that could have contagion and systemic implications.

Stressed VaR and stress testing, together with reverse stress testing, provide management with insights regarding the ‘tail risk’ beyond VaR for which HSBC’s appetite is limited.

Market risk in 2016

(Unaudited)

Global economic growth remained subdued with a divergence in monetary policies in 2016. The ongoing reform of the renminbi ('RMB') exchange rate regime and the economic slowdown of the mainland Chinese economy caused volatility in currency markets. Market concerns persisted due to the scale of the economic slowdown and the potential for further RMB depreciation. The prospect of the US interest rate hike attracted capital outflows from emerging markets and generated economic headwinds for some Asian countries. There was significant depreciation in several Asian currencies against the strengthening US dollar. Major market events including the Brexit referendum and the US Presidential Election added further to the market volatility in 2016.

Against this backdrop, we maintained an overall defensive risk profile in our trading businesses. Defensive positions are characterised by relatively low net open positions or the purchase of protection hedges to mitigate downside risk to portfolios during times of market distress.

Trading portfolios

(Audited)

Value at risk of the trading portfolios

Trading VaR predominantly resides within Global Markets. This was higher at 31 December 2016 compared to 31 December 2015 due to an increase in the interest rate trading VaR, which was driven by portfolio composition changes.

The trading VaR for the year is shown in the table below.

Trading value at risk, 99% 1 day[1]

	Foreign exchange and commodity HK$m	Interest rate HK$m	Equity HK$m	Credit spread HK$m	Portfolio diversification[2] HK$m	Total HK$m
At 31 December 2016						
Year end	**27**	**95**	**14**	**17**	**(56)**	**97**
Average	**52**	**108**	**13**	**23**		**110**
Maximum	**78**	**161**	**26**	**54**		**181**
At 31 December 2015						
Year end	31	70	21	29	(62)	89
Average	54	102	16	27		134
Maximum	92	194	39	45		238

1 *Trading portfolios comprise positions arising from the market-making and warehousing of customer-derived positions.*

2 *Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types, for example, interest rate, equity and foreign exchange, together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.*

Non-trading portfolios

(Unaudited)

Market risk in non-trading portfolios arises principally from mismatches between the future yield on assets and their funding cost, as a result of interest rate changes. Analysis of this risk is complicated by having to make assumptions on embedded optionality within certain investment product areas, such as the incidence of mortgage prepayments, and from behavioural assumptions regarding the economic duration of liabilities which are contractually repayable on demand such as current accounts, and the re-pricing behaviour of managed rate products.

In order to manage this risk optimally, market risk in non-trading portfolios is transferred to Global Markets or to separate books managed under the supervision of the local ALCO. The transfer of market risk to books managed by Global Markets or supervised by ALCO is usually achieved by a series of internal deals between the business units and these books. When the behavioural characteristics of a product differ from its contractual characteristics, the behavioural characteristics are assessed to determine the true underlying interest rate risk. Local ALCOs regularly monitor all such behavioural assumptions and interest rate risk positions, to ensure they comply with interest rate risk limits established by senior management.

Sensitivity of net interest income

A principal part of our management of market risk in non-trading portfolios is to monitor the sensitivity of projected net interest income under varying interest rate scenarios (simulation modelling).

The group aims, through its management of market risk in non-trading portfolios, to mitigate the impact of prospective interest rate movements which could reduce future net interest income, while balancing the cost of such hedging activities on the current net revenue stream. A large part of the group's exposure to changes in net interest income arising from movements in interest rates relates to its core deposit franchise. The group's core deposit franchise is exposed to changes in the value of the deposits raised and spreads against wholesale funds. The value of core deposits increases as interest rates rise and decreases as interest rates fall. This risk is, however, asymmetrical in a very low interest rate environment as there is limited room to lower deposit pricing in the event of interest rate reductions.

Structural foreign exchange exposures

(Unaudited)

Structural foreign exchange exposures, monitored using sensitivity analysis, represent net investments in subsidiaries, branches and associates, the functional currencies of which are currencies other than the HK dollar. An entity's functional currency is that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in 'Other comprehensive income'.

We hedge structural foreign exchange exposures only in limited circumstances. Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates. This is usually achieved by ensuring that, for each subsidiary bank, the ratio of structural exposures in a given currency to risk-weighted assets ('RWA') denominated in that currency is broadly equal to the capital ratio of the subsidiary in question.

We may also transact hedges where a currency in which we have structural exposures is considered likely to revalue adversely, and it is possible in practice to transact a hedge. Any hedging is undertaken using forward foreign exchange contracts which are accounted for under HKFRSs as hedges of a net investment in a foreign operation, or by financing with borrowings in the same currencies as the functional currencies involved.

The group had the following structural foreign currency exposures that were not less than 10% of the total net structural foreign currency positions:

	LCYm	HK$m equivalent
At 31 December 2016		
Renminbi	**170,111**	**189,993**
At 31 December 2015		
Renminbi	156,567	186,866

Operational Risk

(Audited)

Operational risk is the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events. Responsibility for minimising operational risk lies with HSBC's staff. All staff are required to manage the operational risks of the business and operational activities for which they are responsible.

Operational risk management framework

HSBC's Operational Risk Management Framework ('ORMF') is our overarching approach for managing operational risk, the purpose of which is to:

- identify and manage our operational risks in an effective manner;
- remain within the operational risk appetite, which helps the organisation to understand the level of risk it is willing to accept; and
- drive forward-looking risk awareness and assist management focus.

Business and functional managers throughout the organisation are responsible for maintaining an acceptable level of internal control commensurate with the scale and nature of operations, and for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The ORMF helps managers to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

A centralised database is used to record the results of the operational risk management process. Operational risk and control self-assessments are input and maintained by business units. Business and functional management and business risk and control managers monitor the progress of documented action plans to address shortcomings. To ensure that operational risk losses are consistently reported and monitored at Group level, all Group companies are required to report individual losses when the net loss is expected to exceed US$10,000, and to aggregate all other operational risk losses under US$10,000. Losses are entered into the Group Operational Risk database and are reported to the Risk Management Meeting on a monthly basis.

Activities to strengthen our risk culture and better embed the use of the ORMF were further implemented in 2016. In particular, the use of the activity-based 'Three lines of defence' model sets out roles and responsibilities for managing operational risks on a daily basis.

Exposures
(Unaudited)

HSBC continues to strengthen those controls that manage our most material risks by:

- further embedding Global Standards to ensure that we know and protect our customers, ask the right questions and escalate concerns;
- increased monitoring and enhanced detective controls to manage those fraud risks which arise from new technologies and new ways of banking;
- strengthening internal security controls to prevent cyber-attacks;
- improve controls and security to protect customers when using digital channels.

Controls over unauthorised system access ('IT privileged access')

Deficiencies in the design and operational effectiveness of a number of controls associated with IT privileged access have been identified. This included controls over individual access rights to operating systems, applications, and data used in the financial reporting process. Significant improvement in this area has been made during 2016 as a result of actions taken under the associated remediation program. Effective mitigating IT, business, monitoring and period-end controls were in place for 2016.

Regulatory Compliance Risk

(Unaudited)

Overview

The Regulatory Compliance ('RC') function provides independent, objective oversight and challenge and promotes a compliance-oriented culture, supporting the business in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving HSBC's strategic objectives.

Key risk management processes

We regularly review our policies and procedures. Global policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach to RC. Reportable events are escalated to the RMM and the Risk Committee, as appropriate.

Risk Report (continued)

Conduct of business

In 2016, we continued to take steps to raise our standards relating to conduct, which included:

- delivering further global mandatory conduct training to all employees in 2017;
- incorporating the assessment of expected values and behaviours as key determinants in recruitment, performance appraisal and remuneration processes;
- improving our Group-wide market surveillance capability;
- introducing policies and procedures to strengthen support for potentially vulnerable customers;
- enhancing the quality and depth of conduct management information and how it is used across the Group;
- implementing an assessment process to check the effectiveness of our conduct initiatives across the Group; and
- assessing conduct standards and practices within our key third-party suppliers and distributors.

Financial Crime Risk

(Unaudited)

Overview

Financial Crime Risk is a global function that brings together all areas of financial crime risk management at HSBC and is dedicated to implementing the most effective global standards to combat financial crime. The function has been set up to enable us to build on our achievements in managing financial crime risk effectively across the Group and to continue to strengthen financial crime detection, and anti-money laundering, sanctions and anti-bribery and corruption compliance.

Key risk management processes

We continue to embed policies and procedures, introduce new technology solutions and support the cultural change needed to effectively manage financial crime risk. A key enhancement during 2016 was the deployment of our global Customer Due Diligence system. This, along with the enhanced financial crime risk training, will ensure our people have the guidance and tools that they need.

Deferred Prosecution Agreement and related agreements and consent orders, and the Monitor

In December 2012, HSBC Holdings, HSBC North America Holdings Inc. (‘HNAH’) and HSBC Bank USA, N.A. (‘HSBC Bank USA’) entered into agreements with US and UK authorities regarding past inadequate compliance with AML and sanctions laws. Among these agreements, HSBC Holdings and HSBC Bank USA entered into a five-year deferred prosecution agreement (‘US DPA’) with the US Department of Justice (‘DoJ’). HSBC Holdings also entered into an undertaking with the UK FCA (the ‘FCA Direction’) to comply with certain forward-looking obligations with respect to AML and sanctions requirements. In addition, HSBC Holdings entered into a cease and desist order with the US Federal Reserve Board (‘FRB’) with respect to compliance with US AML and sanctions requirements. The agreements with the DoJ and the FRB, and the FCA Direction, require us to retain an independent monitor to evaluate our progress in fully implementing our obligations and the Monitor was appointed in 2013 to produce annual assessments of the effectiveness of the Group’s AML and sanctions compliance.

Throughout 2016, the Group’s Financial System Vulnerabilities Committee (‘FSVC’) received regular reports on HSBC’s relationship with the Monitor and its compliance with the US DPA. The Monitor’s second annual review was received by the FSVC, and it received regular updates from the Monitor on the preliminary findings arising from the Monitor’s ongoing country visits. In February 2017, the Monitor delivered his third annual follow-up review report which the DoJ and HSBC are reviewing further. The Monitor’s fourth annual follow-up review is underway.

Reputational Risk

(Unaudited)

Reputational risk is the failure to meet stakeholder expectations as a result of any event, behaviour, action or inaction, either by HSBC itself, our employees or those with whom we are associated, that might cause stakeholders to form a negative view of HSBC.

Reputational risk relates to perceptions, whether based on fact or otherwise. Stakeholders' expectations are constantly changing and thus reputational risk is dynamic and varies between geographies, groups and individuals. As a global bank, we show unwavering commitment to operating, and to be seen to be operating, to the high standards we have set for ourselves in every jurisdiction. Reputational risk might result in financial or non-financial impacts, loss of confidence, adverse effects on our ability to keep and attract customers, or other consequences. Any lapse in standards of integrity, compliance, customer service or operating efficiency represents a potential reputational risk.

A number of measures to enhance our anti-money laundering, sanctions and other regulatory compliance frameworks have been taken and/or are ongoing. These measures, which should also serve over time to enhance our reputational risk management, include the following:

- simplifying our business through the progressive implementation of our Group strategy, including the adoption of a global financial crime risk filter, which should help to standardise our approach to doing business in higher risk countries;
- an increase in reputational risk resources in each region in which we operate, and the introduction of a central case management and tracking process for reputational risk and client relationship matters;
- the creation of combined reputational risk and client selection committees within the global businesses, with a clear process to escalate and address matters at the appropriate level;
- the continued roll-out of training and communication about the HSBC Values programme that defines the way everyone in the Group should act, and seeks to ensure that the Values are embedded into our operations; and
- the continuous development and implementation of Global Standards around financial crime compliance, which underpin our businesses. This includes ensuring globally consistent application of policies that govern AML and sanctions compliance provisions.

HSBC has zero tolerance for knowingly engaging in any business, activity or association where foreseeable reputational damage has not been considered and mitigated. There must be no barriers to open discussion and escalation of issues that could affect the Group negatively. While there is a level of risk in every aspect of business activity, appropriate consideration of potential harm to HSBC's good name must be a part of all business decisions. Detecting and preventing illicit actors' access to the global financial system calls for constant vigilance and we will continue to cooperate closely with all governments to achieve success. This is integral to the execution of our strategy, to HSBC Values and to preserving and enhancing our reputation.

Risks of insurance manufacturing operations

(Audited)

The majority of the risk in our insurance business derives from manufacturing activities and can be categorised as financial risk and insurance risk. Financial risks include market risk, credit risk and liquidity risk. Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to the issuer (HSBC).

HSBC's bancassurance model

We operate an integrated bancassurance model which provides insurance products principally for customers with whom we have a banking relationship. The insurance contracts we sell relate to the underlying needs of our banking customers, which we can identify from our point-of-sale contacts and customer knowledge. The majority of sales are of savings and investment products.

By focusing largely on personal and small and medium-sized enterprise businesses, we are able to optimise volumes and diversify individual insurance risks.

We choose to manufacture these insurance products in HSBC subsidiaries based on an assessment of operational scale and risk appetite. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts by keeping part of the underwriting profit and investment income within the group. It also reduces distribution costs for our products by using our established branch network, and enables us to control the quality of the sale process and the products themselves to ensure our customers receive products which address their specific needs at the best value. We have life insurance manufacturing operations in six locations: mainland China, Hong Kong, India, Macau, Malaysia, and Singapore.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a handful of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. These arrangements are generally structured with our exclusive strategic partners and earn the group a combination of commissions, fees and a share of profits. We distribute insurance products in all of our geographical regions. Insurance products are sold through all global businesses, but predominantly by RBWM and CMB through our branches and direct channels.

Risk management of insurance manufacturing operations

Governance

Insurance risks are managed to a defined risk appetite, which is aligned to the Group risk appetite and risk management framework, including the Group's 'Three lines of defence' model. The Insurance Risk Management Meeting oversees the control framework and is accountable to the RBWM Risk Management Meeting on risk matters relating to insurance business.

The monitoring of the risks within the insurance operations is carried out by the Insurance Risk teams. Specific risk functions, including wholesale market risk, operational risk, information security risk and financial crime compliance, support insurance risk teams in their respective areas of expertise.

Measurement

The risk profile of our insurance manufacturing businesses is measured using an economic capital approach. Assets and liabilities are measured on a market value basis and a capital requirement is defined to ensure that there is a less than 1 in 200 chance of insolvency over a one year time horizon, given the risks that the businesses are exposed to. The methodology for the economic capital calculation is largely aligned to the pan-European Solvency II insurance capital regulation, which is applicable from January 2016. The economic capital coverage ratio (economic net asset value divided by the economic capital requirement) is a key risk appetite measure. In addition to economic capital, the regulatory solvency ratio is also a metric used to manage risk appetite on an entity basis.

The tables below show the composition of assets and liabilities by contract type. 92% (2015: 93%) of both assets and liabilities are derived from Hong Kong.

Balance sheet of insurance manufacturing subsidiaries by type of contract

	Non-linked contracts[1] HK$m	Linked contracts[2] HK$m	Other assets and liabilities[3] HK$m	Total HK$m
At 31 December 2016				
Financial assets:				
– financial assets designated at fair value	**56,863**	**48,644**	**107**	**105,614**
– derivatives	**660**	**17**	**1**	**678**
– financial investments- held-to-maturity	**238,126**	**–**	**22,641**	**260,767**
– financial investments- available-for-sale	**43,412**	**–**	**1,071**	**44,483**
– other financial assets	**24,194**	**1,091**	**3,955**	**29,240**
Total financial assets	**363,255**	**49,752**	**27,775**	**440,782**
Reinsurance assets	**10,321**	**1,308**	**–**	**11,629**
PVIF	**–**	**–**	**44,077**	**44,077**
Other assets	**7,665**	**3**	**3,894**	**11,562**
Total assets	**381,241**	**51,063**	**75,746**	**508,050**
Liabilities under investment contracts designated at fair value	**29,511**	**6,792**	**–**	**36,303**
Liabilities under insurance contracts	**342,134**	**44,036**	**–**	**386,170**
Deferred tax	**159**	**–**	**6,981**	**7,140**
Other liabilities	**–**	**–**	**10,540**	**10,540**
Total liabilities	**371,804**	**50,828**	**17,521**	**440,153**
Total equity	**–**	**–**	**67,897**	**67,897**
Total equity and liabilities	**371,804**	**50,828**	**85,418**	**508,050**
At 31 December 2015				
Financial assets:				
– financial assets designated at fair value	51,197	46,561	426	98,184
– derivatives	633	1	86	720
– financial investments- HTM	204,961	–	23,638	228,599
– financial investments- AFS	41,583	–	1,066	42,649
– other financial assets	23,796	1,444	3,525	28,765
Total financial assets	322,170	48,006	28,741	398,917
Reinsurance assets	7,303	1,402	–	8,705
PVIF	–	–	36,897	36,897
Other assets	7,275	6	3,232	10,513
Total assets	336,748	49,414	68,870	455,032
Liabilities under investment contracts designated at fair value	29,228	6,821	–	36,049
Liabilities under insurance contracts	298,576	42,244	–	340,820
Deferred tax	95	–	5,846	5,941
Other liabilities	–	–	10,445	10,445
Total liabilities	327,899	49,065	16,291	393,255
Total equity	–	–	61,777	61,777
Total equity and liabilities	327,899	49,065	78,068	455,032

1 *Comprises life non-linked insurance contracts, non-linked investment contracts and remaining non-life insurance contracts.*

2 *Comprises life linked insurance contracts and linked investment contracts.*

3 *Comprises shareholder assets and liabilities.*

Stress and scenario testing

Stress testing forms a key part of the risk management framework for the insurance business. We participate in local and Group-wide regulatory stress tests, including the Bank of England stress test, the Hong Kong Monetary Authority stress test, and individual country insurance regulatory stress tests.

These have highlighted that a key risk scenario for the insurance business is a prolonged low interest rate environment. In order to mitigate the impact of this scenario, the insurance operations identify a range of strategies including the hedging of interest rate risk, a dynamic approach of re-pricing the products to reflect lower interest rates, diversification of product offerings with less sensitivity to interest rate levels, risk transfer to third parties, and yield enhancement investment strategies to optimise the expected returns against the cost of economic capital.

Key Risk Types

The key risk for our insurance operations is market risk, followed by insurance risk. Credit and liquidity risk, whilst significant for the bank, are minor for our insurance operations.

Market risk (insurance)

Market risk is the risk of changes in market factors affecting HSBC's capital or profit. Market factors include interest rates, equity and growth assets, spread risk and foreign exchange rates.

Our exposure varies depending on the type of contract issued. Our most significant life insurance products are contracts with discretionary participating features ('DPF') issued in Hong Kong. These products typically include some form of capital guarantee or guaranteed return, on the sums invested by the policyholders, to which discretionary bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in bonds with a proportion allocated to other asset classes, to provide customers with the potential for enhanced returns.

DPF products expose HSBC to the risk of variation in asset returns, which will impact our participation in the investment performance. In addition, in some scenarios the asset returns can become insufficient to cover the policyholders' financial guarantees, in which case the shortfall has to be met by HSBC. Reserves are held against the cost of such guarantees, calculated by stochastic modelling.

For unit-linked contracts, market risk is substantially borne by the policyholders, but some market risk exposure typically remains as fees earned are related to the market value of the linked assets.

All our insurance manufacturing subsidiaries have market risk mandates which specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk which they may retain. They manage market risk by using, amongst others, some or all of the techniques listed below, depending on the nature of the contracts written:

- For products with DPF, adjusting bonus rates to manage the liabilities to policyholders. The effect is that a significant portion of the market risk is borne by the policyholders;
- Asset and liability matching where asset portfolios are structured to support projected liability cash flows. The group manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity, volatility and target investment return. It is not always possible to match asset and liability durations due to uncertainty over the receipt of all future premiums and the timing of claims; and also because the forecast payment dates of liabilities may exceed the duration of the longest dated investments available. We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how to best structure asset holdings to support liabilities;
- Using derivatives to protect against adverse market movements or better match liability cash flows;
- For new products with investment guarantees, considering the cost when determining the level of premiums or the price structure;
- Periodically reviewing products identified as higher risk, which contain investment guarantees and embedded optionality features linked to savings and investment products;
- Replacing existing products with new products to mitigate market risk, such as changing the investment return sharing portion between policyholders and the shareholder;
- Exiting, to the extent possible, investment portfolios whose risk is considered unacceptable; and
- Repricing premiums charged to policyholders.

The following table illustrates the effects of selected interest rate, equity price and foreign exchange rate scenarios on our profit for the year and the total equity of our insurance manufacturing subsidiaries.

	31 December 2016		31 December 2015	
	Impact on profit after tax for the year	**Impact on total equity**	Impact on profit after tax for the year	Impact on total equity
	HK$m	**HK$m**	HK$m	HK$m
+ 100 basis points parallel shift in yield curves	**(56)**	**(4,137)**	172	(3,602)
– 100 basis points parallel shift in yield curves	**(371)**	**4,575**	(949)	3,618
10% increase in equity prices	**1,345**	**1,347**	1,225	1,225
10% decrease in equity prices	**(1,354)**	**(1,357)**	(1,092)	(1,092)
10% increase in USD exchange rate compared to all currencies	**143**	**143**	136	136
10% decrease in USD exchange rate compared to all currencies	**(143)**	**(143)**	(136)	(136)

Where appropriate, the effects of the sensitivity tests on profit after tax and total equity incorporate the impact of the stress on the PVIF. The relationship between the profit and total equity and the risk factors is non-linear and non-symmetrical, therefore the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. For the same reason, the impact of the stress is not symmetrical on the upside and downside. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, and are stated before allowance for management actions which may mitigate the effect of changes in the market environment. The sensitivities presented do not allow for adverse changes in policyholders' behaviour that may arise in response to changes in market rates.

Credit risk (insurance)

Credit risk is the risk of financial loss if a customer or counterparty fails to meet their obligation under a contract. It arises in two main areas for our insurance manufacturers:

- risk of default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
- risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

The amounts outstanding at the balance sheet date in respect of these items are shown in the table on page 45.

Our insurance manufacturing subsidiaries are responsible for the credit risk, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information. Investment credit exposures are monitored against limits by our local insurance manufacturing subsidiaries, and are aggregated and reported to Group Insurance Credit Risk and Group Credit Risk. Stress testing on the investment credit exposures using credit spread sensitivities and default probabilities is included in the stress and scenario testing as described above.

We use a number of tools to manage and monitor credit risk. These include a credit report which contains a watch-list of investments with current credit concerns and is circulated monthly to senior management in Group Insurance and the individual country Chief Risk Officers to identify investments which may be at risk of future impairment.

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholders; therefore our exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds. The credit quality of these financial assets is included in the table on page 26.

The credit quality of the reinsurers' share of liabilities under insurance contracts is primarily assessed as 'strong' or 'good' (as defined on page 26), with 100% of the exposure being neither past due nor impaired (2015: 100%).

Liquidity risk (insurance)

Liquidity risk is the risk that an insurance operation, though solvent, either does not have sufficient financial resources available to meet its obligations when they fall due, or can secure them only at excessive cost.

Risk is managed by cashflow matching and maintaining sufficient cash resources; investing in high-credit-quality investments with deep and liquid markets, monitoring investment concentrations and restricting them where appropriate and establishing committed contingency borrowing facilities. Insurance manufacturing subsidiaries produce quarterly liquidity risk reports for Group Insurance to review annually the liquidity risks to which they are exposed.

The following table shows the expected undiscounted cash flows for insurance contract liabilities at 31 December 2016. The liquidity risk exposure is wholly borne by the policyholders in the case of unit-linked business and is shared with the policyholders for non-linked insurance. The remaining contractual maturity of investment contract liabilities is included in the table on page 117.

Expected maturity of insurance contract liabilities

	Expected cash flows (undiscounted)				
	Within 1 year HK$m	1-5 years HK$m	5-15 years HK$m	Over 15 years HK$m	Total HK$m
At 31 December 2016					
Non-linked insurance contracts	**28,980**	**118,623**	**255,449**	**252,421**	**655,473**
Linked insurance contracts	**3,025**	**16,492**	**35,559**	**70,238**	**125,314**
	32,005	**135,115**	**291,008**	**322,659**	**780,787**
At 31 December 2015					
Non-linked insurance contracts	26,738	112,308	230,750	237,112	606,908
Linked insurance contracts	2,454	13,397	42,131	82,993	140,975
	29,192	125,705	272,881	320,105	747,883

Insurance risk

Insurance risk is the risk of loss through adverse experience, in either timing or amount, of insurance underwriting parameters (non-economic assumptions). These parameters include mortality, morbidity, longevity, lapses and unit costs.

The principal risk we face is that, over time, the cost of the contract, including claims and benefits may exceed the total amount of premiums and investment income received. The table on page 47 analyses our life insurance risk exposures by type of business.

HSBC Insurance primarily manages its insurance risk through asset and liability management, product design, pricing and overall proposition management (e.g. lapses management by introducing surrender charges), underwriting policy, claims management process and reinsurance which cedes risks above our acceptable thresholds to an external reinsurer thereby limiting our exposure.

Present value of in-force long-term insurance business

In calculating PVIF, 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.

Actuarial Control Committees for each key insurance entity meet on a quarterly basis to review and approve assumptions proposed for use in the determination of the PVIF. All changes to non-economic assumptions, economic assumptions that are not observable and model methodology must be approved by the Actuarial Control Committee.

Economic assumptions are either set in a way that is consistent with observable market values or, in certain markets, long-term economic assumptions are used. Setting such assumptions involves the projection of long-term interest rates and the time horizon over which observable market rates trend 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.

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.

The following table shows the effect on the PVIF of changes in the risk-free rate at 31 December, across all insurance manufacturing subsidiaries.

	Impact on PVIF	
	2016	2015
	HK$m	HK$m
+ 100 basis points shift in risk-free rate	**67**	(63)
– 100 basis points shift in risk-free rate	**379**	(64)

The effects on PVIF shown above, as well as the effects on profit after tax and net assets shown below, are illustrative only and employ simplified scenarios. It should be noted that the effects may not be linear and, therefore, the results cannot be extrapolated. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, but do not incorporate other actions that could be taken by management to mitigate effects, nor do they take account of consequential changes in policyholders' behaviour.

Non-economic assumptions

The table below shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions across all our insurance manufacturing subsidiaries.

	Impact on 2016 results		Impact on 2015 results	
	Profit after tax	**Total equity**	Profit after tax	Total equity
	HK$m	**HK$m**	HK$m	HK$m
10% increase in mortality and/or morbidity rates	**(464)**	**(464)**	(402)	(402)
10% decrease in mortality and/or morbidity rates	**467**	**467**	400	400
10% increase in lapse rates	**(398)**	**(398)**	(355)	(355)
10% decrease in lapse rates	**452**	**452**	407	407
10% increase in expense rates	**(331)**	**(331)**	(285)	(285)
10% decrease in expense rates	**318**	**318**	271	271

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written.

Sensitivity to lapse rates depends on the type of contracts being written. In general, for life insurance contracts a policy lapse has two offsetting effects on profits, which are the loss of future income on the lapsed policy and the existence of surrender charge recouped at policy lapse. The net impact depends on the relative size of these two effects which varies with the type of contracts.

Expense rates risk is the exposure to a change in the cost of administering insurance contracts. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative effect on our profits.

Capital

Capital Management

(Audited)

Our approach to capital management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment in which we operate.

It is our objective to maintain a strong capital base to support the development of our business and to meet regulatory capital requirements at all times. To achieve this, our policy is to hold capital in a range of different forms and all capital raising is agreed with major subsidiaries as part of their individual and the group's capital management processes.

The policy on capital management is underpinned by a capital management framework, which enables us to manage our capital in a consistent manner. The framework defines regulatory capital and economic capital as the two primary measures for the management and control of capital.

Capital measures:

- economic capital is the internally calculated capital requirement to support risks to which we are exposed and forms a core part of the internal capital adequacy assessment process; and
- regulatory capital is the capital which we are required to hold in accordance with the rules established by regulators.

Our capital management process is articulated in our annual capital plan which is approved by the Board. The plan is drawn up with the objective of maintaining both an appropriate amount of capital and an optimal mix between the different components of capital. Each subsidiary manages its own capital to support its planned business growth and meet its local regulatory requirements within the context of the approved annual group capital plan. In accordance with the Capital Management Framework, capital generated by subsidiaries in excess of planned requirements is returned to the Bank, normally by way of dividends.

The Bank is primarily the provider of capital to its subsidiaries and these investments are substantially funded by the Bank's own capital issuance and profit retention. As part of its capital management process, the Bank seeks to maintain a prudent balance between the composition of its capital and that of its investment in subsidiaries.

The principal forms of capital are included in the following balances on the consolidated balance sheet: share capital, other equity instruments, retained profits, other reserves, preference shares and subordinated liabilities.

Externally imposed capital requirements
(Unaudited)

The Hong Kong Monetary Authority ('HKMA') supervises the group on both a consolidated and solo-consolidated basis and therefore receives information on the capital adequacy of, and sets capital requirements for, the group as a whole and on a solo-consolidated basis. Individual banking subsidiaries and branches are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements. In most jurisdictions, non-banking financial subsidiaries are also subject to the supervision and capital requirements of local regulatory authorities.

The group uses the advanced internal ratings-based approach to calculate its credit risk for the majority of its non-securitisation exposures and the internal ratings-based (securitisation) approach to determine credit risk for its banking book securitisation exposures. For market risk, the group uses an internal models approach to calculate its general market risk for the risk categories of interest rate exposures, foreign exchange (including gold) exposures, and equity exposures. The group also uses an internal models approach to calculate its market risk in respect of specific risk for interest rate exposures and equity exposures. The group uses the standardised (market risk) approach for calculating other market risk positions as well as trading book securitisation exposures, and the standardised (operational risk) approach to calculate its operational risk.

During the year, the individual entities within the group and the group itself complied with all of the externally imposed capital requirements of the HKMA.

Basel III
(Unaudited)

Since December 2010, the Basel Committee has developed a comprehensive set of reform measures covering additional capital, leverage and liquidity requirements, commonly referred to as 'Basel III'.

The Basel III capital rules set out the minimum common equity tier 1 ('CET1') requirement of 4.5% and a minimum total capital requirement of 8% from 1 January 2015.

In addition to the criteria detailed in the Basel III proposals, the Basel Committee issued further minimum requirements in January 2011 to ensure that all classes of capital instruments fully absorb losses at the point of non-viability before taxpayers are exposed to loss. Instruments issued on or after 1 January 2013 may only be included in regulatory capital if the new requirements are met. The capital treatment of securities issued prior to this date will be phased out over a 10-year period commencing on 1 January 2013.

The provisions of the Banking (Capital) (Amendment) Rules 2012 came into effect on 1 January 2013 to implement the first phase of the Basel III capital standards in Hong Kong ('Basel III rules').

The Banking (Capital) (Amendment) Rules 2014 came into effect on 1 January 2015 to implement the Basel III capital buffer requirements in Hong Kong. The changes include the phase-in from 2016 to 2019 of the Capital Conservation Buffer ('CCB') which is designed to ensure banks build up capital outside periods of stress of 2.5% of RWAs, the Countercyclical Capital Buffer ('CCyB') which is set on an individual country basis and is built up during periods of excess credit growth to protect against future losses, and the Higher Loss Absorbency ('HLA') requirement for Domestic Systemically Important Banks ('D-SIB') of up to 3.5 % of RWAs. The CCyB for Hong Kong is 0.625% from 1 January 2016 and 1.25% from 1 January 2017. The HKMA announced on 27 January 2017 that it will be increased to 1.875% from 1 January 2018. This increase is consistent with the Basel III phase-in arrangements for the CCyB. On 16 March 2015, the HKMA announced the designation of the group as a D-SIB and the HLA requirement to be 2.5% of RWAs which will be phased-in from 0.625% in 2016 to reach the full implementation in 2019. On 31 December 2015 and 30 December 2016, the HKMA confirmed the designation of the group as a D-SIB as well as the HLA requirements.

Total Loss Absorbing Capacity proposals
(Unaudited)

In November 2014, as part of the 'too big to fail' agenda, the Financial Stability Board ('FSB') published proposals for Total Loss-absorbing Capacity ('TLAC') for Global Systemically Important Banks ('G-SIBs'). In November 2015, the FSB issued its final term sheet on TLAC which set the minimum TLAC requirement to be 16% of RWAs from 1 January 2019, rising to 18% from 1 January 2022. In addition, there must be sufficient TLAC to meet a leverage ratio requirement of 6% from 1 January 2019, rising to 6.75% by 1 January 2022.

Leverage Ratio
(Unaudited)

Basel III introduces a simple non risk-based leverage ratio as a complementary measure to the risk-based capital requirements to limit excessive leverage on the part of banks. The leverage ratio was introduced into the Basel III framework as a non-risk-based backstop limit, to supplement risk-based capital requirements. It aims to constrain the build-up of excess leverage in the banking sector, introducing additional safeguards against model risk and measurement errors. The ratio is a volume-based measure calculated as Basel III tier 1 capital divided by total on-and off-balance sheet exposures.

Basel III provides for a transitional period for the introduction of this ratio, comprising a supervisory monitoring period that started in 2011 and a parallel run period from January 2013 to January 2017. The parallel run will be used to assess whether the proposed minimum ratio of 3% is appropriate, with a view to migrating to a Pillar 1 requirement from 1 January 2018. In 2016, the Basel Committee consulted on various amendments to the design and calibration of the leverage ratio framework in the light of the parallel run.

Capital (continued)

The group is required under rule 45A(6) of the Banking (Disclosure) Rules to disclose its leverage ratio calculated on a consolidated basis.

	At 31 December 2016	At 31 December 2015
	%	%
Leverage ratio	**6.3**	6.4

Capital and leverage ratio exposure measure		
	HK$m	HK$m
Tier 1 capital	**444,872**	418,758
Total exposure measure	**7,018,046**	6,514,618

The decrease in the leverage ratio from 31 December 2015 to 31 December 2016 was mainly due to an increase in total assets during the year.

Further details regarding the group's leverage positions can be viewed in the Supplementary Notes on the Financial Statements 2016, which will be available in the Regulatory Disclosures section of our website: www.hsbc.com.hk.

Capital adequacy at 31 December 2016
(Unaudited)

The following tables show the capital ratios, RWAs and capital base as contained in the 'Capital Adequacy Ratio' return submitted to the HKMA on a consolidated basis under the requirements of section 3C(1) of the Banking (Capital) Rules.

The basis of consolidation for financial accounting purposes is described in note 1 on the Financial Statements and differs from that used for regulatory purposes. Further information on the regulatory consolidation basis and a full reconciliation between the group's accounting and regulatory balance sheets can be viewed in the Supplementary Notes on the Financial Statements 2016, which will be available in the Regulatory Disclosures section of our website www.hsbc.com.hk. Subsidiaries not included in consolidation for regulatory purposes are securities and insurance companies and the capital invested by the group in these subsidiaries is deducted from regulatory capital, subject to certain thresholds.

The Bank and its banking subsidiaries maintain regulatory reserves to satisfy the provisions of the Banking Ordinance and local regulatory requirements for prudential supervision purposes. At 31 December 2016, the effect of this requirement is to reduce the amount of reserves which can be distributed to shareholders by HK$25,931m (31 December 2015: HK$27,819m).

There are no relevant capital shortfalls in any of the group's subsidiaries at 31 December 2016 (31 December 2015: nil) which are not included in its consolidation group for regulatory purposes.

Capital ratios

(Unaudited)

	At 31 December 2016	At 31 December 2015
	%	%
Common equity tier 1 (‘CET1’) capital ratio	**16.0**	15.6
Tier 1 capital ratio	**17.2**	16.6
Total capital ratio	**19.0**	18.6

Risk-weighted assets by risk type

(Unaudited)

	At 31 December 2016	At 31 December 2015
	HK$m	HK$m
Credit risk	**2,027,690**	1,942,430
Counterparty credit risk	**171,150**	176,764
Market risk	**90,454**	101,551
Operational risk	**299,295**	298,662
Total	**2,588,589**	2,519,407

Risk-weighted assets by global business

(Unaudited)

	At 31 December 2016	At 31 December 2015
	HK$m	HK$m
Retail Banking and Wealth Management	**365,094**	350,948
Commercial Banking	**832,810**	805,921
Global Banking and Markets	**899,276**	912,350
Global Private Banking	**27,262**	30,789
Corporate Centre	**464,147**	419,399
Total	**2,588,589**	2,519,407

December 2015 comparatives have been re-presented to conform to the current period’s presentation. For details of these changes in presentation, see note 37 on the Financial Statements.

Capital Base

(Unaudited)

The following table sets out the composition of the group’s capital base under Basel III at 31 December 2016. The position at 31 December 2016 benefits from transitional arrangements which will be phased out.

Capital (continued)

Capital adequacy at 31 December 2016

Capital base
(Unaudited)

	At 31 December 2016 HK$m	At 31 December 2015 HK$m
Common equity tier 1 ('CET1') capital		
Shareholders' equity	**551,776**	514,078
Shareholders' equity per balance sheet	**628,006**	584,201
Revaluation reserve capitalisation issue	**(1,454)**	(1,454)
Other equity instruments	**(14,737)**	(14,737)
Unconsolidated subsidiaries	**(60,039)**	(53,932)
Non-controlling interests	**22,676**	22,352
Non-controlling interests per balance sheet	**51,130**	51,685
Non-controlling interests in unconsolidated subsidiaries	**(6,442)**	(5,717)
Surplus non-controlling interests disallowed in CET1	**(22,012)**	(23,616)
Regulatory deductions to CET1 capital	**(160,144)**	(142,611)
Valuation adjustments	**(2,020)**	(1,845)
Goodwill and intangible assets	**(14,029)**	(14,032)
Deferred tax assets net of deferred tax liabilities	**(1,566)**	(1,863)
Cash flow hedging reserve	**222**	(51)
Changes in own credit risk on fair valued liabilities	**(1,195)**	(940)
Defined benefit pension fund assets	**(62)**	(40)
Significant capital investments in unconsolidated financial sector entities	**(57,395)**	(39,524)
Property revaluation reserves[1]	**(58,168)**	(56,497)
Regulatory reserve	**(25,931)**	(27,819)
Total CET1 capital	**414,308**	393,819
Additional tier 1 ('AT1') capital		
Total AT1 capital before regulatory deductions	**47,897**	50,826
Perpetual subordinated loans	**14,737**	14,737
Perpetual non-cumulative preference shares	**25,228**	25,213
Allowable non-controlling interests in AT1 capital	**7,932**	10,876
Regulatory deductions to AT1 capital	**(17,333)**	(25,887)
Significant capital investments in unconsolidated financial sector entities	**(17,333)**	(25,887)
Total AT1 capital	**30,564**	24,939
Total tier 1 capital	**444,872**	418,758
Tier 2 capital		
Total tier 2 capital before regulatory deductions	**67,536**	79,164
Perpetual cumulative preference shares	**1,551**	3,100
Cumulative term preference shares	**–**	8,138
Perpetual subordinated debt	**3,102**	6,204
Term subordinated debt	**21,472**	21,603
Property revaluation reserves[1]	**26,830**	26,079
Impairment allowances and regulatory reserve eligible for inclusion in tier 2 capital	**14,581**	14,040
Regulatory deductions to tier 2 capital	**(21,106)**	(29,059)
Significant capital investments in unconsolidated financial sector entities	**(21,106)**	(29,059)
Total tier 2 capital	**46,430**	50,105
Total capital	**491,302**	468,863

1 *Includes the revaluation surplus on investment properties which is reported as part of retained profits and adjustments made in accordance with the Banking (Capital) Rules issued by the HKMA.*

A detailed breakdown of the group's CET1 capital, AT1 capital, Tier 2 capital and regulatory deductions can be viewed in the Supplementary Notes on the Financial Statements 2016, which will be available in the Regulatory Disclosures section of our website www.hsbc.com.hk.

The following table shows the pro-forma Basel III end point basis position once all transitional arrangements have been phased out based on the Transition Disclosures Template. It should be noted that the pro-forma Basel III end point basis position takes no account of, for example, any future profits or management actions. In addition, the current regulations or their application may change before full implementation. Given this, the final impact on the group's capital ratios may differ from the pro-forma position, which is a mechanical application of the current rules to the balance sheet at 31 December 2016; it is not a projection. On this pro-forma basis, the group's CET1 ratio is 14.7% (2015: 13.6%), which is above the Basel III minimum requirement, plus expected regulatory capital buffer requirements.

Reconciliation of capital from transitional basis to a pro-forma Basel III end point basis
(Unaudited)

	At 31 December 2016 HK$m	At 31 December 2015 HK$m
CET1 capital on a transitional basis	**414,308**	393,819
Transitional provisions: Significant capital investments in unconsolidated financial sector entities	**(34,666)**	(51,774)
CET1 capital end point basis	**379,642**	342,045
AT1 capital on a transitional basis	**30,564**	24,939
Grandfathered instruments: Perpetual non-cumulative preference shares	**(25,228)**	(25,213)
Transitional provisions:		
Allowable non-controlling interests in AT1 capital	**(6,534)**	(9,494)
Significant capital investments in unconsolidated financial sector entities	**17,333**	25,887
AT1 capital end point basis	**16,135**	16,119
Tier 2 capital on a transitional basis	**46,430**	50,105
Grandfathered instruments:		
Perpetual cumulative preference shares	**(1,551)**	(3,100)
Cumulative term preference shares	**–**	(8,138)
Perpetual subordinated debt	**(3,102)**	(6,204)
Term subordinated debt	**(1,462)**	(1,607)
Transitional provisions: Significant capital investments in unconsolidated financial sector entities	**17,333**	25,887
Tier 2 capital end point basis	**57,648**	56,943

Statement of Director's Responsibilities

The following statement, which should be read in conjunction with the Auditor's statement of their responsibilities set out in their report on page 57, is made with a view to distinguishing for shareholders the respective responsibilities of the Directors and of the Auditor in relation to the Financial Statements.

The Directors of The Hongkong and Shanghai Banking Corporation Limited ('the Bank') are responsible for the preparation of the Bank's *Annual Report and Accounts*, which contains the consolidated financial statements of the Bank and its subsidiaries (together 'the group'), in accordance with applicable law and regulations.

The Hong Kong Companies Ordinance requires the Directors to prepare for each financial year the consolidated financial statements for the group, and the balance sheet for the Bank.

The Directors are responsible for ensuring adequate accounting records are kept that are sufficient to show and explain the group's transactions, such that the group's financial statements give a true and fair view.

The Directors are responsible for preparing the consolidated financial statements that give a true and fair view and are in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') issued by the Hong Kong Institute of Certified Public Accountants. The Directors have elected to prepare the Bank's balance sheet on the same basis.

The Directors, the names of whom are set out in 'Report of the Directors' on page 3 of this *Annual Report and Accounts*, confirm to the best of their knowledge that:

- the consolidated financial statements, which have been prepared in accordance with HKFRSs, have been prepared in accordance with the applicable set of accounting standards and give a true and fair view of the assets, liabilities, financial position and profit or loss of the group and the undertakings included in the consolidation taken as a whole; and
- the management report represented by the Financial Review, the Risk and Capital Reports includes a fair review of the development and performance of the business and the position of the group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that the group faces.

On behalf of the Board

Stuart Gulliver
Chairman
21 February 2017

Independent auditor's report to the shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability)

Opinion

What we have audited

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together, 'the group') set out on pages 65 to 143, which comprise the:

- consolidated balance sheet as at 31 December 2016;
- consolidated income statement for the year then ended;
- consolidated statement of comprehensive income for the year then ended;
- consolidated statement of changes in equity for the year then ended;
- consolidated statement of cash flows for the year then ended; and
- notes to the consolidated financial statements, which include a summary of significant accounting policies.

Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the group as at 31 December 2016, and of its consolidated financial performance and consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') issued by the Hong Kong Institute of Certified Public Accountants ('HKICPA') and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ('HKSAs') issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the group in accordance with the HKICPA's Code of Ethics for Professional Accountants ('the Code'), and we have fulfilled our other ethical responsibilities in accordance with the Code.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follows:

- IT access management
- Impact of the Deferred Prosecution Agreement ('DPA')
- Investment in associate – Bank of Communications Co., Limited ('BoCom')
- The present value of in-force long-term insurance business ('PVIF') and liabilities under non-linked life insurance contracts
- Impairment of loans and advances to customers

Independent auditor's report to the shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability) (continued)

Key audit matters *(continued)*

a IT access management

Nature of the key audit matter

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.

It was identified that the group's controls over individuals access rights to operating systems, applications, and data used in the financial reporting process required improvement. Access rights are important as 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.

A number of enhancements to the control environment were made by management during the year but some controls were not fully remediated and we have assessed the risk of material misstatement arising from access to technology as significant for the audit.

Matters discussed with the Audit Committee

The original approach discussed with the Audit Committee was based on the control enhancements proposed by management, and involved the testing of new and improved control processes. This was supplemented with other control and substantive procedures required for the periods of the year when the changes would not yet have been effective. As the timing of the enhancements to controls changed during the year, we reflected this in the nature and extent of testing and our final approach was discussed with the Audit Committee.

In the Audit Committee meetings, there was a discussion on the status of the control remediation programme, work performed by management and results of testing performed.

How our audit addressed the Key Audit Matter

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

- New access requests to applications, operating systems and databases were properly reviewed and authorised;
- Application, operating systems and database user access rights were removed on a timely basis when an individual left the group or moved role;
- Access rights to applications, operating systems and databases were periodically monitored for appropriateness; and
- Highly privileged access to applications, operating systems and databases was monitored.

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 personnel did not have access to change applications, the operating systems or databases in the production environment.

As a consequence of deficiencies identified in the controls a range of other procedures were performed:

- Where inappropriate access was identified, we have understood the nature of the access and obtained additional evidence of the appropriateness of the activities performed;
- Additional substantive testing was performed on specific year-end reconciliations (custodian, bank account and suspense account reconciliations) and confirmations with external counterparties; and
- Testing was performed on other compensating controls such as business performance reviews.

A significant amount of the group's technology processes and controls were undertaken in shared service centres located outside of Hong Kong. Our audit testing of access rights controls was also performed in the shared service centre locations.

Relevant references in the Annual Report and Accounts 2016

- Risk Report, Operational Risk, page 41

Key audit matters *(continued)*

b Impact of the Deferred Prosecution Agreement ('DPA')

Nature of the key audit matter

HSBC Holdings plc and HSBC Bank USA NA ('HBUS') entered into a DPA with the US Department of Justice ('DoJ'), the Federal Reserve Board and the United Kingdom's Financial Conduct Authority ('FCA') 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 was to conclude 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 Holdings plc and its subsidiaries business. This could include loss of business and withdrawal of funding, restrictions on US dollar clearing functions through HBUS or revocation of bank licences.

As a subsidiary of HSBC Holdings plc, the loss of the ability to clear US dollars through HBUS could have a significant adverse impact on the going concern status of the Bank in the future.

Matters discussed with the Audit Committee

In considering going concern as the basis of preparation of the consolidated financial statements, a discussion was held with the Audit Committee about our assessment of the risk of HSBC Holdings plc and HBUS not meeting the requirements of the DPA and the impact on the going concern assumption of the Bank.

At the Audit Committee meeting held prior to approving the group's Annual Report and Accounts, a summary of our testing procedures and findings was discussed.

How our audit addressed the Key Audit Matter

The likelihood of the DPA being breached and a restriction to US dollar clearing imposed was assessed through:

- Inquiry with the Monitor, whose role is explained on page 42, to understand the status of his work, his assessment of management's progress against the requirements of the DPA and his reporting to the DoJ and FCA.
- Reading the 2016 Monitor report and the eleven country reports issued during the year.
- Reading a sample of the detailed reports produced by the compliance function that undertook testing of controls and processes related to the DPA, and an assessment of their findings.

Each HSBC Holdings plc Risk Committee meeting was attended during the year. At each meeting the status of the Global Standards Programme, which aims to address the DPA recommendations, was discussed. The related discussion was observed.

Minutes of the HSBC Holdings plc Financial System Vulnerabilities Committee meetings, at which the findings of the Monitor were discussed, were inspected.

Compliance with the DPA was discussed with Group Legal.

Relevant references in the Annual Report and Accounts 2016

- Risk Report, Top and emerging risks, page 21
- Risk Report, Financial Crime Risk, page 42
- Note 43: Legal proceedings and regulatory matters, page 141

Independent auditor's report to the shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability) (continued)

Key audit matters *(continued)*

c Investment in associate – Bank of Communications Company, Limited ('BoCom')

Nature of the key audit matter

The Bank holds 19.03% of the listed equity of BoCom at 31 December 2016. This investment is accounted for as an associate using the equity method, because of the significant influence that comes from the shareholding.

The market value of BoCom has remained below the carrying value for a prolonged period. At 31 December 2016, the market value of the investment based on the share price was HK$79.2bn compared with the carrying value of HK$122.8bn.

This is considered an indicator of potential impairment under HKFRSs. An impairment test was performed by the Bank using a value in use model to estimate the investment's value assuming it continues to be held in perpetuity rather than sold. The estimated value in use at 31 December 2016 was HK$124.8bn and on this basis no impairment was recorded. The share of BoCom's profits has been recognised in the consolidated income statement.

The value in use model determines the present value of the Bank's share of BoCom's future cash flows. The model is dependent on many assumptions, both short-term and long-term in nature. These assumptions are derived from a combination of management estimates, analysts' forecasts and market data and are highly judgemental.

Matters discussed with the Audit Committee

Discussions with the Audit Committee were focused on:

- The continued appropriateness of the value in use model given the period of time that the carrying value has been in excess of market value;
- The key assumptions used in the model with a particular focus on the assumptions with the highest level of uncertainty including the long-term profit growth rate and the long-term loan impairment charge;
- The reasonably possible alternative assumptions that were considered to identify those assumptions to which the value in use was most sensitive and to demonstrate the impact on the value in use of a movement in those assumptions; and
- The overall justifications for the divergence between the value in use and market value.

During these discussions, management confirmed their view that the model, assumptions and cash flow forecasts remained appropriate.

How our audit addressed the Key Audit Matter

Controls in place over the value in use model were tested, including senior management review controls over the inputs, assumptions and output of the model.

With the assistance of our valuation experts, the appropriateness of the model was reviewed and challenged and the discount rate used within the model was independently recalculated.

Inputs used in the determination of assumptions within the model were challenged and corroborating information was obtained with reference to external market information, third party sources, including analyst reports, and historical publically available BoCom information.

The year-end meeting between the Bank and senior BoCom executive management, held specifically to identify facts or circumstances impacting management assumptions, was observed.

The mathematical accuracy of the model was tested.

Disclosures made in the Annual Report and Accounts in relation to BoCom were reviewed.

Relevant references in the Annual Report and Accounts 2016

- Financial Review, page 14
- Note 1: Basis of preparation and significant accounting policies , page 75
- Note 15: Interests in associates and joint ventures, page 106

Key audit matters *(continued)*

d The present value of in-force long-term insurance business ('PVIF') and liabilities under non-linked life insurance contracts

Nature of the key audit matter

The group has recorded an asset for PVIF of HK$44,077 million and liabilities under non-linked life insurance contracts of HK$332,057 million as at 31 December 2016.

The determination of these balances requires the use of appropriate actuarial methodologies and also highly judgemental assumptions. Such assumptions include the long term economic returns of insurance contracts issued, assumptions over policyholder behaviour such as longevity, mortality and persistency, and management assumptions over the future costs of obtaining and maintaining the group's insurance business.

Small movements in these assumptions can have a material impact on the PVIF asset and the liabilities under non-linked life insurance contracts.

Matters discussed with the Audit Committee

We discussed with the Audit Committee the results of our testing procedures over key assumptions used in the valuation of the PVIF asset and the liabilities under non-linked life insurance contracts including testing of changes made during the reporting period to the models and to the basis of the calculation of the risk free discount rate.

How our audit addressed the Key Audit Matter

The controls that management had established over the valuation of the PVIF asset and the liabilities under non-linked life insurance contracts were tested. These included controls over policy data reconciliations from the policyholder administration system to the actuarial valuation system, controls over assumption setting, controls over the review and determination of valuation methodology, system access and user acceptance testing controls over the actuarial models used, and controls over the production and approval of the actuarial results.

The appropriateness of the models, methodologies and assumptions used (including assumptions over the long term economic returns of insurance contracts issued, assumptions over policyholder behaviour such as longevity, mortality and persistency, and assumptions relating to future costs of obtaining and maintaining the insurance business) were reviewed with the assistance of our actuarial experts.

Management's key judgements and assumptions were evaluated and challenged with the assistance of our actuarial experts. Our challenge and evaluation included whether these judgements were supported by relevant experience, market information and formed a reasonable basis for setting the assumptions.

Relevant references in the Annual Report and Accounts 2016

- Risk Report, Risks of insurance manufacturing operations , page 44-49
- Note 1: Basis of preparation and significant accounting policies, page 83
- Note 16: Goodwill and intangible assets, page 110

Independent auditor’s report to the shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability) (continued)

Key audit matters *(continued)*

e Impairment of loans and advances to customers

Nature of the key audit matter

Impairment allowances represent management’s best estimate of the losses incurred within the loan portfolios as 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.

The group’s collective impairment allowances are calculated using models which approximate the impact of current economic and credit conditions on large portfolios of loans. The inputs to these models are based on historical loss experience with judgement applied to determine the assumptions used to calculate impairment. Model overlays are applied where data driven parameters or calculations are not considered representative of current risks or conditions of the loan portfolios.

For specific impairment allowances, judgement is required to determine when an impairment event has occurred and then to estimate the expected future cash flows related to that loan to determine the impairment.

The audit was focused on impairment due to the materiality of the loan balances and associated impairment allowances and the subjective nature of the impairment calculations.

Matters discussed with the Audit Committee

We discussed with the Audit Committee details of our testing procedures and our findings over individual and collective impairment allowances.

We also discussed with the Audit Committee changes to risk factors relevant to the collective allowance models as well as judgements made on individually significant loan impairments.

How our audit addressed the Key Audit Matter

The controls management has established to support their collective and individual impairment calculations were tested.

For collective impairment, controls over the completeness and accuracy of the data input to the models were tested. The appropriateness of the models used to determine the impairment allowance was independently assessed and management’s review of key assumptions within the models were tested.

The appropriateness of the collective modelling methodology was independently assessed and model calculations were tested through re-performance.

The appropriateness of management’s judgements was also independently assessed with respect to calculation methodology and segmentation, economic factors and other judgemental overlays, the period of historical loss rates used, loss emergence periods and the valuation of recovery assets.

For impairment allowances on individual loans, the controls over credit file review processes, approval of external collateral valuation vendors, and controls over the approval and recording of significant individual impairments were tested.

For impairment allowances on individual loans, the appropriateness of provisioning methodologies and policies was independently assessed for a sample of loans. An independent view was formed on the level of allowances booked based on review of the detailed loan, security and counterparty information in the credit files, including management’s evidence to determine when the impairment event occurred and, where available, independently obtained market information. Calculations for a sample of discounted cash flows were re-performed.

Relevant references in the Annual Report and Accounts 2016

- Risk report, Credit Risk, page 23-32
- Note 1: Basis of preparation and significant accounting policies, page 77
- Note 2: Operating profit-Loan impairment charges and other credit risk provisions, page 88
- Note 11: Impairment allowances against loans and advances to customers, page 101

Other Information

The directors are responsible for the other information. The other information comprises the information included in the Financial Highlights, Report of Directors, Financial Review, Risk Report, Capital and Statement of Directors' Responsibilities sections of the Annual Report and Accounts 2016, but does not include the consolidated financial statements and our auditor's report thereon, which we obtained prior to the date of this auditor's report, and the Supplementary Notes on the Financial Statements 2016 and the list of the directors of the Bank's subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2016 to 21 February 2017, which are expected to be made available to us after that date.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the Supplementary Notes on the Financial Statements 2016 and the list of the directors of the Bank's subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2016 to 21 February 2017, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the Audit Committee and take appropriate action considering our legal rights and obligations.

Responsibilities of Directors and the Audit Committee for the Consolidated Financial Statements

The directors are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with section 405 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements *(continued)*

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements for the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Mr. Mervyn Robert John Jacob.

PricewaterhouseCoopers
Certified Public Accountants

Hong Kong, 21 February 2017

Financial Statements

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Financial Statements (continued)

Consolidated income statement for the year ended 31 December 2016

	Note	2016 HK$m	2015 HK$m
Interest income	*2a*	**122,564**	124,060
Interest expense		**(25,656)**	(29,683)
Net interest income		**96,908**	94,377
Fee income		**47,139**	51,926
Fee expense		**(7,837)**	(6,267)
Net fee income	*2b*	**39,302**	45,659
Net trading income	*2c*	**24,064**	23,616
Net income/(expense) from financial instruments designated at fair value	*2d*	**3,570**	(2,560)
Gains less losses from financial investments	*2e*	**1,232**	11,611
Dividend income		**234**	210
Net insurance premium income	*3a*	**55,912**	52,593
Other operating income	*2f*	**11,516**	10,439
Total operating income		**232,738**	235,945
Net insurance claims and benefits paid and movement in liabilities to policyholders	*3b*	**(64,586)**	(52,431)
Net operating income before loan impairment charges and other credit risk provisions		**168,152**	183,514
Loan impairment charges and other credit risk provisions	*2g*	**(5,554)**	(5,074)
Net operating income		**162,598**	178,440
Employee compensation and benefits	*4a*	**(38,896)**	(41,126)
General and administrative expenses	*2h*	**(29,917)**	(29,883)
Depreciation of property, plant and equipment	*17a*	**(4,493)**	(4,380)
Amortisation and impairment of intangible assets		**(1,497)**	(1,602)
Total operating expenses		**(74,803)**	(76,991)
Operating profit		**87,795**	101,449
Share of profit in associates and joint ventures		**14,912**	15,830
Profit before tax		**102,707**	117,279
Tax expense	*5a*	**(17,912)**	(17,296)
Profit for the year		**84,795**	99,983
Profit attributable to shareholders of the parent company		**78,646**	89,533
Profit attributable to non-controlling interests		**6,149**	10,450

Consolidated statement of comprehensive income for the year ended 31 December 2016

	2016 HK$m	2015 HK$m
Profit for the year	**84,795**	99,983
Other comprehensive income/(expense)		
Items that will subsequently be reclassified to the income statement when specific conditions are met:		
Available-for-sale investments:		
– fair value changes taken to equity	**(430)**	(2,430)
– fair value changes transferred to the income statement on disposal	**(1,226)**	(15,637)
– amounts transferred to the income statement on impairment	**2**	8
– fair value changes transferred to the income statement on hedged items	**2,296**	37
– income taxes	**(143)**	354
Cash flow hedges:		
– fair value changes taken to equity	**1,354**	1,662
– fair value changes transferred to the income statement	**(2,295)**	(1,433)
– income taxes	**139**	(97)
Share of other comprehensive income of associates and joint ventures	**1,266**	460
Exchange differences	**(15,241)**	(19,188)
Items that will not subsequently be reclassified to the income statement:		
Property revaluation:		
– fair value changes taken to equity	**3,825**	6,601
– income taxes	**(678)**	(1,101)
Remeasurement of defined benefit:		
– before income taxes	**1,016**	(662)
– income taxes	**(183)**	105
Other comprehensive income/(expense) for the year, net of tax	**(10,298)**	(31,321)
Total comprehensive income for the year, net of tax	**74,497**	68,662
Total comprehensive income for the year attributable to:		
– shareholders of the parent company	**68,577**	63,447
– non-controlling interests	**5,920**	5,215
	74,497	68,662

Financial Statements (continued)

Consolidated balance sheet at 31 December 2016

	Note	2016 HK$m	2015 HK$m
ASSETS			
Cash and sight balances at central banks		**213,783**	151,103
Items in the course of collection from other banks		**21,401**	25,020
Hong Kong Government certificates of indebtedness		**242,194**	220,184
Trading assets	*7*	**371,634**	302,626
Derivatives	*8*	**479,807**	380,955
Financial assets designated at fair value	*9*	**106,016**	99,095
Reverse repurchase agreements – non-trading		**271,567**	212,779
Placings with and advances to banks		**463,211**	421,221
Loans and advances to customers	*10*	**2,834,114**	2,762,290
Financial investments	*12*	**1,835,351**	1,716,046
Amounts due from Group companies	*38*	**242,773**	244,396
Interests in associates and joint ventures	*15*	**125,792**	122,438
Goodwill and intangible assets	*16*	**56,936**	49,568
Property, plant and equipment	*17*	**111,640**	110,064
Deferred tax assets	*5*	**1,503**	1,836
Prepayments, accrued income and other assets	*18*	**171,230**	134,062
Total assets		**7,548,952**	6,953,683
LIABILITIES			
Hong Kong currency notes in circulation		**242,194**	220,184
Items in the course of transmission to other banks		**37,753**	30,753
Repurchase agreements – non-trading		**27,810**	16,158
Deposits by banks		**192,479**	148,294
Customer accounts	*19*	**4,900,004**	4,640,076
Trading liabilities	*20*	**188,470**	191,851
Derivatives	*8*	**462,458**	369,419
Financial liabilities designated at fair value	*21*	**51,116**	50,770
Debt securities in issue	*22*	**25,235**	40,859
Retirement benefit liabilities	*4c*	**3,867**	5,809
Amounts due to Group companies	*38*	**198,038**	110,073
Accruals and deferred income, other liabilities and provisions	*23*	**99,487**	86,920
Liabilities under insurance contracts	*24*	**386,170**	340,820
Current tax liabilities	*5*	**1,619**	2,456
Deferred tax liabilities	*5*	**21,401**	18,799
Subordinated liabilities	*26*	**4,836**	8,003
Preference shares	*27*	**26,879**	36,553
Total liabilities		**6,869,816**	6,317,797
EQUITY			
Share capital	*28*	**114,359**	96,052
Other equity instruments	*29*	**14,737**	14,737
Other reserves		**85,886**	93,031
Retained profits		**413,024**	380,381
Total shareholders' equity		**628,006**	584,201
Non-controlling interests		**51,130**	51,685
Total equity		**679,136**	635,886
Total equity and liabilities		**7,548,952**	6,953,683

Directors
Stuart Gulliver
Peter Wong

Consolidated statement of changes in equity for the year ended 31 December 2016

	2016										
				Other reserves							
	Share capital HK$m	Other equity instruments HK$m	Retained profits HK$m	Property revaluation reserve HK$m	Available-for-sale investment reserve HK$m	Cash flow hedge reserve HK$m	Foreign exchange reserve HK$m	Other[1] HK$m	Total share-holders' equity HK$m	Non-controlling interests HK$m	Total equity HK$m
At 1 January	96,052	14,737	380,381	52,099	4,880	(35)	(16,991)	53,078	584,201	51,685	635,886
Profit for the year	–	–	78,646	–	–	–	–	–	78,646	6,149	84,795
Other comprehensive income/(expense) (net of tax)	–	–	542	3,123	1,309	(758)	(14,870)	585	(10,069)	(229)	(10,298)
Available-for-sale investments	–	–	–	–	622	–	–	–	622	(123)	499
Cash flow hedges	–	–	–	–	–	(758)	–	–	(758)	(44)	(802)
Property revaluation	–	–	(245)	3,123	–	–	–	–	2,878	269	3,147
Actuarial gains on defined benefit plans	–	–	793	–	–	–	–	–	793	40	833
Share of other comprehensive income/(expense) of associates and joint ventures	–	–	(6)	–	687	–	–	585	1,266	–	1,266
Exchange differences	–	–	–	–	–	–	(14,870)	–	(14,870)	(371)	(15,241)
Total comprehensive income/(expense) for the year	–	–	79,188	3,123	1,309	(758)	(14,870)	585	68,577	5,920	74,497
Shares issued	18,307	–	–	–	–	–	–	–	18,307	–	18,307
Dividends paid[2]	–	–	(43,296)	–	–	–	–	–	(43,296)	(6,297)	(49,593)
Movement in respect of share-based payment arrangements	–	–	235	–	–	–	–	(258)	(23)	(3)	(26)
Transfers and other movements[3]	–	–	(3,484)	(1,459)	–	–	–	5,183	240	(175)	65
At 31 December	114,359	14,737	413,024	53,763	6,189	(793)	(31,861)	58,588	628,006	51,130	679,136

Consolidated statement of changes in equity for the year ended 31 December 2015

	2015										
				Other reserves							
	Share capital HK$m	Other equity instruments HK$m	Retained profits HK$m	Property revaluation reserve HK$m	Available-for-sale investment reserve HK$m	Cash flow hedge reserve HK$m	Foreign exchange reserve HK$m	Other[1] HK$m	Total share-holders' equity HK$m	Non-controlling interests HK$m	Total equity HK$m
At 1 January	96,052	14,737	339,061	48,481	16,537	(166)	1,872	41,261	557,835	50,511	608,346
Profit for the year	–	–	89,533	–	–	–	–	–	89,533	10,450	99,983
Other comprehensive income/ (expense) (net of tax)	–	–	(929)	5,146	(11,657)	131	(18,863)	86	(26,086)	(5,235)	(31,321)
Available-for-sale investments	–	–	–	–	(12,032)	–	–	–	(12,032)	(5,636)	(17,668)
Cash flow hedges	–	–	–	–	–	131	–	–	131	1	132
Property revaluation	–	–	(238)	5,146	–	–	–	–	4,908	592	5,500
Actuarial losses on defined benefit plans	–	–	(690)	–	–	–	–	–	(690)	133	(557)
Share of other comprehensive income/(expense) of associates and joint ventures	–	–	(1)	–	375	–	–	86	460	–	460
Exchange differences	–	–	–	–	–	–	(18,863)	–	(18,863)	(325)	(19,188)
Total comprehensive income/ (expense) for the year	–	–	88,604	5,146	(11,657)	131	(18,863)	86	63,447	5,215	68,662
Dividends paid[2]	–	–	(37,405)	–	–	–	–	–	(37,405)	(4,053)	(41,458)
Movement in respect of share-based payment arrangements	–	–	7	–	–	–	–	345	352	4	356
Transfers and other movements[3]	–	–	(9,886)	(1,528)	–	–	–	11,386	(28)	8	(20)
At 31 December	96,052	14,737	380,381	52,099	4,880	(35)	(16,991)	53,078	584,201	51,685	635,886

1 *The other reserves mainly comprise the share-based payment reserve account, purchase premium arising from transfer of business within the HSBC Group and other non-distributable reserves. The share-based payment reserve account is used to record the amount relating to share awards and options granted to employees of the group directly by HSBC Holdings plc.*
2 *Including distributions paid on perpetual subordinated loans classified as equity under HKFRSs.*
3 *The movement from retained profits to other reserves includes the relevant transfers in associates according to local regulatory requirements.*

Consolidated statement of cash flows for the year ended 31 December 2016

	Note	2016 HK$m	2015 HK$m
Operating activities			
Cash generated from operations	*32*	**210,612**	168,508
Interest received on financial investments		**17,961**	15,201
Dividends received on financial investments		**235**	212
Dividends received from associates		**4,664**	4,990
Taxation paid		**(18,222)**	(17,020)
Net cash inflow from operating activities		**215,250**	171,891
Investing activities			
Purchase of financial investments		**(567,270)**	(579,361)
Proceeds from sale or redemption of financial investments		**446,850**	462,793
Purchase of property, plant and equipment		**(3,009)**	(3,687)
Proceeds from sale of property, plant and equipment and assets held for sale		**2**	355
Purchase of other intangible assets		**(1,825)**	(1,796)
Net cash inflow from the sale of interests in business portfolios		**388**	5,092
Net cash outflow from investing activities		**(124,864)**	(116,604)
Net cash inflow before financing activities		**90,386**	55,287
Financing activities			
Issue of ordinary share capital		**18,307**	–
Issue of subordinated liabilities		**63,982**	1,395
Redemption of preference shares		**(9,688)**	–
Repayment of subordinated liabilities		**(3,110)**	(7,704)
Ordinary dividends paid	*6*	**(42,565)**	(36,750)
Dividends paid on perpetual subordinated loans	*6*	**(731)**	(655)
Dividends paid to non-controlling interests		**(6,297)**	(4,053)
Interest paid on preference shares		**(1,008)**	(864)
Interest paid on subordinated liabilities		**(1,010)**	(1,004)
Net cash inflow/(outflow) from financing activities		**17,880**	(49,635)
Increase in cash and cash equivalents	*33*	**108,266**	5,652

Notes on the Financial Statements

1 Basis of preparation and significant accounting policies

a Basis of preparation

(i) Compliance with Hong Kong Financial Reporting Standards

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') have been prepared in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') as issued by the Hong Kong Institute of Certified Public Accountants ('HKICPA') and accounting principles generally accepted in Hong Kong. These financial statements also comply with the requirements of the Hong Kong Companies Ordinance (Cap. 622) which are applicable to the preparation of financial statements.

Standards adopted during the year ended 31 December 2016

There were no new standards applied during the year ended 31 December 2016. During 2016, the group adopted a number of amendments to standards which had an insignificant effect on the consolidated financial statements of the group.

(ii) Future accounting developments

Minor amendments to HKFRSs

The group has not early applied any of the amendments effective after 31 December 2016 and it expects they will have an insignificant effect, when applied, on the consolidated financial statements of the group.

Major new HKFRSs

The HKICPA has published HKFRS 9 'Financial Instruments', HKFRS 15 'Revenue from Contracts with Customers' and HKFRS 16 'Leases'.

HKFRS 9 'Financial Instruments'

In September 2014, the HKICPA issued HKFRS 9 'Financial Instruments', which is the comprehensive standard to replace HKAS 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 (i.e 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'). 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 HKAS 39. However, based on an assessment of financial assets performed to date and expectations around changes to balance sheet composition, the group expects that the overall impact of any change will not be significant.

For financial liabilities designated to be 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. The impact of this change is not expected to be significant.

1 Basis of preparation and significant accounting policies *(continued)*

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, an impairment 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, an 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 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 HKAS 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 HKAS 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, but do not explicitly address macro hedge accounting strategies, which are particularly important for banks. As a result, HKFRS 9 includes an accounting policy choice to remain with HKAS 39 hedge accounting.

Based on the analysis performed to date, the group expects to exercise the accounting policy choice to continue HKAS 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 HKFRS 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 group does not intend to restate comparatives. 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. If this presentation was applied at 31 December 2016, 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 the group'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 the group's credit risk, is disclosed in note 21. The group is assessing the impact that the impairment requirements will have on the financial statements.

The group intends to quantify the potential impact of HKFRS 9 once it is practicable to provide reliable estimates, which will be no later than in the *Annual Report and Accounts 2017*. Until reliable estimates of the impact are available, particularly on the interaction with the regulatory capital requirements, further information on the expected impact on the financial position and on capital planning cannot be provided.

1 Basis of preparation and significant accounting policies *(continued)*

HKFRS 15 'Revenue from Contracts with Customers'

In July 2014, the HKICPA issued HKFRS 15 'Revenue from Contracts with Customers'. The original effective date of HKFRS 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. HKFRS 15 provides a principles-based approach for revenue recognition, and introduces the concept of recognising revenue for performance obligations as they are satisfied. The standard should be applied retrospectively, with certain practical expedients available. The group has assessed the impact of HKFRS 15 and it expects that the standard will have no significant effect, when applied, on the consolidated financial statements of the group.

HKFRS 16 'Leases'

In May 2016, the HKICPA issued HKFRS 16 'Leases' with an effective date of annual periods beginning on or after 1 January 2019. HKFRS 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 HKAS 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 HKAS 17. The group is currently assessing the impact of HKFRS 16 and it is not practicable to quantify the effect as at the date of the publication of these financial statements. Existing operating lease commitments are set out in note 35.

(iii) Foreign currencies

Items included in each of the group's entities are measured using the currency of the primary economic environment in which the entity operates (the 'functional currency'). The group's consolidated financial statements are presented in Hong Kong dollars.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date except non-monetary assets and liabilities measured at historical cost that are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income or in the income statement depending on where the gain or loss on the underlying item is recognised.

In the consolidated financial statements, the assets, liabilities and results of foreign operations whose functional currency is not Hong Kong dollars are translated into the group's presentation currency at the reporting date. Exchange differences arising are recognised in other comprehensive income. On disposal of a foreign operation, exchange differences previously recognised in other comprehensive income are reclassified to the income statement.

(iv) Presentation of information

Certain disclosures required by HKFRSs have been included in the audited sections of the *Annual Report and Accounts* as follows:

- Disclosures concerning the nature and extent of risks relating to banking and insurance activities are included in the 'Risk Report' on pages 15 to 49.
- Capital disclosures are included in the 'Capital' section on page 50.

In accordance with the group's policy to provide disclosures that help other stakeholders to understand the group's performance, financial position and changes thereto, the information provided in the Notes on the Financial Statements, the Risk Report and the Capital section goes beyond the minimum levels required by accounting standards, statutory and regulatory requirements. In addition, the group 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.

1 Basis of preparation and significant accounting policies *(continued)*

(v) 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 highlighted as the critical accounting estimates and judgements in note 1(b) 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 2016 Financial Statements. Management's selection of the group's accounting policies which contain critical estimates and judgements reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved.

(vi) Segmental analysis

The group's chief operating decision-maker is the Executive Committee which operates as a general management committee under the direct authority of the Board and operating segments are reported in a manner consistent with the internal reporting provided to the Executive Committee.

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.

(vii) 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, capital resources and risks facing the group including those associated with the Deferred Prosecution Agreement as described in note 43.

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b Summary of significant accounting policies

(i) Consolidation and related policies

Investments in subsidiaries

Where an entity is governed by voting rights, the group consolidates 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 to direct relevant activities and whether power is held as agent or principal.

Business combinations are accounted for using the acquisition method. 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. This election is made for each business combination.

The Bank's investments in subsidiaries are stated at cost less impairment losses.

Goodwill

Goodwill is allocated to cash-generating units for the purpose of impairment testing. Impairment testing is performed at least annually, or whenever there is an indication of impairment.

Interests in associates

The group classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint arrangements, as associates.

Investments in associates are recognised using the equity method. The attributable share of the results and reserves of associates are included in the consolidated financial statements of the group 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.

Notes on the Financial Statements (continued)

1 Basis of preparation and significant accounting policies *(continued)*

Investments in associates are assessed at each reporting date and tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in associates is not tested separately for impairment but is assessed as part of the carrying amount of the investment.

Critical accounting estimates and judgements
Impairment testing of investments in associates 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 in note 15.

(ii) Income and expenses

Operating income

Interest income and expense

Interest income and expense for all financial instruments, excluding those classified as held for trading or designated at fair value are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. However, as an exception to this, interest on debt securities issued by the group that are designated under the fair value option and derivatives managed in conjunction with those debt securities are included in interest expense.

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 the group 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 a transaction, such as the acquisition of shares, for a third party); and
- income earned from the provision of services is recognised as revenue as the services are provided (for example, asset management services).

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.

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 the group and derivatives managed in conjunction with those debt securities, which is recognised in 'Interest expense'.

The accounting policies for **insurance premium income** are disclosed in note 1(b)(vi).

1 Basis of preparation and significant accounting policies *(continued)*

(iii) Valuation of financial instruments

All financial instruments are initially recognised 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, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, the group recognises the difference as a trading gain or loss at inception ('day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and 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 the group enters into an offsetting transaction.

The fair value of financial instruments is generally measured on an individual basis. However, in cases where the group 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 HKFRSs offsetting criteria.

Critical accounting estimates and judgements
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, where the measurement of fair value is more judgemental.

(iv) Financial instruments measured at amortised cost

Loans and advances to banks and customers, held-to-maturity investments and most financial liabilities are measured at amortised cost. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs. If the initial fair value is lower than the cash amount advanced, such as for some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan (as described in paragraph (iii) above) through the recognition of interest income, unless the loan becomes impaired.

The group 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. When the group intends to hold the loan, a provision on the loan commitment is only recorded where it is probable that the group will incur a loss.

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. 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 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, the group considers on a case-by-case basis at each balance sheet date whether there is any objective evidence that a loan is impaired.

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.

Notes on the Financial Statements (continued)

1 Basis of preparation and significant accounting policies *(continued)*

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.

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, generally retail lending portfolios.

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. This assessment captures impairment losses that the group has incurred as a result of events occurring before the balance sheet date which the group 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.

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, the group 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. Individual loans are grouped using ranges of past due days and statistical estimates are made of 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; such as industry sector, loan grade or product. In applying this methodology, adjustments are made to estimate the periods of time between a loss event occurring, for example through a missed payment, and its confirmation through write-off (known as the Loss Identification Period). Current economic conditions are also evaluated when calculating the appropriate level of allowance required to cover inherent loss. In certain highly-developed markets, 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, the group 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.

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.

1 Basis of preparation and significant accounting policies *(continued)*

Assets acquired in exchange for loans

When non-financial assets acquired in exchange for loans as part of an orderly realisation are held for sale, these assets are recorded as 'Assets held for sale' and reported in 'Other assets'.

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.

Critical accounting estimates and judgements

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.

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.

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.

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.

Notes on the Financial Statements (continued)

1 Basis of preparation and significant accounting policies *(continued)*

(v) Financial instruments measured at fair value

Available-for-sale financial assets

Available-for-sale financial assets are recognised on the trade date when the group enters into contractual arrangements to purchase those instruments, and are normally derecognised when either the securities are sold or redeemed. 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. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial investments'.

Impairment of available-for-sale financial assets

Available-for-sale financial assets are assessed at each balance sheet date for objective evidence of impairment. 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.

Available-for-sale debt securities

In assessing objective evidence of impairment at the reporting date, the group 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. 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 decreases in the estimated future cash flows. 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.

Available-for-sale equity securities

A significant or prolonged decline in the fair value of the equity below its cost is 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.

All subsequent increases in the fair value of the instrument are treated as a revaluation and are recognised in other comprehensive income. 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. Impairment losses recognised on the equity security are not reversed through the income statement.

Financial instruments designated at fair value

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:

- the use of the designation removes or significantly reduces an accounting mismatch. Under this criterion, the main classes of financial instruments designated by the group are:

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.

1 Basis of preparation and significant accounting policies *(continued)*

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

A contract under which the group does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. See Note 1(b)(vi) for investment contracts with DPF and contracts where the group 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.

Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative, this includes embedded derivatives which are bifurcated from the host contract when they meet the definition of a derivative on a standalone basis.

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 the group 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 held for risk management purposes they are designated in hedge relationships where the required criteria for documentation and hedge effectiveness are met. The group enters into fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

Fair value hedge

Changes in the fair value of derivatives 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.

Notes on the Financial Statements (continued)

1 Basis of preparation and significant accounting policies *(continued)*

Cash flow hedge

The effective portion of changes in the fair value of derivatives 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.

(vi) Insurance contracts

A contract is classified as an insurance contract where the group accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event. An insurance contract may also transfer financial risk, but is accounted for as an insurance contract if the insurance risk is significant. In addition, the group issues investment contracts with discretionary participation features which are also accounted for as insurance contracts as required by HKFRS 4 'Insurance Contracts'.

Net insurance premium income

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 claims and benefits paid and movements in liabilities to policyholders

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.

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.

1 Basis of preparation and significant accounting policies *(continued)*

Future profit participation on insurance contracts with Discretionary Participation Features ('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 required by HKFRS 4. 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.

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 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 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.

Critical accounting estimates and judgements

The value of PVIF depends upon assumptions regarding future events. The PVIF is determined by discounting those expected future profits 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 assumptions are reassessed at each reporting date and changes in the estimates which affect the value of PVIF are reflected in the income statement.

(vii) Property

Land and buildings

Land and buildings held for own use are carried at their revalued amount, being the fair value at the date of the revaluation less any subsequent accumulated depreciation and impairment losses.

Revaluations are performed by professional qualified valuers, on a market basis, with sufficient regularity to ensure that the net carrying amount does not differ materially from the fair value. Surpluses arising on revaluation are credited firstly to the income statement, to the extent of any deficits arising on revaluation previously charged to the income statement in respect of the same land and buildings, and are thereafter taken to the 'Property revaluation reserve'. Deficits arising on revaluation are first set off against any previous revaluation surpluses included in the 'Property revaluation reserve' in respect of the same land and buildings, and are thereafter recognised in the income statement.

1 Basis of preparation and significant accounting policies *(continued)*

Buildings held for own use which are situated on leasehold land where it is possible to reliably separate the value of the building from the value of the leasehold land at inception of the lease are revalued by professional qualified valuers, on a depreciated replacement cost basis or surrender value, with sufficient regularity to ensure that the net carrying amount does not differ materially from the fair value.

Leasehold land and buildings are depreciated over the shorter of the unexpired terms of the leases or the remaining useful lives.

The Government of Hong Kong owns all the land in Hong Kong and permits its use under leasehold arrangements. Similar arrangements exist in mainland China. At inception of the lease, where the cost of land is known or can be reliably determined and the term of the lease is not less than 50 years, the group records its interests in leasehold land and land use rights as land and buildings held for own use. Where the term is less than 50 years, the group records its interests as operating leases.

Where the cost of the land is unknown or cannot be reliably determined, and the leasehold land and land use rights are not clearly held under an operating lease, they are accounted for as land and buildings held for own use.

Investment properties

The group holds certain properties as investments to earn rentals or for capital appreciation, or both, and those investment properties are included on balance sheet at fair value with changes in fair value being recognised in the income statement.

(viii) Employee compensation and benefits

Post-employment benefit plans

The group operates a number of pension schemes (including defined benefit and defined contribution) and post-employment benefit schemes.

Payments to defined contribution plans are charged as an expense as the employees render service.

Defined benefit pension obligations are calculated 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.

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

(ix) Tax

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 and any adjustment to tax payable in respect of previous years. The group provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities.

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 is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled.

Current and deferred tax is calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

1 Basis of preparation and significant accounting policies *(continued)*

(x) Provisions, contingent liabilities and guarantees

Provisions

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.

Contingent liabilities, contractual commitments and guarantees

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, are not recognised in the financial statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

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.

The Bank has issued financial guarantees and similar contracts to other group entities. The group elects to account for certain guarantees as insurance contracts in the Bank 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.

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Notes on the Financial Statements (continued)

2 Operating profit

a *Interest income*

Interest income recognised on impaired financial assets amounted to HK$374m in the year (2015: HK$277m).

b *Net fee income*

	2016 HK$m	2015 HK$m
Account services	**3,063**	2,976
Funds under management[1]	**5,771**	6,215
Cards	**7,063**	7,072
Credit facilities	**2,825**	3,219
Broking income	**3,131**	5,583
Imports/exports	**3,771**	4,340
Unit trusts	**5,855**	6,598
Underwriting	**1,188**	1,214
Remittances	**3,324**	3,438
Global custody	**3,450**	3,744
Insurance agency commission	**1,746**	1,482
Other	**5,952**	6,045
Fee income	**47,139**	51,926
Fee expense	**(7,837)**	(6,267)
Net fee income	**39,302**	45,659

1 *Includes Mandatory Provident Fund*

	2016 HK$m	2015 HK$m
Net fee income includes the following:		
Net fee income, other than amounts included in determining the effective interest rate, arising from financial assets or financial liabilities that are not held for trading or designated at fair value		
– fee income	**14,892**	15,862
– fee expense	**(3,290)**	(1,879)
	11,602	13,983
Net fee income on trust and other fiduciary activities where the group holds or invests assets on behalf of its customers		
– fee income	**8,551**	9,032
– fee expense	**(845)**	(1,005)
	7,706	8,027

In 2016, certain expenditure in respect of credit card loyalty programmes previously presented in 'General and administrative expenses' is presented in 'Fee expense' to more appropriately reflect the nature of the expenditure. This accounted for the majority of the increase in fee expense during the year.

2 Operating profit *(continued)*

c *Net trading income*

	2016 HK$m	2015 HK$m
Dealing profits	**18,195**	17,523
Net interest income on trading activities	**3,718**	4,439
Dividend income from trading securities	**2,074**	1,674
– Listed investments	**2,045**	1,636
– Unlisted investments	**29**	38
Gains/(losses) from hedging activities	**77**	(20)
Fair value hedges		
– Net gain/(loss) on hedged items attributable to the hedged risk	**(2,550)**	68
– Net gain/(loss) on hedging instruments	**2,598**	(88)
Cash flow hedges		
– Net hedging gain	**29**	–
	24,064	23,616

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

	2016 HK$m	2015 HK$m
Income/(expense) on assets designated at fair value which back insurance and investment contracts	**4,104**	(2,304)
Increase in fair value of liabilities to customers under investment contracts	**(651)**	(374)
	3,453	(2,678)
Net change in fair value of other financial assets/liabilities designated at fair value[1]	**102**	100
Interest income on financial assets and liabilities designated at fair value	**15**	18
	3,570	(2,560)

1 *Gains and losses from changes in the fair value of the group's issued debt securities include those arising from changes in the group's own credit risk. In 2016, the group recognised a HK$62m gain on changes in the fair value of these instruments arising from changes in own credit risk (2015:HK$26m gain).*

e *Gains less losses from financial investments*

	2016 HK$m	2015 HK$m
Gain on partial disposal of investment in Industrial Bank	**–**	10,636
Gains on disposal of other available-for-sale securities	**1,234**	983
Impairment of available-for-sale equity investments	**(2)**	(8)
	1,232	11,611

There were no gains or losses on the disposal of held-to-maturity investments in the year (2015: nil).

Notes on the Financial Statements (continued)

2 Operating profit *(continued)*

f *Other operating income*

	2016 HK$m	2015 HK$m
Gain on 150th anniversary banknotes issuance	–	693
Movement in present value of in-force insurance business	7,306	4,689
Gains on investment properties	36	480
Gains/(losses) on disposal of property, plant and equipment and assets held for sale	(57)	134
Gain on disposal of subsidiaries, associates and business portfolios	1	23
Rental income from investment properties	400	404
Other	3,830	4,016
	11,516	10,439

Other included net gains on loans and receivables of HK$146m (2015: HK$278m). There were no gains or losses on the disposal of financial liabilities measured at amortised cost during the year (2015: nil).

g *Loan impairment charges and other credit risk provisions*

	2016 HK$m	2015 HK$m
Individually assessed impairment charges:		
– New charges	5,224	4,011
– Releases	(1,567)	(1,390)
– Recoveries	(277)	(305)
	3,380	2,316
Collectively assessed impairment charges	2,065	2,656
Other credit risk provisions	109	102
Loan impairment charges and other credit risk provisions	5,554	5,074

There were no impairment charges against available-for-sale debt securities included in other credit risk provisions (2015: nil). There were no impairment charges or provisions relating to held-to-maturity investments (2015: nil).

h *General and administrative expenses*

	2016 HK$m	2015 HK$m
Premises and equipment		
– Rental expenses	3,665	3,542
– Other premises and equipment expenses	4,107	4,032
	7,772	7,574
Marketing and advertising expenses	2,909	3,900
Other administrative expenses	19,236	18,409
	29,917	29,883

In 2016, certain expenditure in respect of credit card loyalty programmes previously presented in 'Marketing and advertising expenses' is presented in 'Fee expense' to more appropriately reflect the nature of the expenditure. This accounted for the majority of the decrease in marketing and advertising expenses during the year.

Included in operating expenses were direct operating expenses of HK$27m (2015: HK$22m) arising from investment properties that generated rental income during the year. Direct operating expenses arising from investment properties that did not generate rental income amounted to HK$4m (2015: HK$2m).

Included in operating expenses were minimum lease payments under operating leases of HK$3,675m (2015: HK$3,692m).

i *Auditors' remuneration*

Auditors' remuneration amounted to HK$82m (2015: HK$78m).

3 Insurance income

a *Net insurance premium income*

	Non-linked insurance HK$m	Linked insurance HK$m	Total HK$m
2016			
Gross insurance premium income	**57,349**	**2,522**	**59,871**
Reinsurers' share of gross insurance premium income	**(3,930)**	**(29)**	**(3,959)**
Net insurance premium income	**53,419**	**2,493**	**55,912**
2015			
Gross insurance premium income	51,367	4,937	56,304
Reinsurers' share of gross insurance premium income	(3,684)	(27)	(3,711)
Net insurance premium income	47,683	4,910	52,593

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

	Non-linked insurance HK$m	Linked insurance HK$m	Total HK$m
2016			
Gross claims and benefits paid and movement in liabilities to policyholders	**63,473**	**4,472**	**67,945**
Claims, benefits and surrenders paid	**19,099**	**2,395**	**21,494**
Movement in liabilities	**44,374**	**2,077**	**46,451**
Reinsurers' share of claims and benefits paid and movement in liabilities	**(3,514)**	**155**	**(3,359)**
Reinsurers' share of claims, benefits and surrenders paid	**(319)**	**(80)**	**(399)**
Reinsurers' share of movement in liabilities	**(3,195)**	**235**	**(2,960)**
Net insurance claims and benefits paid and movement in liabilities to policyholders	**59,959**	**4,627**	**64,586**
2015			
Gross claims and benefits paid and movement in liabilities to policyholders	53,950	1,577	55,527
Claims, benefits and surrenders paid	21,216	3,285	24,501
Movement in liabilities	32,734	(1,708)	31,026
Reinsurers' share of claims and benefits paid and movement in liabilities	(3,214)	118	(3,096)
Reinsurers' share of claims, benefits and surrenders paid	(318)	(445)	(763)
Reinsurers' share of movement in liabilities	(2,896)	563	(2,333)
Net insurance claims and benefits paid and movement in liabilities to policyholders	50,736	1,695	52,431

Notes on the Financial Statements (continued)

4 Employee compensation and benefits

a *Employee compensation and benefits*

	2016 HK$m	2015 HK$m
Wages and salaries	**35,376**	37,846
Social security costs	**1,022**	1,080
Retirement benefit costs		
– Defined contribution plans	**1,505**	1,449
– Defined benefit plans	**993**	751
	38,896	41,126

'Wages and salaries' include the effect of share-based payments arrangements as follows:

	2016 HK$m	2015 HK$m
Restricted share awards	**985**	1,303
Savings-related shares and other share option plans	**107**	78
	1,092	1,381

b *Directors' emoluments*

The aggregate emoluments of the Directors of the Bank disclosed pursuant to section 4 of the Companies (Disclosure of Information about Benefits of Directors) Regulation were HK$102m (2015: HK$100m). This comprises fees of HK$9m (2015: HK$9m) and other emoluments of HK$93m (2015: HK$91m) which includes contributions to pension schemes of HK$1m (2015: HK$1m). Non-cash benefits which are included in other emoluments mainly relate to share-based payment awards, and the provision of housing and furnishing. Details on loans to directors are set out in note 38.

c *Retirement benefit pension plans*

The group operates a number of retirement benefit plans, with a total cost of HK$2,498m (2015: HK$2,200m), the largest of which is the HSBC Group Hong Kong Local Staff Retirement Benefit Scheme ('the Principal Plan').

In Hong Kong, the Principal Plan covers employees of the Bank and certain other local employees of the Group. The Principal Plan comprises a funded defined benefit scheme (which provides a lump sum on retirement but is now closed to new members) and a defined contribution scheme. The latter was established on 1 January 1999 for new employees, and the group has been moving to defined contribution plans for all new employees. Since the defined benefit element of the Principal Plan is a final salary lump sum scheme, its exposure to longevity risk and interest rate risk is limited.

The trustee assumes the overall responsibility for the Principal Plan but a management committee and a number of sub-committees have also been established. These committees have been established to broaden the governance and manage the concomitant issues.

The Principal Plan is predominantly a funded plan with assets which are held in trust funds separate from the group. The actuarial funding valuation of the Principal Plan is reviewed at least on a triennial basis or in accordance with local practice and regulations. The actuarial assumptions used to conduct the actuarial funding valuation of the Principal Plan vary according to the economic conditions.

The defined benefit scheme of the Principal Plan mainly invests in bonds with a smaller portion in equities and each investment manager has been assigned a benchmark applicable to their respective asset class. The target asset allocations for the portfolio are as follows: Bonds 65% and Equity 35%.

4 Employee compensation and benefits *(continued)*

(i) Cumulative actuarial losses recognised in other comprehensive income in respect of defined benefit plans

	2016 HK$m	2015 HK$m
At 1 January	(8,303)	(7,641)
Actuarial gains/(losses) recognised in other comprehensive income	1,016	(662)
At 31 December	(7,287)	(8,303)

(ii) Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets HK$m	Present value of defined benefit obligations HK$m	Net defined benefit liability HK$m
Net defined benefit liability			
At 1 January 2016	13,974	(19,736)	(5,762)
Current service cost	–	(846)	(846)
Past service cost and losses from settlements[1]	–	(32)	(32)
Service cost	–	(878)	(878)
Net interest income/(cost) on the net defined benefit liability	303	(415)	(112)
Remeasurement effects recognised in other comprehensive income	91	925	1,016
– Return on plan assets (excluding interest income)	91	–	91
– Actuarial gains from changes in financial assumptions	–	1,558	1,558
– Actuarial losses from experience	–	(633)	(633)
Exchange differences and other movements	(19)	28	9
Contributions by the group	1,889	–	1,889
Benefits paid	(1,483)	1,524	41
At 31 December 2016	14,755	(18,552)	(3,797)
Retirement benefit liabilities recognised on the balance sheet			(3,867)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			70
Present value of defined benefit obligation relating to:			
– Actives		(18,300)	
– Pensioners		(252)	

Notes on the Financial Statements (continued)

4 Employee compensation and benefits *(continued)*

	Fair value of plan assets HK$m	Present value of defined benefit obligations HK$	Net defined benefit liability HK$m
Net defined benefit liability			
At 1 January 2015	14,870	(20,357)	(5,487)
Current service cost	–	(883)	(883)
Past service cost and gains from settlements[1]	–	274	274
Service cost	–	(609)	(609)
Net interest income/(cost) on the net defined benefit liability	297	(429)	(132)
Remeasurement effects recognised in other comprehensive income	(548)	(114)	(662)
– Return on plan assets (excluding interest income)	(548)	–	(548)
– Actuarial gains from changes in demographic assumptions	–	6	6
– Actuarial losses from changes in financial assumptions	–	(182)	(182)
– Actuarial gains from experience	–	62	62
Exchange differences and other movements	(26)	118	92
Contributions by the group	983	–	983
Contributions by employees	2	(2)	–
Benefits paid	(1,604)	1,657	53
At 31 December 2015	13,974	(19,736)	(5,762)
Retirement benefit liabilities recognised on the balance sheet			(5,809)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			47
Present value of defined benefit obligation relating to:			
– Actives		(19,475)	
– Pensioners		(261)	

1 *Gains / (losses) from settlements arise as the difference between assets distributed and liabilities extinguished on settlements.*

The group expects to make HK$717m of contributions to defined benefit pension plans during 2017.

(iii) Fair value of plan assets by asset classes

	2016			2015		
	Value HK$m	**Quoted market price in active market HK$m**	**Thereof HSBC HK$m**	Value HK$m	Quoted market price in active market HK$m	Thereof HSBC HK$m
Fair value of plan assets	**14,755**	**14,755**	**1,348**	13,974	13,974	407
– Equities	**5,260**	**5,260**	**–**	5,233	5,233	10
– Bonds	**7,358**	**7,358**	**–**	7,439	7,439	–
– Other[1]	**2,137**	**2,137**	**1,348**	1,302	1,302	397

1 *Other mainly consists of cash and deposits.*

4 Employee compensation and benefits *(continued)*

(iv) Benefits expected to be paid from the Principal Plan

Benefits expected to be paid from the Principal Plan to retirees over each of the next five years, and in aggregate for the five years thereafter, are as follows:

	2017 HK$m	2018 HK$m	2019 HK$m	2020 HK$m	2021 HK$m	2022-2026 HK$m
HSBC Group Hong Kong Local Staff Retirement Benefit Scheme	**594**	**778**	**930**	**1,067**	**1,231**	**4,634**

(v) The Principal Plan's principal actuarial financial assumptions

The present value of the Principal Plan's obligation was HK$11,215m (2015: HK$12,071m). The principal actuarial assumptions used to calculate the group's obligations for the Principal Plan for the year, and used as the basis for measuring the expenses in relation to the Principal Plan, were as follows:

	2016 % p.a.	2015 % p.a.
Discount rate	**1.80**	1.70
Rate of pay increase	**3.0**	4.0
Mortality table	**HKLT2015**[1]	HKLT2011[1]

1 *HKLT2015- Hong Kong Life Tables 2015.*

The group determines the discount rates to be applied to its obligations in consultation with the Principal Plan's local actuary, on the basis of current average yields of Hong Kong Government bonds, with maturities consistent with those of the defined benefit obligations.

(vi) Actuarial assumption sensitivities

The discount rate and rate of pay increase are sensitive to changes in market conditions arising during the reporting period. The following table shows the financial impact of assumption changes on the Principal Plan at year end:

	Impact on Pension Obligation	
	2016 HK$m	2015 HK$m
Discount rate		
- increase of 25bps..........	**(215)**	(249)
- decrease of 25bps..........	**222**	258
Rate of pay increase		
- increase of 25bps..........	**227**	239
- decrease of 25bps..........	**(221)**	(233)

Notes on the Financial Statements (continued)

5 Tax expense

a The Bank and its subsidiaries in Hong Kong have provided for Hong Kong profits tax at the rate of 16.5% (2015: 16.5%) on the profits for the year assessable in Hong Kong. Overseas branches and subsidiaries have similarly provided for tax in the countries in which they operate at the appropriate rates of tax ruling in 2016. Deferred taxation is provided for in accordance with the group's accounting policy in note 1(b)(ix).

The charge for taxation in the income statement comprises:

	2016 HK$m	2015 HK$m
Current income tax		
– Hong Kong taxation – on current year profit	**8,567**	10,005
– Hong Kong taxation – adjustments in respect of prior years	**(74)**	(134)
– Overseas taxation – on current year profit	**7,598**	8,072
– Overseas taxation – adjustments in respect of prior years	**(337)**	223
	15,754	18,166
Deferred tax		
– Origination and reversal of temporary differences	**2,159**	(769)
– Effect of changes in tax rates	**13**	18
– Adjustments in respect of prior years	**(14)**	(119)
	2,158	(870)
	17,912	17,296

b *Reconciliation between taxation charge and accounting profit at applicable tax rates:*

	2016 HK$m	2015 HK$m
Profit before tax	**102,707**	117,279
Notional tax on profit before tax, calculated at the rates applicable to profits in the countries concerned	**19,727**	21,983
Effects of profits in associates and joint ventures	**(2,390)**	(2,612)
Non taxable income and gains	**(1,951)**	(3,994)
Local taxes and overseas withholding taxes	**1,275**	1,118
Permanent disallowables	**957**	887
Others	**294**	(86)
	17,912	17,296

c *Movements of deferred tax assets and liabilities:*

	Accelerated capital allowances HK$m	**Insurance technical provisions HK$m**	**Expense provisions HK$m**	**Impairment allowances on financial assets HK$m**	**Revaluation of properties HK$m**	**Other HK$m**	**Total HK$m**
2016							
Assets	**132**	**–**	**983**	**1,107**	**–**	**718**	**2,940**
Liabilities	**(643)**	**(6,134)**	**–**	**(249)**	**(12,503)**	**(374)**	**(19,903)**
At 1 January	**(511)**	**(6,134)**	**983**	**858**	**(12,503)**	**344**	**(16,963)**
Exchange and other adjustments	**(2)**	**24**	**(274)**	**6**	**125**	**198**	**77**
Charge/(credit) to income statement	**(5)**	**(1,213)**	**252**	**(190)**	**288**	**(1,290)**	**(2,158)**
Charge/(credit) to reserves	**–**	**–**	**–**	**–**	**(678)**	**(176)**	**(854)**
At 31 December	**(518)**	**(7,323)**	**961**	**674**	**(12,768)**	**(924)**	**(19,898)**
Assets	**108**	**–**	**961**	**674**	**–**	**2,415**	**4,158[1]**
Liabilities	**(626)**	**(7,323)**	**–**	**–**	**(12,768)**	**(3,339)**	**(24,056)[1]**

5 Tax expense *(continued)*

	Accelerated capital allowances HK$m	Insurance technical provisions HK$m	Expense provisions HK$m	Impairment allowances on financial assets HK$m	Revaluation of properties HK$m	Other HK$m	Total HK$m
2015							
Assets[1]	106	–	1,079	284	–	763	2,232
Liabilities[1]	(736)	(5,390)	–	–	(11,728)	(1,528)	(19,382)
At 1 January	(630)	(5,390)	1,079	284	(11,728)	(765)	(17,150)
Exchange and other adjustments	(7)	33	(94)	(21)	72	30	13
Charge/(credit) to income statement	126	(777)	(2)	595	254	674	870
Charge/(credit) to reserves	–	–	–	–	(1,101)	405	(696)
At 31 December	(511)	(6,134)	983	858	(12,503)	344	(16,963)
Assets[1]	132	–	983	1,107	–	718	2,940
Liabilities[1]	(643)	(6,134)	–	(249)	(12,503)	(374)	(19,903)

1 *After netting off balances within countries, the balances as disclosed in the accounts are as follows: deferred tax assets HK$1,503m (2015:HK$ 1,836m); and deferred tax liabilities HK$21,401m (2015:HK$18,799m).*

The amount of unused tax losses for which no deferred tax asset is recognised in the balance sheet is HK$2,497m (2015: HK$2,216m). Of this amount, HK$2,047m (2015: HK$1,988m) has no expiry date and the remaining will expire within 10 years.

Deferred tax of HK$1,334m (2015: HK$721m) has been provided in respect of distributable reserves or post-acquisition reserves of associates that, on distribution or sale, would attract withholding tax.

Deferred tax is not recognised in respect of the group's investments in subsidiaries and branches where remittance or other realisation is not probable, and for those associates and interests in joint ventures where it has been determined that no additional tax will arise.

6 Dividends

Dividends to ordinary shareholders of the parent company

	2016		2015	
	Per share HK$	**Total HK$m**	Per share HK$	Total HK$m
Ordinary dividends paid				
– fourth interim dividend in respect of the previous financial year approved and paid during the year	**0.44**	**17,065**	0.37	14,250
– first interim dividend paid	**0.20**	**8,500**	0.20	7,500
– second interim dividend paid	**0.19**	**8,500**	0.20	7,500
– third interim dividend paid	**0.19**	**8,500**	0.20	7,500
	1.02	**42,565**	0.97	36,750

The Directors have declared a fourth interim dividend in respect of the financial year ending 31 December 2016 of HK$25,438m (HK$0.56 per ordinary share).

Distributions on other equity instruments

	2016 HK$m	2015 HK$m
US$1,900m floating rate perpetual subordinated loans (interest rate at one year US dollar LIBOR plus 3.84%)	**731**	655

Notes on the Financial Statements (continued)

7 Trading assets

	2016 HK$m	2015 HK$m
Treasury and other eligible bills	**91,908**	43,607
Debt securities	**180,501**	178,358
Equity shares	**71,915**	44,775
Other[1]	**27,310**	35,886
	371,634	302,626

1 *'Other' trading assets primarily include settlement accounts with banks and customers.*

	2016			2015		
	Treasury and other eligible bills HK$m	**Debt securities HK$m**	**Equity shares HK$m**	Treasury and other eligible bills HK$m	Debt securities HK$m	Equity shares HK$m
Issued by						
– central governments and central banks	**91,908**	**133,422**	**–**	43,607	124,962	–
– other public sector entities	**–**	**2,421**	**–**	–	8,115	–
– banks	**–**	**21,708**	**13,675**	–	22,095	5,806
– corporate entities	**–**	**22,950**	**58,240**	–	23,186	38,969
	91,908	**180,501**	**71,915**	43,607	178,358	44,775
Listed	**1,576**	**130,085**	**71,299**	2,164	122,934	44,093
Unlisted	**90,332**	**50,416**	**616**	41,443	55,424	682
	91,908	**180,501**	**71,915**	43,607	178,358	44,775

8 Derivatives

Use of derivatives

The group transacts derivatives for three primary purposes: to create risk management solutions for clients, to manage the portfolio risk arising from client business, and to manage and hedge the group's own risks. Derivatives (except for derivatives which are designated as effective hedging instruments) are held for trading. Within the held for trading classification are two types of derivative instruments: those used in sales and trading activities, and those used for risk management purposes but which for various reasons do not meet the qualifying criteria for hedge accounting. The second category includes derivatives managed in conjunction with financial instruments designated at fair value. These activities are described more fully below.

The group's derivative activities give rise to significant open positions in portfolios of derivatives. These positions are managed constantly to ensure that they remain within acceptable risk levels. When entering into derivative transactions, the group employs the same credit risk management framework to assess and approve potential credit exposures that it uses for traditional lending.

8 Derivatives *(continued)*

Contract amounts and fair values of assets and liabilities by class of derivatives

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.

	2016			2015		
	Contract amounts HK$m	**Assets HK$m**	**Liabilities HK$m**	Contract amounts HK$m	Assets HK$m	Liabilities HK$m
Trading derivatives						
Exchange rate contracts	**18,076,732**	**363,707**	**350,787**	16,125,677	246,202	231,885
– spot, forward and future	**13,577,599**	**217,748**	**201,955**	11,665,620	122,743	117,563
– swaps	**3,390,162**	**130,488**	**132,717**	3,392,883	109,227	99,997
– options purchased	**554,632**	**14,071**	**1,039**	515,299	14,054	131
– options written	**554,339**	**1,400**	**15,076**	551,875	178	14,194
Interest rate contracts	**18,861,627**	**150,198**	**150,582**	15,974,328	136,697	135,827
– forward and future	**1,877,788**	**243**	**204**	1,146,748	183	244
– swaps	**16,567,560**	**147,051**	**147,313**	14,514,463	133,907	132,784
– options purchased	**105,767**	**1,352**	**147**	54,662	1,226	48
– options written	**156,612**	**69**	**1,522**	52,728	70	1,832
– other	**153,900**	**1,483**	**1,396**	205,727	1,311	919
Equity derivatives	**604,504**	**22,350**	**24,653**	712,028	27,815	31,330
Credit derivatives	**474,160**	**2,431**	**2,437**	432,544	2,800	2,790
Commodity and other	**140,339**	**4,529**	**4,208**	95,216	5,920	5,675
Total held for trading	**38,157,362**	**543,215**	**532,667**	33,339,793	419,434	407,507
Trading derivatives managed in conjunction with financial instruments designated at fair value						
Interest rate contracts	**9,568**	**65**	**8**	7,342	60	10
	9,568	**65**	**8**	7,342	60	10
Cash flow hedging derivatives						
Exchange rate contracts	**140,665**	**6,570**	**1,322**	118,323	1,511	994
Interest rate contracts	**46,049**	**22**	**247**	66,684	171	127
	186,714	**6,592**	**1,569**	185,007	1,682	1,121
Fair value hedging derivatives						
Interest rate contracts	**262,940**	**2,534**	**813**	217,391	415	1,417
Gross total derivatives	**38,616,584**	**552,406**	**535,057**	33,749,533	421,591	410,055
Netting	**–**	**(72,599)**	**(72,599)**	–	(40,636)	(40,636)
Total	**38,616,584**	**479,807**	**462,458**	33,749,533	380,955	369,419

a *Trading derivatives*

Most of the group'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.

b *Hedging derivatives*

The group uses derivatives (principally interest rate and currency swaps) for hedging purposes in the management of its own asset and liability portfolios and structural positions. This enables the group to optimise the overall costs 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 accounting treatment of hedging transactions varies according to the nature of the instrument hedged and the type of hedging transaction. Derivatives may qualify as hedges for accounting purposes if they are fair value hedges, cash flow hedges, or hedges of net investments in foreign operations.

8 Derivatives *(continued)*

Fair value hedges

The group'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.

Cash flow hedges

The group's cash flow hedges consist principally of interest rate and currency swaps that are used to protect against exposures to variability in future interest and principal 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.

Amount transferred to the income statement in respect of cash flow hedges included a gain of HK$2,286m (2015: HK$181m gain) taken to "Net interest income" and a loss of HK$341m (2015: HK$1,182m gain) taken to "Net trading income". The group does not have any qualifying cash flow hedges that involve non-financial assets or non-financial liabilities (2015: none).

The gains and losses on ineffective portions of such derivatives are recognised immediately in "Net trading income". During the year to 31 December 2016, an insignificant amount was recognised due to hedge ineffectiveness and termination of forecast transactions (2015: insignificant amount).

The schedule of forecast principal balances on which the expected interest cash flows arise as at 31 December 2016 is as follows:

	3 months or less HK$m	More than 3 months but less than 1 year HK$m	5 years or less but more than 1 year HK$m
At 31 December 2016			
Cash inflows from assets	**92,356**	**135,219**	**82,205**
Cash outflows from liabilities	**(6,329)**	**(6,329)**	**(5,695)**
Net cash inflows	**86,027**	**128,890**	**76,510**
At 31 December 2015			
Cash inflows from assets	103,693	123,920	65,679
Cash outflows from liabilities	(12,960)	(22,468)	(11,525)
Net cash inflows	90,733	101,452	54,154

Derivatives valued using models with unobservable inputs

Any initial gain or loss on financial instruments where the valuation is dependent on unobservable parameters is deferred over the life of the contract or until the instrument is redeemed, transferred or sold or the fair value becomes observable. All derivatives that are part of qualifying hedging relationships have valuations based on observable market parameters.

The aggregate unobservable inception profit yet to be recognised in the income statement is immaterial.

9 Financial assets designated at fair value

	2016 HK$m	2015 HK$m
Treasury and other eligible bills	**418**	1,070
Debt securities	**17,435**	17,755
Equity shares	**88,163**	80,270
	106,016	99,095

	2016			2015		
	Treasury and other eligible bills HK$m	**Debt securities HK$m**	**Equity shares HK$m**	Treasury and other eligible bills HK$m	Debt securities HK$m	Equity shares HK$m
Issued by						
– central governments and central banks	**418**	**446**	**–**	1,070	646	–
– other public sector entities	**–**	**1,332**	**–**	–	993	–
– banks	**–**	**8,121**	**2,840**	–	8,433	2,501
– corporate entities	**–**	**7,536**	**85,323**	–	7,683	77,769
	418	**17,435**	**88,163**	1,070	17,755	80,270
Listed	**–**	**9,055**	**44,996**	–	9,588	38,126
Unlisted	**418**	**8,380**	**43,167**	1,070	8,167	42,144
	418	**17,435**	**88,163**	1,070	17,755	80,270

10 Loans and advances to customers

a *Loans and advances to customers*

	2016 HK$m	2015 HK$m
Gross loans and advances to customers	**2,846,806**	2,773,819
Impairment allowances (note 11(a))	**(12,692)**	(11,529)
	2,834,114	2,762,290

Notes on the Financial Statements (continued)

10 Loans and advances to customers *(continued)*

b *Analysis of loans and advances to customers based on categories used by the HSBC Group*

The following analysis of loans and advances to customers is based on the categories used by the HSBC Group, including the group, to manage associated risks.

2016	Hong Kong HK$m	Rest of Asia-Pacific HK$m	Total HK$m
Residential mortgages[1]	**492,989**	**267,619**	**760,608**
Credit card advances	**58,289**	**22,665**	**80,954**
Other personal	**132,171**	**70,947**	**203,118**
Total personal	**683,449**	**361,231**	**1,044,680**
Commercial, industrial and international trade	**428,035**	**384,227**	**812,262**
Commercial real estate	**198,579**	**55,786**	**254,365**
Other property-related lending	**221,919**	**69,911**	**291,830**
Government	**20,230**	**2,405**	**22,635**
Other commercial	**136,729**	**132,944**	**269,673**
Total corporate and commercial	**1,005,492**	**645,273**	**1,650,765**
Non-bank financial institutions	**103,311**	**45,611**	**148,922**
Settlement accounts	**1,337**	**1,102**	**2,439**
Total financial	**104,648**	**46,713**	**151,361**
Gross loans and advances to customers	**1,793,589**	**1,053,217**	**2,846,806**
Individually assessed impairment allowances	**(2,960)**	**(5,099)**	**(8,059)**
Collectively assessed impairment allowances	**(1,959)**	**(2,674)**	**(4,633)**
Net loans and advances to customers	**1,788,670**	**1,045,444**	**2,834,114**
2015			
Residential mortgages[1]	472,324	260,901	733,225
Credit card advances	56,791	22,180	78,971
Other personal	132,234	84,092	216,326
Total personal	661,349	367,173	1,028,522
Commercial, industrial and international trade	419,589	405,594	825,183
Commercial real estate	186,463	64,420	250,883
Other property-related lending	207,448	65,412	272,860
Government	6,292	2,484	8,776
Other commercial	133,718	145,632	279,350
Total corporate and commercial	953,510	683,542	1,637,052
Non-bank financial institutions	64,050	42,414	106,464
Settlement accounts	1,099	682	1,781
Total financial	65,149	43,096	108,245
Gross loans and advances to customers	1,680,008	1,093,811	2,773,819
Individually assessed impairment allowances	(2,165)	(4,875)	(7,040)
Collectively assessed impairment allowances	(1,979)	(2,510)	(4,489)
Net loans and advances to customers	1,675,864	1,086,426	2,762,290

1 *Residential mortgages include Hong Kong Government Home Ownership Scheme loans of HK$30,215m (2015: HK$27,702m).*

The geographical information shown above has been classified by the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.

10 Loans and advances to customers *(continued)*

c *Loans and advances to customers include equipment leased to customers under finance leases and hire purchase contracts having the characteristics of finance leases*

	2016			2015		
	Present value of the minimum lease payments HK$m	**Unearned future finance income HK$m**	**Total minimum lease payments HK$m**	Present value of the minimum lease payments HK$m	Unearned future finance income HK$m	Total minimum lease payments HK$m
Amounts receivable						
– Within one year	**2,151**	**677**	**2,828**	2,494	687	3,181
– After one year but within five years	**7,764**	**1,951**	**9,715**	8,152	1,893	10,045
– After five years	**18,296**	**3,346**	**21,642**	17,999	3,014	21,013
	28,211	**5,974**	**34,185**	28,645	5,594	34,239
Impairment allowances	**(28)**			(26)		
Net investment in finance leases and hire purchase contracts	**28,183**			28,619		

11 Impairment allowances against loans and advances to customers

a *Movement in impairment allowances on loans and advances to customers*

2016	**Individually assessed allowances HK$m**	**Collectively assessed allowances HK$m**	**Total HK$m**
At 1 January	**7,040**	**4,489**	**11,529**
Amounts written off	**(2,334)**	**(2,694)**	**(5,028)**
Recoveries of loans and advances written off in previous years	**277**	**881**	**1,158**
Net charge to income statement (note 2(g))	**3,380**	**2,065**	**5,445**
Unwinding of discount of loan impairment	**(310)**	**(58)**	**(368)**
Exchange and other adjustments	**6**	**(50)**	**(44)**
At 31 December (note 10(a))	**8,059**	**4,633**	**12,692**
2015			
At 1 January	6,299	4,221	10,520
Amounts written off	(1,505)	(3,109)	(4,614)
Recoveries of loans and advances written off in previous years	305	978	1,283
Net charge to income statement (note 2(g))	2,316	2,656	4,972
Unwinding of discount of loan impairment	(210)	(67)	(277)
Exchange and other adjustments	(165)	(190)	(355)
At 31 December (note 10(a))	7,040	4,489	11,529

Notes on the Financial Statements (continued)

11 Impairment allowances against loans and advances to customers *(continued)*

b *Impairment allowances on loans and advances to customers*

Impaired loans and advances to customers are those loans and advances where objective evidence exists that full repayment of principal or interest is considered unlikely. Individually assessed allowances are made after taking into account the value of collateral in respect of such loans and advances.

The geographical information shown below has been classified by the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.

	Hong Kong HK$m	Rest of Asia-Pacific HK$m	Total HK$m
At 31 December 2016			
Gross loans and advances to customers			
Individually assessed impaired gross loans and advances	**6,808**	**10,731**	**17,539**
Collectively assessed	**1,786,781**	**1,042,486**	**2,829,267**
– Impaired loans and advances	**720**	**1,119**	**1,839**
– Non-impaired loans and advances	**1,786,061**	**1,041,367**	**2,827,428**
Total gross loans and advances to customers	**1,793,589**	**1,053,217**	**2,846,806**
Impairment allowances	**(4,919)**	**(7,773)**	**(12,692)**
– Individually assessed	**(2,960)**	**(5,099)**	**(8,059)**
– Collectively assessed	**(1,959)**	**(2,674)**	**(4,633)**
Net loans and advances	**1,788,670**	**1,045,444**	**2,834,114**
Fair value of collateral which has been taken into account in respect of individually assessed impaired loans and advances to customers	**3,258**	**5,488**	**8,746**
Individually assessed impaired gross loans and advances as a percentage of gross loans and advances to customers	**0.4%**	**1.0%**	**0.6%**
Total allowances as a percentage of total gross loans and advances	**0.3%**	**0.7%**	**0.4%**
At 31 December 2015			
Gross loans and advances to customers			
Individually assessed impaired gross loans and advances	5,781	11,005	16,786
Collectively assessed	1,674,227	1,082,806	2,757,033
– Impaired loans and advances	728	889	1,617
– Non-impaired loans and advances	1,673,499	1,081,917	2,755,416
Total gross loans and advances to customers	1,680,008	1,093,811	2,773,819
Impairment allowances	(4,144)	(7,385)	(11,529)
– Individually assessed	(2,165)	(4,875)	(7,040)
– Collectively assessed	(1,979)	(2,510)	(4,489)
Net loans and advances	1,675,864	1,086,426	2,762,290
Fair value of collateral which has been taken into account in respect of individually assessed impaired loans and advances to customers	2,360	5,153	7,513
Individually assessed impaired gross loans and advances as a percentage of gross loans and advances to customers	0.3%	1.0%	0.6%
Total allowances as a percentage of total gross loans and advances	0.2%	0.7%	0.4%

12 Financial investments

	2016 HK$m	2015 HK$m
Available-for-sale		
– treasury and other eligible bills	**688,369**	691,636
– debt securities[1]	**877,504**	786,746
– equity shares	**8,711**	9,065
	1,574,584	1,487,447
Held-to-maturity		
– debt securities[2]	**260,767**	228,599
	1,835,351	1,716,046

1 *Included certificates of deposit of HK$66,462m (2015:HK$76,037m).*
2 *Included certificates of deposit of HK$7,763m (2015:HK$12,601m).*

a *Available-for-sale*

	2016			2015		
	Treasury and other eligible bills HK$m	**Debt securities HK$m**	**Equity shares HK$m**	Treasury and other eligible bills HK$m	Debt securities HK$m	Equity shares HK$m
Issued by						
– central governments and central banks	**688,369**	**599,854**	**–**	691,636	574,173	–
– other public sector entities	**–**	**89,280**	**–**	–	72,658	–
– banks	**–**	**146,584**	**4,820**	–	98,417	4,651
– corporate entities	**–**	**41,786**	**3,891**	–	41,498	4,414
	688,369	**877,504**	**8,711**	691,636	786,746	9,065
Listed	**42,746**	**647,552**	**3,344**	29,841	548,039	3,810
Unlisted	**645,623**	**229,952**	**5,367**	661,795	238,707	5,255
	688,369	**877,504**	**8,711**	691,636	786,746	9,065

b *Held-to-maturity*

	2016		2015	
	Book value HK$m	**Fair value HK$m**	Book value HK$m	Fair value HK$m
Issued by				
– central governments and central banks	**6,845**	**7,383**	5,907	6,584
– other public sector entities	**27,546**	**27,729**	25,676	26,851
– banks	**87,709**	**88,857**	90,955	93,945
– corporate entities	**138,667**	**138,420**	106,061	108,540
	260,767	**262,389**	228,599	235,920
Listed	**95,668**	**95,694**	74,128	75,846
Unlisted	**165,099**	**166,695**	154,471	160,074
	260,767	**262,389**	228,599	235,920

Notes on the Financial Statements (continued)

13 Assets pledged, assets transferred and collateral received

Financial assets pledged as collateral

	2016 HK$m	2015 HK$m
Treasury bills, debt securities, equities and deposits	**206,526**	118,762

The above table shows assets where a charge has been granted to secure liabilities on a legal and contractual basis. 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.

Hong Kong currency notes in circulation are secured by the deposit of funds in respect of which the Hong Kong Government certificates of indebtedness are held.

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

	2016		2015	
	Carrying amount of transferred assets HK$m	**Carrying amount of associated liabilities HK$m**	Carrying amount of transferred assets HK$m	Carrying amount of associated liabilities HK$m
Repurchase agreements	**61,738**	**21,851**	16,039	14,830
Securities lending agreements	**3,506**	**–**	1,658	1
	65,244	**21,851**	17,697	14,831

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. As the substance of these transactions is secured borrowings, the collateral assets continue to be recognised in full and the related liabilities, reflecting the group's obligation to repurchase the transferred assets for a fixed price at a future date, are 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 transactions. The group remains exposed to interest rate risk, credit risk and market risk on these pledged instruments. The counterparty's recourse is not limited to the transferred assets.

Collateral accepted as security for assets

	2016 HK$m	2015 HK$m
Fair value of the collateral permitted to sell or repledge in the absence of default	**531,561**	369,184
Fair value of collateral actually sold or repledged	**86,287**	56,451

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

14 Investments in subsidiaries

The principal subsidiaries of the Bank are:

	Place of incorporation	Principal activity	The group's interest in issued share capital / registered or charter capital
Hang Seng Bank Limited	Hong Kong	Banking	62.14%
HSBC Bank (China) Company Limited	PRC[1]	Banking	100%
HSBC Bank Malaysia Berhad	Malaysia	Banking	100%
HSBC Bank Australia Limited[2]	Australia	Banking	100%
HSBC Bank (Taiwan) Limited[2]	Taiwan	Banking	100%
HSBC Bank (Singapore) Limited	Singapore	Banking	100%
HSBC Life (International) Limited[2]	Bermuda	Retirement benefits and life insurance	100%

1 *People's Republic of China*
2 *Held indirectly*

All the above subsidiaries are included in the group's consolidated financial statements. All these subsidiaries make their financial statements up to 31 December.

The principal places of business are the same as the places of incorporation except for HSBC Life (International) Limited which operates mainly in Hong Kong.

The proportion of voting rights held is the same as the proportion of ownership interest held.

The principal subsidiaries are regulated banking and insurance entities in the Asia-Pacific region and, as such, are required to maintain certain minimum levels of capital and liquid assets to support their operations. The effect of these regulatory requirements is to limit the extent to which the subsidiaries may transfer funds to the Bank in the form of repayment of shareholder loans or cash dividends.

Subsidiary with material non-controlling interest

	2016	2015
Hang Seng Bank Limited		
Ownership interest and voting rights held by non-controlling interests	**37.86%**	37.86%
	HK$m	HK$m
Profit attributable to non-controlling interests	**6,138**	10,409
Accumulated non-controlling interests of the subsidiary	**50,601**	51,231
Dividends paid to non-controlling interests	**6,297**	4,053
Summarised financial information (before intra-group eliminations):		
– Assets	**1,377,242**	1,334,429
– Liabilities	**1,236,556**	1,192,448
– Net operating income before loan impairment	**30,563**	41,950
– Profit for the year	**16,204**	27,494
– Other comprehensive income	**(582)**	(13,700)
– Total comprehensive income	**15,622**	13,794

Notes on the Financial Statements (continued)

15 Interests in associates and joint ventures

	2016 HK$m	2015 HK$m
Share of net assets	**121,985**	118,328
Goodwill	**3,787**	4,042
Intangible assets	**58**	123
Deferred tax on intangible assets	**(14)**	(31)
Impairment	**(24)**	(24)
	125,792	122,438

At 31 December 2016, the group's interests in associates amounted to HK$125,792m (2015: HK$121,929m).

(i) Principal associate

	Place of incorporation	The group's interest in issued share capital
Bank of Communications Co., Ltd.	People's Republic of China	19.03%

Bank of Communications Co., Ltd. is listed on recognised stock exchanges. The fair value represents valuation based on the quoted market price of the shares held (Level 1 in the fair value hierarchy) and amounted to HK$79,160m at 31 December 2016 (2015: HK$77,039m).

Bank of Communications Co., Limited ('BoCom')

The group's significant influence in BoCom was established via representation on BoCom's Board of Directors, and a Technical Cooperation and Exchange Programme ('TCEP'). Under the TCEP, a number of HSBC staff have been seconded to assist in the maintenance of BoCom's financial and operating policies.

Impairment testing

At 31 December 2016, the fair value of HSBC's investment in BoCom had been below the carrying amount for approximately 56 months. As a result, the group performed an impairment test on the carrying amount, which confirmed that there was no impairment at 31 December 2016.

	At 31 December 2016			At 31 December 2015		
	VIU HK$bn	**Carrying amount HK$bn**	**Fair value HK$bn**	VIU HK$bn	Carrying amount HK$bn	Fair value HK$bn
Bank of Communications Co., Limited	**124.8**	**122.8**	**79.2**	132.1	119.5	77.0

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 used discounted cash flow projections based on management's estimates of earnings. Cash flows beyond the short to medium-term were then extrapolated in perpetuity using a long-term growth rate. An imputed capital maintenance charge ('CMC') is calculated to reflect expected regulatory capital requirements, and is deducted 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.

15 Interests in associates and joint ventures *(continued)*

Key assumptions in VIU calculation

- Long-term profit growth rate: 5% (2015: 5%) for periods after 2019, which does not exceed forecast GDP growth in mainland China.
- Long-term asset growth rate: 4% (2015: 4%) for periods after 2019, which is the rate that assets are expected to grow to achieve long-term profit growth of 5%.
- Discount rate: 13% (2015: 13%) which is derived from a range of values obtained by applying a capital asset pricing model ('CAPM') calculation for BoCom, using market data. Management also compares rates derived from the CAPM with discount rates from external sources and the Group's discount rate for evaluating investments in mainland China. The discount rate used was within the range of 10.2% to 15.0% (2015: 10.1% to 14.2%) indicated by the CAPM and external sources.
- Loan impairment charge as a percentage of customer advances: a range from 0.72% to 0.87% (2015: 0.71% to 0.78%) in the short to medium-term and are based on the forecasts disclosed by external analysts. For periods after 2019, the ratio is 0.7% (2015: 0.7%), slightly higher than the historical average.
- Risk-weighted assets as a percentage of total assets: 62% for all forecast periods (2015: 67% for all forecast periods). This is consistent with medium-term forecasts disclosed by external analysts.
- Cost-income ratio: 40% (2015: 41%) in the short to medium-term. The ratios were consistent with the short to medium-term range forecasts of 39.9% to 40.2% (2015: 40.3% to 40.7%) disclosed by external analysts.

The following table shows the change to each key assumption in the VIU calculation that on its own would reduce the headroom to nil.

Key assumption	Changes to key assumption to reduce headroom to nil
• Long-term profit growth rate	• Decrease by 10 basis points
• Long-term asset growth rate	• Increase by 11 basis points
• Discount rate	• Increase by 13 basis points
• Loan impairment charge as a percentage of customer advances	• Increase by 2 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 74 basis points
• Cost-income ratio	• Increase by 47 basis points

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

Notes on the Financial Statements (continued)

15 Interests in associates and joint ventures *(continued)*

	Favourable change			Unfavourable change		
		Increase in VIU	VIU		Decrease in VIU	VIU
	bps	HK$bn	HK$bn	bps	HK$bn	HK$bn
At 31 December 2016						
Long-term profit growth rate	**–**	**–**	**124.8**	**-150**	**(25.7)**	**99.1**
Long-term asset growth rate	**-80**	**13.6**	**138.4**	**–**	**–**	**124.8**
Discount rate	**-100**	**18.1**	**142.9**	**–**	**–**	**124.8**
Loan impairment charge as a percentage of customer advances	**–**	**–**	**124.8**	**2016 to 2019: 0.93%** **2020 onwards: 0.80%**	**(8.4)**	**116.4**
Risk-weighted assets as a percentage of total assets	**-30**	**0.8**	**125.6**	**+170**	**(4.7)**	**120.1**
Cost-income ratio	**-170**	**7.3**	**132.1**	**+250**	**(10.6)**	**114.2**
At 31 December 2015						
Long-term profit growth rate	+100	25.1	157.2	-210	(36.5)	95.6
Long-term asset growth rate	-50	9.1	141.2	+100	(21.4)	110.7
Discount rate	-150	32.2	164.3	+110	(16.4)	115.7
Loan impairment charge as a percentage of customer advances	0.70% throughout	1.1	133.2	2015 to 2018: 0.85% 2019 onwards: 0.75%	(5.3)	126.8
Risk-weighted assets as a percentage of total assets	-350	9.0	141.1	+10	(0.2)	131.9
Cost-income ratio	-250	11.5	143.6	+120	(5.4)	126.7

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is HK$84bn to HK$147bn.

15 Interests in associates and joint ventures *(continued)*

Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2016, the group included the associate's results on the basis of financial statements made up for the 12 months to 30 September 2016, but taking into account the financial effect of significant transactions or events in the period from 1 October 2016 to 31 December 2016.

	At 30 September 2016 HK$m	At 30 September 2015 HK$m
Selected balance sheet information of BoCom		
Cash and balances at central banks	**1,069,067**	1,121,481
Loans and advances to banks and other financial institutions	**786,695**	859,625
Loans and advances to customers	**4,390,644**	4,344,068
Other financial assets	**2,413,593**	1,896,670
Prepayment, accrued income and other assets	**382,370**	384,827
Total assets	**9,042,369**	8,606,671
Deposits by banks and other financial institutions	**2,306,842**	2,024,465
Customer accounts	**5,280,905**	5,362,887
Other financial liabilities	**542,533**	363,737
Other liabilities	**216,071**	227,311
Total liabilities	**8,346,351**	7,978,400
Total equity	**696,018**	628,271
Total equity attributable to:		
– ordinary shareholders	**625,727**	606,772
– non-controlling interests	**3,417**	3,687
– preference shareholders	**66,874**	17,812
Reconciliation of BoCom's net assets to carrying amount in the group's consolidated financial statements		
The group's share of net assets	**119,104**	115,497
Add: Goodwill	**3,681**	3,934
Add: Intangible assets	**44**	92
Carrying amount	**122,829**	119,523

	For the 12 months ended 30 September	
	2016 HK$m	2015 HK$m
Selected income statement information of BoCom		
Net interest income	**160,016**	173,631
Net fee and commission income	**42,641**	42,115
Loan impairment charges	**(33,252)**	(29,245)
Depreciation and amortisation	**(9,437)**	(7,842)
Tax expense	**(21,734)**	(23,073)
Profit for the year	**78,796**	82,437
Other comprehensive income	**6,795**	2,919
Total comprehensive income	**85,591**	85,356
Dividends received from BoCom	**4,503**	4,841

Notes on the Financial Statements (continued)

15 Interests in associates and joint ventures *(continued)*

(ii) Other associates

Summarised aggregate financial information in respect of associates not individually material

	2016 HK$m	2015 HK$m
Carrying value	**2,963**	2,407
The group's share of:		
– Assets	**6,213**	2,777
– Liabilities	**3,357**	370
– Profit or loss from continuing operations	**167**	229
– Total comprehensive income	**167**	229
Other expense related to investment in an associate:		
– Impairment of an associate	**24**	24

At 31 December 2016, the group's share of associates' contingent liabilities incurred relating to the group's interest in associates was HK$273,500m (2015: HK$303,980m).

During the year, Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited has been changed from a joint venture to an associate.

16 Goodwill and intangible assets

Goodwill and intangible assets includes goodwill arising on business combinations, the present value of in-force long-term insurance business, and other intangible assets.

	2016 HK$m	2015 HK$m
Goodwill	**6,201**	6,344
Present value of in-force long-term insurance business	**44,077**	36,897
Other intangible assets	**6,658**	6,327
	56,936	49,568

a *The present value of in-force long-term insurance business ('PVIF')*

(i) PVIF specific assumptions

The following are the key long term assumptions used in the computation of PVIF for Hong Kong, being the main life insurance operations:

	2016	2015
Weighted average risk free rate	**2.09%**	1.82%
Weighted average risk discount rate	**6.34%**	6.81%
Expenses inflation	**3.00%**	3.00%

16 Goodwill and intangible assets *(continued)*

(ii) Movement in PVIF for the year ended 31 December

	2016 HK$m	2015 HK$m
At 1 January	**36,897**	32,389
Value of new business written during the year	**6,048**	4,972
Movements arising from in-force business:		
– expected return	**(2,622)**	(2,518)
– experience variances	**225**	(136)
– changes in operating assumptions	**2,675**	752
Investment return variances	**2,004**	1,592
Changes in investment assumptions	**(1,062)**	(9)
Other adjustments	**38**	36
Changes in PVIF	**7,306**	4,689
Exchange differences and other	**(126)**	(181)
At 31 December	**44,077**	36,897

17 Property, plant and equipment

a *Property, plant and equipment*

	2016			2015		
	Land and buildings HK$m	**Investment properties HK$m**	**Equipment HK$m**	Land and buildings HK$m	Investment properties HK$m	Equipment HK$m
Cost or valuation						
At 1 January	**94,000**	**10,716**	**24,539**	86,753	12,784	23,826
Exchange and other adjustments	**(480)**	**(2)**	**(218)**	(580)	(16)	(581)
Additions	**489**	**–**	**2,520**	554	699	2,434
Disposals	**(20)**	**–**	**(4,749)**	(28)	–	(1,091)
Elimination of accumulated depreciation on revalued land and buildings	**(2,575)**	**–**	**–**	(2,428)	–	–
Surplus on revaluation	**3,825**	**36**	**–**	6,601	480	–
Reclassifications	**(105)**	**(121)**	**–**	3,128	(3,231)	(49)
At 31 December	**95,134**	**10,629**	**22,092**	94,000	10,716	24,539
Accumulated depreciation						
At 1 January	**167**	**–**	**19,024**	74	–	18,610
Exchange and other adjustments	**(3)**	**–**	**(167)**	86	–	(452)
Charge for the year	**2,598**	**–**	**1,895**	2,456	–	1,924
Disposals	**(18)**	**–**	**(4,706)**	(25)	–	(1,054)
Elimination of accumulated depreciation on revalued land and buildings	**(2,575)**	**–**	**–**	(2,428)	–	–
Reclassifications	**–**	**–**	**–**	4	–	(4)
At 31 December	**169**	**–**	**16,046**	167	–	19,024
Net book value at 31 December	**94,965**	**10,629**	**6,046**	93,833	10,716	5,515
Total at 31 December			**111,640**			110,064

Notes on the Financial Statements (continued)

17 Property, plant and equipment *(continued)*

b *The carrying amount of land and buildings, had they been stated at cost less accumulated depreciation, would have been as follows:*

	2016 HK$m	2015 HK$m
Cost less accumulated depreciation	**21,967**	22,027

c *Valuation of land and buildings and investment properties*

The group's land and buildings and investment properties were revalued in November 2016 and updated for any material changes at 31 December 2016. The basis of valuation for land and buildings and investment properties was open market value, depreciated replacement cost or surrender value as noted in note 1(a)(vii). The resultant values are Level 3 in the fair value hierarchy. There were no transfers in to or out of Level 3 during the year (2015: nil). The fair values for land and buildings are determined by using direct comparison approach which values the properties in their respective existing states and uses, assuming sale with immediate vacant possession and by making reference to comparable sales evidence. The valuations take into account the characteristics of the properties (unobservable inputs) which include the location, size, shape, view, floor level, year of completion and other factors collectively. The premium or discount applied to the characteristics of the properties is within minus 20 percent and plus 20 percent. In determining the open market value of investment properties, expected future cash flows have been discounted to their present values. The net book value of 'Land and buildings' includes HK$12,249m (2015: HK$12,627m) in respect of properties which were valued using the depreciated replacement cost method or surrender value.

Land and buildings and investment properties in Hong Kong, Macau and mainland China, represent 96% by value of the group's properties subject to valuation. The valuations were carried out by DTZ Cushman & Wakefield Limited who have recent experience in the location and type of properties and who are members of the Hong Kong Institute of Surveyors. Properties in eleven countries, representing 4% by value of the group's properties, were valued by different independent professionally qualified valuers.

18 Prepayments, accrued income and other assets

	2016 HK$m	2015 HK$m
Prepayments and accrued income	**21,505**	21,186
Bullion	**69,894**	47,105
Acceptances and endorsements	**32,290**	31,480
Reinsurers' share of liabilities under insurance contracts (note 24)	**11,368**	8,543
Current tax assets	**3,537**	1,013
Other accounts	**32,636**	24,735
	171,230	134,062

Prepayments, accrued income and other assets included HK$84,162m (2015: HK$76,035m) of financial assets, the majority of which were measured at amortised cost.

19 Customer accounts

	2016 HK$m	2015 HK$m
Current accounts	**991,562**	949,169
Savings accounts	**2,946,379**	2,645,151
Other deposit accounts	**962,063**	1,045,756
	4,900,004	4,640,076

20 Trading liabilities

	2016 HK$m	2015 HK$m
Certificates of deposit in issue	**1,341**	1,770
Other debt securities in issue	**24,361**	18,387
Short positions in securities	**79,048**	60,488
Deposits by banks	**9,557**	12,504
Customer accounts	**74,163**	98,702
	188,470	191,851

Other debt securities in issue comprises of structured notes issued, for which market risks are actively managed as part of trading portfolios.

21 Financial liabilities designated at fair value

	2016 HK$m	2015 HK$m
Debt securities in issue	**14,814**	14,721
Liabilities to customers under investment contracts	**36,302**	36,049
	51,116	50,770

At 31 December 2016, the carrying amount of the debt securities in issue was HK$58m higher than the contractual amount at maturity (2015: HK$102m). At 31 December 2016, the accumulated gain in fair value attributable to changes in credit risk for debt securities in issue was HK$39m (2015: HK$26m loss).

22 Debt securities in issue

	2016 HK$m	2015 HK$m
Certificates of deposit	**1,709**	6,181
Other debt securities	**23,526**	34,678
	25,235	40,859

23 Accruals and deferred income, other liabilities and provisions

	2016 HK$m	2015 HK$m
Accruals and deferred income	**24,409**	25,425
Acceptances and endorsements	**32,290**	31,480
Share based payment liability to HSBC Holdings plc	**1,945**	1,769
Other liabilities	**39,676**	27,043
Provisions for liabilities and charges (note 25)	**1,167**	1,203
	99,487	86,920

Accruals and deferred income, other liabilities and provisions included HK$91,602m (2015: HK$78,221m) of financial liabilities which were measured at amortised cost.

Notes on the Financial Statements (continued)

24 Liabilities under insurance contracts

	2016			2015		
	Gross	Reinsurers' Share[2]	Net	Gross	Reinsurers' Share[2]	Net
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Non-linked insurance contracts[1]						
At 1 January	**298,576**	**(7,151)**	**291,425**	265,743	(4,182)	261,561
Claims and benefits paid	**(19,099)**	**319**	**(18,780)**	(21,216)	318	(20,898)
Increase in liabilities to policyholders	**63,473**	**(3,514)**	**59,959**	53,950	(3,214)	50,736
Foreign exchange and other movements	**(816)**	**269**	**(547)**	99	(73)	26
At 31 December	**342,134**	**(10,077)**	**332,057**	298,576	(7,151)	291,425
Linked insurance contracts						
At 1 January	**42,244**	**(1,392)**	**40,852**	44,439	(1,441)	42,998
Claims and benefits paid	**(2,395)**	**80**	**(2,315)**	(3,285)	445	(2,840)
Increase in liabilities to policyholders	**4,472**	**155**	**4,627**	1,577	118	1,695
Foreign exchange and other movements	**(285)**	**(134)**	**(419)**	(487)	(514)	(1,001)
At 31 December	**44,036**	**(1,291)**	**42,745**	42,244	(1,392)	40,852
Total liabilities to policyholders	**386,170**	**(11,368)**	**374,802**	340,820	(8,543)	332,277

1 *Includes liabilities under non-life insurance contracts.*
2 *Amounts recoverable from reinsurance of liabilities under insurance contracts are included in the consolidated balance sheet in 'Prepayment, accrued income and other assets'.*

25 Provisions for liabilities and charges

	2016			2015		
	Restructuring costs	Others	Total	Restructuring costs	Others	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 1 January	**801**	**402**	**1,203**	113	1,028	1,141
New provisions/increase in provisions	**647**	**171**	**818**	840	374	1,214
Provisions used	**(200)**	**(68)**	**(268)**	(109)	(204)	(313)
Amounts reversed	**(438)**	**(97)**	**(535)**	(30)	(175)	(205)
Exchange and other movements	**(24)**	**(27)**	**(51)**	(13)	(621)	(634)
At 31 December	**786**	**381**	**1,167**	801	402	1,203

26 Subordinated liabilities

Subordinated liabilities consist of undated primary capital notes and other loan capital having an original term to maturity of five years or more.

		2016 HK$m	2015 HK$m
US$400m	Undated floating rate primary capital notes[1]	**3,102**	6,204
MYR500m	Fixed rate (4.35%) subordinated bonds due 2022, callable from 2017[2]	**865**	897
MYR500m	Fixed rate (5.05%) subordinated bonds due 2027, callable from 2022[3]	**869**	902
		4,836	8,003

1 *In February 2016, the group redeemed US$400m undated floating rate primary capital notes at par.*
2 *The interest rate on the MYR500m 4.35% callable subordinated bonds due 2022 will increase by 1% from June 2017.*
3 *The interest rate on the MYR500m 5.05% callable subordinated bonds due 2027 will increase by 1% from November 2022.*

Subordinated liabilities issued to Group entities are not included in the above.

27 Preference shares

	2016 HK$m	2015 HK$m
Issued and fully paid		
Redeemable preference shares	**–**	8,138
Irredeemable preference shares	**26,879**	28,415
	26,879	36,553

The preference shares were issued at the then nominal value, and may be redeemed or cancelled subject to 30 days' notice in writing to shareholders and with the prior consent of the Hong Kong Monetary Authority. In the event of cancellation, holders of the shares shall be entitled to receive the issue price of US$1 per share held together with any unpaid dividends for the period since the annual dividend payment date immediately preceding the date of cancellation, subject to the Bank having sufficient distributable profits. The holders of the preference shares are entitled to one vote per share at shareholders' meetings of the Bank.

1,050m cumulative redeemable preference shares were issued in 2009, and were fully redeemed in 2016 at the issue price of US$1 per share.

The number of issued non-cumulative irredeemable preference shares at 31 December 2016 was 3,253m (2015: 3,253m). No non-cumulative irredeemable preference shares were issued during the year (2015: nil).

The number of issued cumulative irredeemable preference shares at 31 December 2016 was 200m (2015: 400m) and 200m were cancelled during the year. No cumulative irredeemable preference shares were issued during the year (2015: nil).

There was INR870m (2015: INR870m) of authorised preference share capital, comprising 8.7m compulsorily convertible preference shares ('CCPS') of INR100 each in the share capital of a subsidiary, HSBC InvestDirect Securities (India) Private Limited ('HSBC InvestDirect'). The CCPS were issued and fully paid in 2009 at a nominal value of INR100 each. These shares may be converted into fully paid equity shares of HSBC InvestDirect at any time after one year to ten years from the date of allotment of the CCPS by written notice. The conversion shall be made at par or premium as may be determined by the Board of HSBC InvestDirect at the time of the conversion. The CCPS shall carry a fixed dividend of 0.001% of the face value per annum. After ten years following the allotment of the CCPS, all outstanding CCPS shall be converted at par or premium as may be determined by the Board of HSBC InvestDirect at the time of the conversion. HSBC InvestDirect did not convert any CCPS during 2016 (2015: nil). The number of issued CCPS at 31 December 2016 was 8.7m (2015: 8.7m). No CCPS were issued during the year (2015: nil).

Notes on the Financial Statements (continued)

28 Share capital

Issued and fully paid

	2016 HK$m	2015 HK$m
Ordinary share capital	**114,359**	96,052

	2016	2015
Number of ordinary shares		
At 1 January	**38,420,982,901**	**38,420,982,901**
Issued during the year	**7,322,508,897**	–
At 31 December	**45,743,491,798**	**38,420,982,901**

7,323m new ordinary shares were issued during 2016 (2015: nil) at an issue price of HK$2.5 each for general corporate purposes and to further strengthen the capital base.

The holders of the ordinary shares are entitled to receive dividends as declared from time to time, rank equally with regard to the Bank's residual assets and are entitled to one vote per share at shareholder meetings of the Bank.

29 Other equity instruments

Other equity instruments comprise additional tier 1 capital instruments in issue which are accounted for in equity.

		2016 HK$m	2015 HK$m
US$1,000m	Floating rate perpetual subordinated loan, callable from Dec 2019[1]	**7,756**	7,756
US$900m	Floating rate perpetual subordinated loan, callable from Dec 2019[1]	**6,981**	6,981
		14,737	14,737

1 *Interest rate at one year US dollar LIBOR plus 3.84%.*

The additional tier 1 capital instruments are perpetual subordinated loans on which coupon payments may be cancelled at the sole discretion of the Bank. The subordinated loans will be written down at the point of non-viability on the occurrence of a trigger event as defined in the Banking (Capital) Rules. They rank higher than ordinary shares in the event of a wind-up.

30 Maturity analysis of assets and liabilities

The following is an analysis of assets and liabilities by remaining contractual maturities at the balance sheet date:

2016	On demand HK$m	Due within 1 month HK$m	Due between 1 and 3 months HK$m	Due between 3 and 12 months HK$m	Due between 1 and 5 years HK$m	Due after 5 years HK$m	No contractual maturity HK$m	Trading instruments HK$m	Non-trading derivatives HK$m	Total HK$m
Assets										
Cash and sight balances at central banks	213,783	–	–	–	–	–	–	–	–	213,783
Items in the course of collection from other banks	–	21,401	–	–	–	–	–	–	–	21,401
Hong Kong Government certificates of indebtedness	242,194	–	–	–	–	–	–	–	–	242,194
Trading assets	–	–	–	–	–	–	–	371,634	–	371,634
Derivatives	–	–	–	–	–	–	–	470,681	9,126	479,807
Financial assets designated at fair value	–	39	822	2,990	11,545	2,457	88,163	–	–	106,016
– Treasury bills	–	–	418	–	–	–	–	–	–	418
– Debt securities	–	39	404	2,990	11,545	2,457	–	–	–	17,435
– Equity shares	–	–	–	–	–	–	88,163	–	–	88,163
Reverse repurchase agreements – non-trading	31,583	162,862	50,958	22,001	4,163	–	–	–	–	271,567
Placings with and advances to banks	117,597	183,698	92,212	41,753	20,404	7,547	–	–	–	463,211
Loans and advances to customers	185,796	372,402	291,528	465,166	816,370	715,544	(12,692)	–	–	2,834,114
Financial investments	–	242,389	416,605	367,518	544,873	255,251	8,715	–	–	1,835,351
– Treasury and other eligible bills	–	216,750	342,321	129,298	–	–	–	–	–	688,369
– Certificate of deposit	–	7,369	8,873	50,830	5,074	2,079	–	–	–	74,225
– Debt securities held to maturity	–	1,952	3,462	12,038	72,295	163,257	–	–	–	253,004
– Debt securities available-for-sale	–	16,318	61,949	175,352	467,504	89,915	4	–	–	811,042
– Equity shares available-for-sale	–	–	–	–	–	–	8,711	–	–	8,711
Amounts due from Group companies	114,005	21,079	76,240	12,233	1,673	209	–	17,334	–	242,773
Interests in associates and joint ventures	–	–	–	–	–	–	125,792	–	–	125,792
Goodwill and intangible assets	–	–	–	–	–	–	56,936	–	–	56,936
Property, plant and equipment	–	–	–	–	–	–	111,640	–	–	111,640
Deferred tax assets	–	–	–	–	–	–	1,503	–	–	1,503
Prepayment, accrued income and other assets	14,886	23,699	33,731	14,128	10,553	2,451	71,782	–	–	171,230
Total assets	919,844	1,027,569	962,096	925,789	1,409,581	983,459	451,839	859,649	9,126	7,548,952

30 Maturity analysis of assets and liabilities *(continued)*

	On demand HK$m	Due within 1 month HK$m	Due between 1 and 3 months HK$m	Due between 3 and 12 months HK$m	Due between 1 and 5 years HK$m	Due after 5 years HK$m	No contractual maturity HK$m	Trading instruments HK$m	Non-trading derivatives HK$m	Total HK$m
2016										
Liabilities										
Hong Kong currency notes in circulation	242,194	–	–	–	–	–	–	–	–	242,194
Items in the course of transmission to other banks	–	37,753	–	–	–	–	–	–	–	37,753
Repurchase agreements – non-trading	14,983	11,298	1,529	–	–	–	–	–	–	27,810
Deposits by banks	132,567	36,401	14,247	8,936	304	24	–	–	–	192,479
Customer accounts	4,008,969	472,392	232,651	163,848	21,710	434	–	–	–	4,900,004
Trading liabilities	–	–	–	–	–	–	–	188,470	–	188,470
Derivatives	–	–	–	–	–	–	–	460,076	2,382	462,458
Financial liabilities designated at fair value	206	–	–	4,401	10,150	222	36,137	–	–	51,116
– Debt securities	–	–	–	4,401	10,150	222	41	–	–	14,814
– Others	206	–	–	–	–	–	36,096	–	–	36,302
Debt securities in issue	–	1,549	408	7,440	11,818	4,020	–	–	–	25,235
– Certificate of deposit	–	1,022	408	279	–	–	–	–	–	1,709
– Other debt securities	–	527	–	7,161	11,818	4,020	–	–	–	23,526
Retirement benefit liabilities	–	–	–	–	–	–	3,867	–	–	3,867
Amounts due to Group companies	34,343	64,729	961	301	3	84,288	–	13,413	–	198,038
Accruals and deferred income, other liabilities and provisions	12,658	24,753	38,329	15,005	2,896	231	5,615	–	–	99,487
Liabilities under insurance contracts[1]	2,263	–	–	–	–	–	383,907	–	–	386,170
Current tax liabilities	33	62	226	1,273	25	–	–	–	–	1,619
Deferred tax liabilities	–	–	–	–	–	–	21,401	–	–	21,401
Subordinated liabilities[2]	–	–	–	865	–	869	3,102	–	–	4,836
Preference shares	–	–	–	–	–	–	26,879	–	–	26,879
Total liabilities	4,448,216	648,937	288,351	202,069	46,906	90,088	480,908	661,959	2,382	6,869,816

30 Maturity analysis of assets and liabilities *(continued)*

2015	On demand HK$m	Due within 1 month HK$m	Due between 1 and 3 months HK$m	Due between 3 and 12 months HK$m	Due between 1 and 5 years HK$m	Due after 5 years HK$m	No contractual maturity HK$m	Trading instruments HK$m	Non-trading derivatives HK$m	Total HK$m
Assets										
Cash and sight balances at central banks	151,103	–	–	–	–	–	–	–	–	151,103
Items in the course of collection from other banks	–	25,020	–	–	–	–	–	–	–	25,020
Hong Kong Government certificates of indebtedness	220,184	–	–	–	–	–	–	–	–	220,184
Trading assets	–	–	–	–	–	–	–	302,626	–	302,626
Derivatives	–	–	–	–	–	–	–	378,858	2,097	380,955
Financial assets designated at fair value	–	1,313	831	1,785	12,007	2,889	80,270	–	–	99,095
– Treasury bills	–	1,070	–	–	–	–	–	–	–	1,070
– Debt securities	–	243	831	1,785	12,007	2,889	–	–	–	17,755
– Equity shares	–	–	–	–	–	–	80,270	–	–	80,270
Reverse repurchase agreements – non-trading	16,433	146,004	25,677	7,872	16,793	–	–	–	–	212,779
Placings with and advances to banks	83,706	178,741	91,352	33,813	24,052	9,557	–	–	–	421,221
Loans and advances to customers	151,833	348,911	313,640	498,306	770,049	691,080	(11,529)	–	–	2,762,290
Financial investments	–	222,004	410,572	407,780	461,377	205,036	9,277	–	–	1,716,046
– Treasury and other eligible bills	–	175,178	341,206	175,252	–	–	–	–	–	691,636
– Certificates of deposit	–	7,813	16,232	51,515	10,500	2,578	–	–	–	88,638
– Debt securities held to maturity	–	83	2,705	10,960	72,802	129,448	–	–	–	215,998
– Debt securities available-for-sale	–	38,930	50,429	170,053	378,075	73,010	212	–	–	710,709
– Equity shares available-for-sale	–	–	–	–	–	–	9,065	–	–	9,065
Amounts due from Group companies	36,875	106,912	53,997	11,826	17,484	251	–	17,051	–	244,396
Interests in associates and joint ventures	–	–	–	–	–	–	122,438	–	–	122,438
Goodwill and intangible assets	–	–	–	–	–	–	49,568	–	–	49,568
Property, plant and equipment	–	–	–	–	–	–	110,064	–	–	110,064
Deferred tax assets	–	–	–	–	–	–	1,836	–	–	1,836
Prepayment, accrued income and other assets	6,608	21,709	33,569	10,596	10,142	2,496	48,942	–	–	134,062
Total assets	666,742	1,050,614	929,638	971,978	1,311,904	911,309	410,866	698,535	2,097	6,953,683

30 Maturity analysis of assets and liabilities *(continued)*

	On demand HK$m	Due within 1 month HK$m	Due between 1 and 3 months HK$m	Due between 3 and 12 months HK$m	Due between 1 and 5 years HK$m	Due after 5 years HK$m	No contractual maturity HK$m	Trading instruments HK$m	Non-trading derivatives HK$m	Total HK$m
2015										
Liabilities										
Hong Kong currency notes in circulation	220,184	–	–	–	–	–	–	–	–	220,184
Items in the course of transmission to other banks	–	30,753	–	–	–	–	–	–	–	30,753
Repurchase agreements – non-trading	6,385	8,161	1,612	–	–	–	–	–	–	16,158
Deposits by banks	128,554	14,744	1,197	1,400	2,324	75	–	–	–	148,294
Customer accounts	3,642,772	540,729	237,184	189,092	29,705	594	–	–	–	4,640,076
Trading liabilities	–	–	–	–	–	–	–	191,851	–	191,851
Derivatives	–	–	–	–	–	–	–	366,881	2,538	369,419
Financial liabilities designated at fair value	349	–	–	–	14,438	224	35,759	–	–	50,770
– Debt securities	–	–	–	–	14,438	224	60	–	–	14,722
– Others	349	–	–	–	–	–	35,699	–	–	36,048
Debt securities in issue	7	1,553	3,756	6,765	24,695	4,083	–	–	–	40,859
– Certificates of deposit	7	1,553	2,576	1,764	282	–	–	–	–	6,182
– Other debt securities	–	–	1,180	5,001	24,413	4,083	–	–	–	34,677
Retirement benefit liabilities	–	–	–	–	–	–	5,809	–	–	5,809
Amounts due to Group companies	24,180	53,956	1,198	339	43	20,125	–	10,232	–	110,073
Accruals and deferred income, other liabilities and provisions	6,558	24,555	35,813	10,037	3,299	469	6,189	–	–	86,920
Liabilities under insurance contracts[1]	2,236	–	–	–	–	–	338,584	–	–	340,820
Current tax liabilities	39	176	247	1,983	11	–	–	–	–	2,456
Deferred tax liabilities	–	–	–	–	–	–	18,799	–	–	18,799
Subordinated liabilities[2]	–	–	3,104	–	897	902	3,100	–	–	8,003
Preference shares	–	–	9,688	–	–	–	26,865	–	–	36,553
Total liabilities	4,031,264	674,627	293,799	209,616	75,412	26,472	435,105	568,964	2,538	6,317,797

1 *Liabilities under insurance contracts are included in the 'No contractual maturity' time bucket.*
2 *The maturity for subordinated liabilities is based on the earliest date on which the group is required to pay, i.e. the callable date.*

31 Analysis of cash flows payable under financial liabilities by remaining contractual maturities

	On demand HK$m	Due within 3 months HK$m	Due between 3 and 12 months HK$m	Due between 1 and 5 years HK$m	Due after 5 years HK$m	Total HK$m
At 31 December 2016						
Hong Kong currency notes in circulation	**242,194**	**–**	**–**	**–**	**–**	**242,194**
Items in the course of transmission to other banks	**–**	**37,753**	**–**	**–**	**–**	**37,753**
Repurchase agreements – non-trading	**14,987**	**12,833**	**–**	**–**	**–**	**27,820**
Deposits by banks	**132,574**	**50,929**	**9,096**	**317**	**27**	**192,943**
Customer accounts	**4,009,208**	**706,984**	**167,132**	**24,172**	**469**	**4,907,965**
Trading liabilities	**188,470**	**–**	**–**	**–**	**–**	**188,470**
Derivatives	**459,667**	**523**	**999**	**545**	**26**	**461,760**
Financial liabilities designated at fair value	**206**	**56**	**4,594**	**10,437**	**36,330**	**51,623**
Debt securities in issue	**–**	**2,170**	**7,658**	**12,412**	**4,455**	**26,695**
Amounts due to Group companies	**47,847**	**66,251**	**2,199**	**10,088**	**95,265**	**221,650**
Other financial liabilities	**12,634**	**58,489**	**12,856**	**1,711**	**210**	**85,900**
Subordinated liabilities	**–**	**29**	**933**	**313**	**4,356**	**5,631**
Preference shares	**–**	**225**	**531**	**3,022**	**34,433**	**38,211**
	5,107,787	**936,242**	**205,998**	**63,017**	**175,571**	**6,488,615**
Loan commitments	**1,699,275**	**567,212**	**16,580**	**4,486**	**64**	**2,287,617**
Financial guarantee and credit risk related guarantee contracts	**64,017**	**–**	**–**	**–**	**–**	**64,017**
	6,871,079	**1,503,454**	**222,578**	**67,503**	**175,635**	**8,840,249**
At 31 December 2015						
Hong Kong currency notes in circulation	220,184	–	–	–	–	220,184
Items in the course of transmission to other banks	–	30,753	–	–	–	30,753
Repurchase agreements – non-trading	6,385	9,890	–	–	–	16,275
Deposits by banks	128,562	15,950	1,410	2,343	84	148,349
Customer accounts	3,643,166	779,904	192,808	33,562	666	4,650,106
Trading liabilities	191,851	–	–	–	–	191,851
Derivatives	366,823	382	929	946	–	369,080
Financial liabilities designated at fair value	350	58	203	15,072	35,948	51,631
Debt securities in issue	7	5,588	7,165	26,005	4,696	43,461
Amounts due to Group companies	34,532	55,185	750	2,229	22,221	114,917
Other financial liabilities	7,151	54,450	8,241	1,546	441	71,829
Subordinated liabilities	–	3,150	73	1,152	4,224	8,599
Preference shares	–	10,212	421	2,397	32,857	45,887
	4,599,011	965,522	212,000	85,252	101,137	5,962,922
Loan commitments	1,605,093	508,358	12,652	5,867	22	2,131,992
Financial guarantee and credit risk related guarantee contracts	63,812	–	–	–	–	63,812
	6,267,916	1,473,880	224,652	91,119	101,159	8,158,726

Notes on the Financial Statements (continued)

31 Analysis of cash flows payable under financial liabilities by remaining contractual maturities *(continued)*

The balances in the above tables incorporates all cash flows relating to principal and future coupon payments on an undiscounted basis (except for trading liabilities and trading derivatives). Trading liabilities and trading derivatives have been included in the 'On demand' time bucket as trading liabilities are typically held for short periods of time. The undiscounted cash flows payable under hedging derivative liabilities are classified according to their contractual maturity. Investment contract liabilities have been included in financial liabilities designated at fair value, whereby the policyholders have the options to surrender or transfer at any time, and are reported in the "Due after 5 years" time bucket. A maturity analysis prepared on the basis of the earliest possible contractual repayment date (assuming that all surrender and transfer options are exercised) would result in all investment contracts being presented as falling due within one year or less. The undiscounted cash flows potentially payable under loan commitments and financial guarantee contracts are classified on the basis of the earliest date they can be called. Cash flows payable in respect of customer accounts are primarily contractually repayable on demand or at short notice.

32 Reconciliation of operating profit to cash generated from operations

	2016 HK$m	2015 HK$m
Operating profit	**87,795**	101,449
Net interest income	**(96,908)**	(94,377)
Dividend income	**(234)**	(210)
Depreciation and amortisation	**5,990**	5,982
Amortisation of prepaid operating lease payments	**18**	17
Loan impairment charges and other credit risk provisions	**5,554**	5,074
Loans and advances written off net of recoveries	**(3,870)**	(3,331)
Other provisions for liabilities and charges	**261**	1,016
Provisions used	**(268)**	(313)
Gains on investment properties	**(36)**	(480)
(Gains)/losses on disposal of property, plant and equipment and assets held for sale	**57**	(134)
Gain on disposal of business portfolios	**(1)**	(23)
Impairment on interests in associates and joint ventures	**-**	13
Gains less losses from financial investments	**(1,232)**	(11,611)
Share-based payments expense	**1,019**	1,318
Movement in present value of in-force business	**(7,306)**	(4,689)
Interest received	**106,416**	110,427
Interest paid	**(25,385)**	(29,689)
Operating profit before changes in working capital	**71,870**	80,439
Change in treasury bills with original term to maturity of more than three months	**(43,439)**	(109,172)
Change in placings with and advances to banks	**(3,141)**	24,012
Change in certificates of deposit with original term to maturity of more than three months	**14,424**	8,559
Change in repos and reverse repos	**(3,615)**	(11,842)
Change in trading assets	**(61,369)**	94,823
Change in trading liabilities	**(3,381)**	(23,961)
Change in derivative assets	**(98,852)**	8,979
Change in derivative liabilities	**93,039**	2,291
Change in financial assets designated as fair value	**(7,991)**	170
Change in financial liabilities designated as fair value	**346**	1,936
Change in financial investments held for backing liabilities to long-term policyholders	**(34,928)**	(34,655)
Change in loans and advances to customers	**(73,374)**	46,848
Change in amounts due from Group companies	**1,623**	(52,702)
Change in prepayment, accrued income and other assets	**(56,582)**	9,016
Change in deposits by banks	**44,185**	(78,419)
Change in customer accounts	**259,928**	160,084
Change in amounts due to Group companies	**25,057**	(23,128)
Change in debt securities in issue	**(15,624)**	(4,438)
Change in liabilities under insurance contracts	**45,350**	30,638
Change in accruals and deferred income, other liabilities and provisions	**49,560**	25,015
Exchange adjustments	**7,526**	14,015
Cash generated from operations	**210,612**	168,508

33 Analysis of cash and cash equivalents

a *Change in cash and cash equivalents during the year*

	2016 HK$m	2015 HK$m
At 1 January	**658,397**	679,670
Net cash inflow before the effect of foreign exchange movements	**108,266**	5,652
Effect of foreign exchange movements	**(13,958)**	(26,925)
At 31 December	**752,705**	658,397

b *Analysis of balances of cash and cash equivalents in the consolidated balance sheet*

	2016 HK$m	2015 HK$m
Cash in hand and sight balances with central banks	**213,783**	151,103
Items in the course of collection from other banks	**21,401**	25,020
Reverse repurchase agreements – non-trading	**167,872**	124,351
Placings with and advances to banks	**311,734**	279,297
Treasury bills, certificates of deposit and other eligible bills	**75,668**	109,379
Less: items in the course of transmission to other banks	**(37,753)**	(30,753)
	752,705	658,397

The amount of cash and cash equivalents that are subject to exchange control and regulatory restrictions amounted to HK$182,494m at 31 December 2016 (2015: HK$151,255m).

34 Contingent liabilities and commitments

a *Off-balance sheet contingent liabilities and commitments*

	2016 HK$m	2015 HK$m
Contingent liabilities and financial guarantee contracts		
Guarantees and irrevocable letters of credit pledged as collateral security	**257,863**	256,561
Other contingent liabilities	**1,696**	1,371
	259,559	257,932
Commitments		
Documentary credits and short-term trade-related transactions	**30,080**	31,337
Forward asset purchases and forward forward deposits placed	**6,235**	4,821
Undrawn formal standby facilities, credit lines and other commitments to lend	**2,251,302**	2,095,834
	2,287,617	2,131,992

The above table discloses the nominal principal amounts of commitments excluding capital commitments, guarantees and other contingent liabilities, which are mainly credit-related instruments including both financial and non-financial guarantees and commitments to extend credit. Contractual amounts represent the amounts at risk should contracts be fully drawn upon and clients default. The amount of the loan commitments shown above reflects, where relevant, the expected level of take-up of pre-approved facilities. Since a significant portion of guarantees and commitments are expected to expire without being drawn upon, the total of the contractual amounts is not representative of future liquidity requirements.

34 Contingent liabilities and commitments *(continued)*

b *Guarantees (including financial guarantee contracts)*

The group provides guarantees and similar undertakings on behalf of both third party customers and other entities within the Group. These guarantees are generally provided in the normal course of banking business. The principal types of guarantees provided, and the maximum potential amount of future payments which the group could be required to make, were as follows:

	2016 HK$m	2015 HK$m
Guarantees in favour of third parties		
Financial guarantees [1]	**52,831**	54,228
Other guarantees [2]	**183,160**	180,933
	235,991	235,161
Guarantees in favour of other HSBC Group entities	**21,872**	21,400
	257,863	256,561

1 *Financial guarantees are contracts that require the issuer to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. The amounts in the above table are nominal principal amounts.*

2 *Other guarantees include re-insurance letters of credit related to particular transactions, trade-related letters of credit issued without provision for the issuing entity to retain title to the underlying shipment, performance bonds, bid bonds, standby letters of credit and other transaction-related guarantees.*

The amounts disclosed in the above table reflect the group's maximum exposure under a large number of individual guarantee undertakings. The risks and exposures from guarantees are captured and managed in accordance with HSBC's overall credit risk management policies and procedures. Guarantees are subject to an annual credit review process.

35 Other commitments

Capital commitments

At 31 December 2016, capital commitments, mainly related to the commitment for purchase of premises, were HK$2,945m (2015: HK$3,354m).

Lease commitments

The group leases certain properties and equipment under operating leases. The leases normally run for a period of one to ten years and may include an option to renew. Lease payments are usually adjusted annually to reflect market rentals. None of the leases include contingent rentals. Future minimum lease payments under non-cancellable operating leases for premises and equipment are as follows:

	2016 HK$m	2015 HK$m
Amounts payable within		
– one year or less	**2,974**	3,054
– five years or less but over one year	**4,545**	4,858
– over five years	**658**	779
	8,177	8,691

36 Offsetting of financial assets and financial liabilities

	Amounts subject to enforceable netting arrangements								
	Effects of offsetting in the balance sheet			Amounts not offset in the balance sheet				Amounts not subject to enforceable netting arrangements[1]	
	Gross amounts HK$m	Amounts offset HK$m	Amounts reported in the balance sheet HK$m	Financial instruments HK$m	Non-cash collateral HK$m	Cash collateral HK$m	Net amount HK$m	HK$m	Balance sheet total HK$m
2016									
Financial assets									
Derivatives	**528,961**	**(72,599)**	**456,362**	**(339,755)**	**(19,420)**	**(38,762)**	**58,425**	**23,445**	**479,807**
Reverse repos, stock borrowing and similar agreements classified as:	**451,804**	**(2,358)**	**449,446**	**–**	**(446,189)**	**(455)**	**2,802**	**14,608**	**464,054**
– trading assets	**1,393**	**–**	**1,393**	**–**	**(1,387)**	**–**	**6**	**–**	**1,393**
– non-trading assets	**450,411**	**(2,358)**	**448,053**	**–**	**(444,802)**	**(455)**	**2,796**	**14,608**	**462,661**
Loans and advances to customers at amortised cost	**15,042**	**(15,042)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
	995,807	**(89,999)**	**905,808**	**(339,755)**	**(465,609)**	**(39,217)**	**61,227**	**38,053**	**943,861**[2]
Financial liabilities									
Derivatives	**511,784**	**(72,599)**	**439,185**	**(339,755)**	**(6,286)**	**(49,836)**	**43,308**	**23,273**	**462,458**
Repos, stock lending and similar agreements classified as:	**62,679**	**(2,358)**	**60,321**	**–**	**(60,079)**	**(2)**	**240**	**12,590**	**72,911**
– trading liabilities	**142**	**–**	**142**	**–**	**(142)**	**–**	**–**	**–**	**142**
– non-trading liabilities	**62,537**	**(2,358)**	**60,179**	**–**	**(59,937)**	**(2)**	**240**	**12,590**	**72,769**
Customer accounts at amortised cost	**15,042**	**(15,042)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
	589,505	**(89,999)**	**499,506**	**(339,755)**	**(66,365)**	**(49,838)**	**43,548**	**35,863**	**535,369**[3]

36 Offsetting of financial assets and financial liabilities *(continued)*

	Amounts subject to enforceable netting arrangements								
	Effects of offsetting in the balance sheet			Amounts not offset in the balance sheet					
	Gross amounts HK$m	Amounts offset HK$m	Amounts reported in the balance sheet HK$m	Financial instruments HK$m	Non-cash collateral HK$m	Cash collateral HK$m	Net amount HK$m	Amounts not subject to enforceable netting arrangements[1] HK$m	Balance sheet total HK$m
2015									
Financial assets									
Derivatives	390,543	(40,636)	349,907	(285,735)	(7,835)	(23,322)	33,015	31,048	380,955
Reverse repos, stock borrowing and similar agreements classified as:	350,318	(4,109)	346,209	–	(345,629)	(373)	207	22,254	368,463
– trading assets	182	–	182	–	(177)	–	5	171	353
– non-trading assets	350,136	(4,109)	346,027	–	(345,452)	(373)	202	22,083	368,110
Loans and advances to customers at amortised cost	15,032	(15,032)	–	–	–	–	–	–	–
	755,893	(59,777)	696,116	(285,735)	(353,464)	(23,695)	33,222	53,302	749,418[2]
Financial liabilities									
Derivatives	381,116	(40,636)	340,480	(285,735)	(3,411)	(30,356)	20,978	28,939	369,419
Repos, stock lending and similar agreements classified as:	59,083	(4,109)	54,974	–	(54,848)	(3)	123	5,628	60,602
– trading liabilities	501	–	501	–	(497)	–	4	–	501
– non-trading liabilities	58,582	(4,109)	54,473	–	(54,351)	(3)	119	5,628	60,101
Customer accounts at amortised cost	15,032	(15,032)	–	–	–	–	–	–	–
	455,231	(59,777)	395,454	(285,735)	(58,259)	(30,359)	21,101	34,567	430,021[3]

1 *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 offsetting right.*
2 *Amounts presented in the balance sheet included balances due from Group companies of HK$254,849m (2015: HK$239,795m).*
3 *Amounts presented in the balance sheet included balances due to Group companies of HK$160,702m (2015: HK$152,261m).*

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 'Amounts not offset in the balance sheet' for derivatives and reverse repurchase/ repurchase, stock borrowing/ lending and similar arrangements include transactions where:

- the counterparty has an offsetting exposure with the group 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 are received and pledged in respect of the transactions described above.

37 Segmental analysis

Change in reportable segment

The group's chief operating decision-maker, the Executive Committee ('EXCO'), regularly reviews operating activities on a number of bases, including by global business and by geographical region. In prior years, the group's operating segments were organised by geographical region, Hong Kong and Rest of Asia-Pacific. During 2016, several factors, including a clear shift in the focus of information to global businesses received by EXCO, have caused a change in the way business performance is assessed and allocation of resources is prioritised. Accordingly, the segmental reporting has been changed to global businesses as this provides the most meaningful information with which to understand the performance of the group.

Information provided to EXCO is measured in accordance with HKFRSs. The group's operations are closely integrated and, accordingly, the presentation of data includes internal allocations of certain items of income and expenses. These allocations include the costs of certain support services and global functions to the extent that they can be meaningfully attributed. Costs which are not allocated to global businesses are included in the 'Corporate Centre'. All such transactions are undertaken on arm's length terms.

The group's operating segments are organised into four global businesses and a Corporate Centre. The group provides a comprehensive range of banking and related financial services to its customers organised by global business:

- Retail Banking and Wealth Management ('RBWM') serves personal customers. We take deposits and provide transactional banking services to enable customers to manage their day to day finances and save for the future. We selectively offer credit facilities to assist customers in their short or longer-term borrowing requirements; and we provide financial advisory, broking, insurance and investment services to help them manage and protect their financial futures.
- Commercial Banking ('CMB') is segmented into Corporate, to serve both corporate and mid-market companies with more sophisticated financial needs, and Business Banking, to serve small and medium-sized enterprises ('SMEs'), enabling differentiated coverage of our target customers. This allows us to provide continuous support to companies as they grow both domestically and internationally, and ensures a clear focus on internationally aspirant customers.
- Global Banking and Markets ('GB&M') provides tailored financial solutions to major government, corporate and institutional clients worldwide. GB&M operates a long-term relationship management approach to build a full understanding of clients' financial requirements. Sector-focused client service teams comprising relationship managers and product specialists develop financial solutions to meet individual client needs.
- Global Private Banking ('GPB') provides investment management and trustee solutions to high net worth individuals and their families. We aim to meet the needs of our clients by providing excellent customer service, leveraging our global footprint and offering a comprehensive suite of solutions.
- Corporate Centre was established during the year to align certain functions of the group. The Corporate Centre includes Balance Sheet Management, certain interests in associates and joint ventures, as well as the results of our financing operations and central support costs with associated recoveries.

The group has also conducted a number of internal reviews during the year to align customer requirements to those global businesses best suited to service their respective needs, resulting in the transfer of a portfolio of customers from CMB to GB&M. Performance by global business is presented in the 'Financial Review' section. Comparative figures have been re-presented to conform to current year presentation.

Notes on the Financial Statements (continued)

Information by geographic region

	Hong Kong HK$m	Rest of Asia-Pacific HK$m	Inter-region elimination HK$m	Total HK$m
2016				
Total operating income	**165,957**	**70,491**	**(3,710)**	**232,738**
Profit before tax	**60,645**	**42,062**	**-**	**102,707**
Total assets	**5,416,727**	**2,625,900**	**(493,675)**	**7,548,952**
Total liabilities	**5,062,172**	**2,301,319**	**(493,675)**	**6,869,816**
Credit commitments and contingencies (contract amounts)	**1,413,979**	**1,133,197**	**-**	**2,547,176**
2015				
Total operating income	165,673	74,258	(3,986)	235,945
Profit before tax	72,872	44,407	-	117,279
Total assets	4,934,662	2,588,062	(569,041)	6,953,683
Total liabilities	4,613,757	2,273,081	(569,041)	6,317,797
Credit commitments and contingencies (contract amounts)	1,273,983	1,115,941	-	2,389,924

Information by country

	Revenue[1]		Non-current assets[2]	
	2016 HK$m	2015 HK$m	**2016 HK$m**	2015 HK$m
Hong Kong	**108,165**	119,764	**106,513**	104,503
Mainland China	**14,307**	16,653	**130,167**	127,346
Australia	**6,537**	6,740	**821**	822
India	**7,761**	7,488	**1,919**	2,203
Indonesia	**4,467**	4,160	**3,810**	3,424
Malaysia	**5,794**	6,582	**761**	762
Singapore	**9,327**	9,809	**1,333**	1,412
Taiwan	**2,798**	3,111	**2,127**	2,118
Other	**8,996**	9,207	**2,840**	2,584
Total	**168,152**	183,514	**250,291**	245,174

1 *Revenue (defined as 'Net operating income before loan impairment charges and other credit risk provisions') is attributable to countries based on the location of the principal operations of the subsidiary or branch.*

2 *Non-current assets consist of property, plant and equipment, goodwill, other intangible assets, interests in associates and joint ventures and certain other assets.*

38 Related party transactions

The group's related parties include the parent, fellow subsidiaries, associates, joint ventures, post-employment benefit plans for the benefit of the group's 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.

a *Inter-company*

The group is wholly-owned by HSBC Asia Holdings B.V.. HSBC Asia Holdings B.V. is in turn wholly-owned by HSBC Asia Holdings (UK) Limited, which is wholly-owned by HSBC Holdings B.V.. HSBC Holdings B.V. is wholly-owned by HSBC Finance (Netherlands), which is wholly-owned by HSBC Holdings plc (incorporated in England).

The group entered into transactions with its fellow subsidiaries in the normal course of business, including the acceptance and placement of interbank deposits, correspondent banking transactions and off-balance sheet transactions. The activities were on substantially the same terms, including interest rates and security, as for comparable transactions with third party counterparties.

The group shares the costs of certain IT projects with its fellow subsidiaries and also used certain processing services of fellow subsidiaries on a cost recovery basis. The Bank also acted as agent for the distribution of retail investment funds for fellow subsidiaries and paid professional fees for services provided by fellow subsidiaries. The commissions and fees in these transactions and services are priced on an arm's length basis.

The aggregate amount of income and expenses arising from these transactions during the year and the balances of amounts due to and from the relevant parties at the year end are as follows:

	2016			2015		
	Immediate holding company HK$m	**Ultimate holding company HK$m**	**Fellow subsidiaries HK$m**	Immediate holding company HK$m	Ultimate holding company HK$m	Fellow subsidiaries HK$m
Income and expenses for the year						
Interest income	**–**	**–**	**1,242**	–	–	599
Interest expense[1]	**1,232**	**559**	**517**	892	534	341
Fee income	**–**	**–**	**2,482**	–	–	2,604
Fee expense	**–**	**–**	**971**	–	–	802
Other operating income	**–**	**826**	**2,346**	–	577	2,729
Other operating expenses[2]	**6**	**2,387**	**7,681**	7	2,433	7,586
At 31 December						
Assets						
Trading assets[3]	**–**	**14**	**17,320**	–	–	17,051
Derivative assets	**–**	**–**	**110,669**	–	–	101,630
Other assets[3]	**1**	**382**	**225,056**	–	102	227,243
	1	**396**	**353,045**	–	102	345,924
Liabilities						
Trading liabilities[3]	**–**	**13**	**13,400**	–	–	10,232
Financial liabilities designated at fair value[3]	**–**	**–**	**8**	–	–	4
Derivative liabilities	**–**	**–**	**115,743**	–	–	108,317
Other liabilities[3]	**510**	**7,714**	**92,338**	554	624	78,585
Subordinated liabilities[3]	**65,378**	**18,677**	**–**	1,395	18,679	–
Preference shares	**26,779**	**–**	**100**	36,451	–	102
	92,667	**26,404**	**221,589**	38,400	19,303	197,240
Guarantees	**–**	**–**	**21,872**	–	–	21,400
Commitments	**–**	**–**	**2,578**	–	–	2,841

1 *Interest expense included distribution on preference shares and interest on subordinated liabilities.*
2 *In 2016, payments were made of HK$682m (2015: HK$1,014m) for software costs which were capitalised as intangible assets in the balance sheet of the group.*
3 *These balances are presented under 'Amounts due from/to Group companies' in the consolidated balance sheet.*

Notes on the Financial Statements (continued)

38 Related party transactions *(continued)*

b *Share option and share award schemes*

The group participates in various share option and share plans operated by HSBC whereby share options or shares of HSBC are granted to employees of the group. As disclosed in note 4(a), the group recognises an expense in respect of these share options and share awards. The cost borne by the ultimate holding company in respect of share options is treated as a capital contribution and is recorded within 'Other reserves'. In respect of share awards, the group recognises a liability to the ultimate holding company over the vesting period. This liability is measured at the fair value of the shares at each reporting date, with changes since the award dates adjusted through the capital contribution account within 'Other reserves'. The balances of the capital contribution and the liability as at 31 December 2016 amounted to HK$3,225m and HK$1,945m respectively (2015: HK$3,483m and HK$1,769m respectively).

c *Pension funds*

At 31 December 2016, HK$14.0bn (2015: HK$12.6bn) of pension fund assets were under management by group companies. Total fees paid or payable by pension plans to group companies for providing fund management, administrative and trustee services amounted to HK$21m for the year (2015: HK$22m).

d *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 interests in associates and joint ventures are given in note 15. Transactions and balances during the year with associates and joint ventures were as follows:

	2016		2015	
	Highest balance during the year HK$m	**Balance at 31 December HK$m**	Highest balance during the year HK$m	Balance at 31 December HK$m
Amounts due from associates – unsubordinated	**24,147**	**22,268**	32,372	15,614
Amounts due from joint ventures – unsubordinated	**3**	**–**	2	–
	24,150	**22,268**	32,374	15,614
Amounts due to associates	**8,625**	**4,464**	8,113	713
Commitments	**1**	**1**	1	1

The disclosure of the year-end balance and the highest balance during the year is considered the most meaningful information to represent transactions during the year.

The transactions resulting in amounts due to and from associates and joint ventures 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.

e *Key Management Personnel*

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Bank and the group. It includes members of the Board of Directors and Executive Committee of the Bank and the Board of Directors and Group Managing Directors of HSBC Holdings plc.

38 Related party transactions *(continued)*

The following table shows the expense in respect of compensation for Key Management Personnel of the Bank for services rendered to the Bank:

	2016 HK$m	2015 HK$m
Salaries and other short term benefits	**285**	233
Retirement benefits	**10**	13
Share-based payments	**111**	179
	406	425

Transactions, arrangements and agreements involving Key Management Personnel

	2016 HK$m	2015 HK$m
During the year		
Highest average assets[1]	**21,374**	27,536
Highest average liabilities[1]	**33,658**	39,743
Contribution to the group's profit before tax	**599**	865
At the year end		
Guarantees	**3,547**	4,379
Commitments	**2,623**	2,268

1 *The disclosure of the highest average balance during the year is considered the most meaningful information to represent transactions during the year.*

Transactions, arrangements and agreements are entered into by the group with companies that may be controlled by Key Management Personnel of the group and their immediate relatives. These transactions are primarily loans and deposits, and were entered into in the ordinary course of business and on substantially the same terms, including interest rates and security, as comparable transactions with persons or companies 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.

No impairment losses have been recorded against balances outstanding during the year with Key Management Personnel, and there are no specific impairment allowances on balances with Key Management Personnel at the year end (2015: nil).

f *Loans to directors*

Directors are defined as the Directors of the Bank, its ultimate holding company, HSBC Holdings plc and intermediate companies, as well as companies that are controlled by, and entities that are connected with these directors. Particulars of loans to directors disclosed pursuant to section 17 of the Companies (Disclosure of Information about Benefits of Directors) Regulation are as follows:

	Aggregate amount outstanding at 31 December		Maximum aggregate amount outstanding during the year	
	2016 HK$m	2015 HK$m	**2016 HK$m**	2015 HK$m
By the Bank	**1,063**	3,246	**1,279**	4,467
By subsidiaries	**–**	–	**1**	1
	1,063	3,246	**1,280**	4,468

These amounts include principal and interest, and the maximum liability that may be incurred under guarantees.

Notes on the Financial Statements (continued)

39 Fair values of financial instruments carried at fair value

The fair value of financial instruments is generally measured on the basis of the individual financial instrument. However, in cases where the group manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the group measures the fair value of the group of financial instruments on a net basis, but presents the underlying financial assets and liabilities separately in the financial statements, unless they satisfy the HKFRS offsetting criteria as described in note 36.

Financial instruments carried at fair value and bases of valuation

		Valuation techniques				
	Level 1 HK$m	Level 2 HK$m	Level 3 HK$m	Third party total HK$m	Inter-company[2] HK$m	Total HK$m
At 31 December 2016						
Trading assets[1]	**239,646**	**131,285**	**703**	**371,634**	**–**	**371,634**
Derivative assets	**3,673**	**364,062**	**1,403**	**369,138**	**110,669**	**479,807**
Financial assets designated at fair value	**72,736**	**29,524**	**3,756**	**106,016**	**–**	**106,016**
Available-for-sale investments	**1,058,461**	**510,357**	**5,766**	**1,574,584**	**–**	**1,574,584**
Trading liabilities[1]	**75,880**	**106,768**	**5,822**	**188,470**	**–**	**188,470**
Derivative liabilities	**3,684**	**340,336**	**2,695**	**346,715**	**115,743**	**462,458**
Financial liabilities designated at fair value	**–**	**50,875**	**241**	**51,116**	**–**	**51,116**
At 31 December 2015						
Trading assets[1]	158,173	143,611	842	302,626	–	302,626
Derivative assets	6,914	271,230	1,181	279,325	101,630	380,955
Financial assets designated at fair value	65,883	30,766	2,446	99,095	–	99,095
Available-for-sale investments	1,015,065	466,129	6,253	1,487,447	–	1,487,447
Trading liabilities[1]	56,291	128,102	7,458	191,851	–	191,851
Derivative liabilities	5,773	253,647	1,682	261,102	108,317	369,419
Financial liabilities designated at fair value	–	50,770	–	50,770	–	50,770

1 *Amounts with HSBC Group entities are not reflected here.*
2 *Inter-company derivative balances are largely under 'Level 2'.*

Transfers between levels of the fair value hierarchy are deemed to occur at the end of the reporting period. Transfers between level 1 and level 2 are immaterial.

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, direct observation of a traded price may not be possible. In these circumstances, the group 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. 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 those 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 on-going 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.

39 Fair values of financial instruments carried at fair value *(continued)*

To this end, the ultimate responsibility for the determination of fair values lies within the Finance function, which reports to the Group Finance Director. Finance establishes the accounting policies and procedures governing valuation, and is responsible for ensuring that these comply with all relevant accounting standards.

Determination of fair value

Fair values 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 the group 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 judgement as to whether a market is active may include, but is not restricted to, the 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. In inactive markets, obtaining assurance that the transaction price provides evidence of fair value or determining the adjustments to transaction prices that are necessary to measure the fair value of the instrument requires additional work during the valuation process.

Financial liabilities measured at fair value

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 the group issues structured notes.

Fair value adjustments

Fair value adjustments are adopted when the group determines that there are additional factors that would be considered relevant by a market participant that are not incorporated within the valuation model. Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement, such as when models are enhanced, fair value adjustments may no longer be required.

Risk-related adjustments

(i) Bid-offer
HKFRS 13 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.

(ii) 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, an adjustment may be necessary to reflect the likelihood that market participants would adopt more conservative values for uncertain parameters and/or model assumptions, than those used in the group's valuation model.

39 Fair values of financial instruments carried at fair value *(continued)*

(iii) Credit valuation adjustment ('CVA') and debit valuation adjustment ('DVA')

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

The DVA is an adjustment to the valuation of OTC derivative contracts to reflect the possibility that the group may default, and that the group may not pay the full market value of the transactions.

The group calculates a separate CVA and DVA for each legal entity, and for each counterparty to which the entity has exposure. With the exception of central clearing parties, all third-party counterparties are included in the CVA and DVA calculations, and these adjustments are not netted across group entities.

The group calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of the group, to the group's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, the group calculates the DVA by applying the PD of the group, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to the group 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 the group uses a simulation methodology, which incorporates a range of potential exposures over the life of the portfolio, to calculate the expected positive exposure to a counterparty. The simulation methodology includes credit mitigants, such as counterparty netting agreements and collateral agreements with the counterparty.

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

(iv) Funding fair value adjustment ('FFVA')

The FFVA is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available and is adjusted for events that may terminate the exposure, such as the default of the group or the counterparty. The FFVA and DVA are calculated independently.

(v) 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. In these circumstances, model limitation adjustments are adopted.

(vi) Inception profit (Day 1 profit or loss reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs.

39 Fair values of financial instruments carried at fair value *(continued)*

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

	Assets				Liabilities		
	Available-for-sale HK$m	Held for trading HK$m	Designated at fair value HK$m	Derivatives HK$m	Held for trading HK$m	Derivatives HK$m	Designated at fair value HK$m
2016							
At 1 January	**6,253**	**842**	**2,446**	**1,181**	**7,458**	**1,682**	**-**
Total gains or losses recognised in profit or loss	**(11)**	**16**	**169**	**709**	**(399)**	**1,479**	**(9)**
Total gains or losses recognised in other comprehensive income	**207**	**1**	**1**	**(5)**	**(117)**	**85**	**(7)**
Purchases/issues	**40**	**1,400**	**1,996**	**–**	**1,830**	**–**	**–**
Sales	**(14)**	**(1,492)**	**(4)**	**–**	**–**	**–**	**–**
Deposits/settlements	**(773)**	**–**	**(853)**	**62**	**(1,144)**	**(25)**	**–**
Net transfers (out)/in	**64**	**(64)**	**1**	**(544)**	**(1,806)**	**(526)**	**257**
At 31 December	**5,766**	**703**	**3,756**	**1,403**	**5,822**	**2,695**	**241**
Unrealised gains or losses recognised in profit or loss relating to those assets and liabilities held at the end of the reporting period[1]	**–**	**4**	**172**	**32**	**–**	**(29)**	**9**
2015							
At 1 January	6,712	165	1,911	785	12,153	1,108	–
Total gains or losses recognised in profit or loss	43	7	276	705	(1,387)	872	–
Total gains or losses recognised in other comprehensive income	(922)	(7)	(1)	(8)	(413)	(8)	–
Purchases/issues	548	992	1,940	–	4,424	–	–
Sales	(128)	(282)	(68)	–	–	–	–
Deposits/settlements	–	–	(807)	(75)	(3,257)	(75)	–
Net transfers out	–	(33)	(805)	(226)	(4,062)	(215)	–
At 31 December	6,253	842	2,446	1,181	7,458	1,682	–
Unrealised gains or losses recognised in profit or loss relating to those assets and liabilities held at the end of the reporting period[1]	–	7	101	244	9	(61)	–

1 *The amount has been reported on a net basis, after taking into consideration the total gains or losses arising from those transactions where the risk has been backed out to other HSBC entities.*

Transfers between levels of the fair value hierarchy are deemed to occur at the end of the reporting period. Transfers out of Level 3 held for trading liabilities predominantly resulted from an increase in the observability of inputs such as correlations in pricing the instruments.

Effects of changes in significant non-observable assumptions to reasonably possible alternatives

The key unobservable inputs to Level 3 financial instruments include volatility and correlation for structured notes and deposits valued using option models, bid quotes for corporate bonds valued using approaches that take into account of market comparables, and multiple items for private equity and strategic investments. In the absence of an active market, the fair value of private equity and strategic investments 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. The change in fair values due to changes in reasonably possible alternative assumptions for these unobservable inputs is not significant.

Notes on the Financial Statements (continued)

40 Fair values of financial instruments not carried at fair value

		Fair values			
			Valuation techniques		
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
At 31 December 2016	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
Assets					
Reverse repurchase agreements – non-trading	**271,567**	**–**	**260,167**	**11,839**	**272,006**
Placings with and advances to banks	**463,211**	**–**	**451,012**	**12,215**	**463,227**
Loans and advances to customers	**2,834,114**	**–**	**74,856**	**2,746,942**	**2,821,798**
Financial investment debt securities	**260,767**	**5,099**	**257,290**	**–**	**262,389**
Liabilities					
Repurchase agreements – non-trading	**27,810**	**–**	**27,809**	**–**	**27,809**
Deposits by banks	**192,479**	**–**	**192,133**	**328**	**192,461**
Customer accounts	**4,900,004**	**–**	**4,900,114**	**–**	**4,900,114**
Debt securities in issue	**25,235**	**–**	**25,269**	**–**	**25,269**
Subordinated liabilities	**4,836**	**–**	**1,763**	**2,263**	**4,026**
Preference shares	**26,879**	**–**	**–**	**27,285**	**27,285**
At 31 December 2015					
Assets					
Reverse repurchase agreements – non-trading	212,779	–	205,434	7,432	212,866
Placings with and advances to banks	421,221	–	411,044	10,387	421,431
Loans and advances to customers	2,762,290	–	44,348	2,708,923	2,753,271
Financial investment debt securities	228,599	4,098	231,821	–	235,919
Liabilities					
Repurchase agreements – non-trading	16,158	–	16,158	–	16,158
Deposits by banks	148,294	–	147,826	468	148,294
Customer accounts	4,640,076	–	4,640,626	–	4,640,626
Debt securities in issue	40,859	–	40,898	–	40,898
Subordinated liabilities	8,003	–	1,838	5,027	6,865
Preference shares	36,553	–	–	36,863	36,863

Other financial instruments not carried at fair value are typically short-term in nature or re-price to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value.

Valuation

The fair values of financial instruments that are not carried at fair value on the balance sheet are calculated as described below.

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.

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. 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. The fair value of a loan reflects loan impairments at the balance sheet date. For impaired loans, fair value is estimated by discounting the future cash flows over the time period they are expected to be recovered.

40 Fair values of financial instruments not carried at fair value *(continued)*

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 estimated by discounting future cash flows using discount rates for the applicable maturities and taking own credit spread into account.

The fair values in this note are stated at a specific date and may be significantly different from the amounts which will actually be paid on the maturity or settlement dates of the instruments. In many cases, it would not be possible to realise immediately the estimated fair values given the size of the portfolios measured. Accordingly, these fair values do not represent the value of these financial instruments to the group as a going concern.

41 Structured entities

The group enters into certain transactions with customers in the ordinary course of business which involve the use of structured entities ('SEs'). The group's arrangements that involve SEs are authorised centrally when they are established to ensure appropriate purpose and governance. The activities of SEs administered by the group are closely monitored by senior management. The group's transactions with consolidated and unconsolidated SEs are set out below.

Structured credit transactions

The group provides structured credit products to third-party professional and institutional investors who wish to obtain exposure to a reference portfolio of debt instruments. In such structures, the investor receives returns referenced to the underlying portfolio by purchasing notes issued by the SEs. The group enters into contracts with the SE, including derivatives, in order to pass the required risks and rewards of the reference portfolios to the SEs.

Securitisations by the group

The group uses SEs to securitise customer loans and advances that it has originated in order to diversify its sources of funding for asset origination and for capital efficiency purposes. The loans and advances are transferred by the group to the SEs for cash, and the SEs issue debt securities to investors to fund the cash purchases. The group may also act as a derivative counterparty or provide a guarantee. Credit enhancements to the underlying assets may be provided to obtain investment grade ratings on the senior debt issued by the SEs.

Third-party financing SEs

The group also transacts with third party SEs in the normal course of business for a number of purposes, for example, to provide finance to public and private sector infrastructure projects, for asset and structured finance transactions and for customers to raise finance against security. The group also has interests in third-party established structured entities by holding notes issued by these entities or entering into derivatives where the group absorbs risk from the entities.

Funds

The group has established and managed funds to provide customers with investment opportunities. The group, as the fund manager, may be entitled to receive management and performance fees based on the assets under management. The group purchases and holds units of HSBC managed and third party managed funds in order to facilitate both business and customer needs. The majority of these funds held relate to the insurance business. When the group is deemed to be acting as a principal rather than an agent in its role as a fund manager, the group controls and hence consolidates these funds.

The group's transactions with consolidated SEs are not significant.

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Notes on the Financial Statements (continued)

41 Structured entities (continued)

Unconsolidated structured entities

The maximum exposure to loss from the group's interests in unconsolidated SEs represents the maximum loss that the group could incur as a result of its involvement with unconsolidated SEs regardless of the probability of the loss being incurred. For commitments and guarantees, the maximum exposure to loss is the notional amount of potential future losses. For retained and purchased investments in and loans to unconsolidated SEs, 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 the group's exposure to loss.

Income from unconsolidated SEs includes recurring and non-recurring fees, interest, dividends, gains or losses on the re-measurement or derecognition of interests in structured entities, any mark-to-market gains or losses on a net basis and gains or losses from the transfer of assets and liabilities to the structured entities.

The nature and risk associated with the group's interest in unconsolidated SEs are set out below.

	Securitisations HK$m	HSBC managed funds HK$m	Non-HSBC managed funds HK$m	Other HK$m	Total HK$m
At 31 December 2016					
Total assets	**33,137**	**567,991**	**5,784,647**	**59,374**	**6,445,149**
The group's interest- assets					
Trading assets	**–**	**2,272**	**–**	**–**	**2,272**
Financial assets designated at fair value	**–**	**18,161**	**44,926**	**–**	**63,087**
Derivatives	**–**	**–**	**–**	**249**	**249**
Loans and advances to customers	**6,786**	**–**	**–**	**7,568**	**14,354**
Financial investments	**–**	**–**	**797**	**–**	**797**
Other assets	**–**	**–**	**–**	**358**	**358**
Total assets in relation to the group's interests in the unconsolidated structured entities[1]	**6,786**	**20,433**	**45,723**	**8,175**	**81,117**
The group's interest- liabilities					
Derivatives	**–**	**–**	**–**	**1**	**1**
Total liabilities in relation to the group's interests in the unconsolidated structured entities	**–**	**–**	**–**	**1**	**1**
The group's maximum exposure	**7,305**	**20,434**	**53,097**	**8,532**	**89,368**
At 31 December 2015					
Total assets	30,631	622,340	5,527,243	57,366	6,237,580
The group's interest- assets					
Trading assets	–	99	–	–	99
Financial assets designated at fair value	–	15,506	40,142	–	55,648
Derivatives	–	–	–	299	299
Loans and advances to customers	8,654	–	–	6,918	15,572
Financial investments	–	–	435	–	435
Other assets	–	–	–	283	283
Total assets in relation to the group's interests in the unconsolidated structured entities[1]	8,654	15,605	40,577	7,500	72,336
The group's interest- liabilities					
Derivatives	205	–	–	2	207
Total liabilities in relation to the group's interests in the unconsolidated structured entities	205	–	–	2	207
The group's maximum exposure	9,305	15,605	40,598	7,946	73,454

1 *Most of HSBC managed funds and non-HSBC managed funds are held by the insurance business.*

Structured entities sponsored by the group

The amount of assets transferred to and income received from unconsolidated structured entities sponsored by the group during 2016 and 2015 was not significant.

42 Bank balance sheet and statement of changes in equity

Bank balance sheet at 31 December 2016

	2016 HK$m	2015 HK$m
ASSETS		
Cash and sight balances at central banks	**163,204**	112,427
Items in the course of collection from other banks	**15,006**	18,055
Hong Kong Government certificates of indebtedness	**242,194**	220,184
Trading assets	**274,287**	215,109
Derivatives	**453,746**	360,222
Financial assets designated at fair value	**403**	911
Reverse repurchase agreements – non-trading	**146,398**	94,592
Placings with and advances to banks	**202,763**	179,109
Loans and advances to customers	**1,575,340**	1,546,056
Financial investments	**983,049**	950,504
Amounts due from Group companies	**450,399**	407,194
Investments in subsidiaries	**81,801**	72,395
Interests in associates and joint ventures	**39,830**	39,830
Goodwill and intangible assets	**4,578**	4,361
Property, plant and equipment	**82,344**	80,513
Deferred tax assets	**530**	924
Prepayment, accrued income and other assets	**108,001**	80,271
Total assets	**4,823,873**	4,382,657
LIABILITIES		
Hong Kong currency notes in circulation	**242,194**	220,184
Items in the course of transmission to other banks	**25,350**	21,960
Repurchase agreements – non-trading	**10,464**	6,192
Deposits by banks	**139,033**	92,969
Customer accounts	**3,100,506**	2,972,413
Trading liabilities	**100,777**	101,342
Derivatives	**440,528**	350,281
Financial liabilities designated at fair value	**8,917**	8,744
Debt securities in issue	**18,255**	32,054
Retirement benefit liabilities	**2,914**	4,465
Amounts due to Group companies	**272,210**	141,047
Accruals and deferred income, other liabilities and provisions	**53,779**	47,809
Current tax liabilities	**1,119**	1,451
Deferred tax liabilities	**7,625**	6,806
Subordinated liabilities	**3,102**	6,204
Preference shares	**26,779**	36,451
Total liabilities	**4,453,552**	4,050,372
EQUITY		
Share capital	**114,359**	96,052
Other equity instruments	**14,737**	14,737
Other reserves	**8,443**	6,558
Retained profits	**232,782**	214,938
Total equity	**370,321**	332,285
Total equity and liabilities	**4,823,873**	4,382,657

Directors
Stuart Gulliver
Peter Wong

42 Bank balance sheet and statement of changes in equity *(continued)*

Bank statement of changes in equity for the year ended 31 December 2016

	Share capital HK$m	Other equity instruments HK$m	Retained profits HK$m	Other reserves: Property revaluation reserve HK$m	Other reserves: Available-for-sale investment reserve HK$m	Other reserves: Cash flow hedge reserve HK$m	Other reserves: Foreign exchange Reserve HK$m	Other reserves: Other[1] HK$m	Total equity HK$m
2016									
At 1 January	**96,052**	**14,737**	**214,938**	**33,056**	**1,355**	**19**	**(12,867)**	**(15,005)**	**332,285**
Profit for the year	**–**	**–**	**59,314**	**–**	**–**	**–**	**–**	**–**	**59,314**
Other comprehensive income/(expense) (net of tax)	**–**	**–**	**573**	**4,082**	**913**	**(694)**	**(867)**	**–**	**4,007**
Available-for-sale investments	**–**	**–**	**–**	**–**	**913**	**–**	**–**	**–**	**913**
Cash flow hedges	**–**	**–**	**–**	**–**	**–**	**(694)**	**–**	**–**	**(694)**
Property revaluation	**–**	**–**	**(173)**	**4,082**	**–**	**–**	**–**	**–**	**3,909**
Actuarial gains on defined benefit plans	**–**	**–**	**746**	**–**	**–**	**–**	**–**	**–**	**746**
Exchange differences	**–**	**–**	**–**	**–**	**–**	**–**	**(867)**	**–**	**(867)**
Total comprehensive income/(expense)	**–**	**–**	**59,887**	**4,082**	**913**	**(694)**	**(867)**	**–**	**63,321**
Shares issued	**18,307**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**18,307**
Dividends paid[2]	**–**	**–**	**(43,296)**	**–**	**–**	**–**	**–**	**–**	**(43,296)**
Movement in respect of share-based payment arrangements	**–**	**–**	**205**	**–**	**–**	**–**	**–**	**(215)**	**(10)**
Transfers and other movements[3]	**–**	**–**	**1,048**	**(1,322)**	**(6)**	**–**	**–**	**(6)**	**(286)**
At 31 December	**114,359**	**14,737**	**232,782**	**35,816**	**2,262**	**(675)**	**(13,734)**	**(15,226)**	**370,321**
2015									
At 1 January	96,052	14,737	199,851	28,933	2,575	(106)	(8,825)	(15,324)	317,893
Profit for the year	–	–	52,541	–	–	–	–	–	52,541
Other comprehensive income/(expense) (net of tax)	–	–	(1,026)	5,108	(1,220)	125	(4,042)	–	(1,055)
Available-for-sale investments	–	–	–	–	(1,220)	–	–	–	(1,220)
Cash flow hedges	–	–	–	–	–	125	–	–	125
Property revaluation	–	–	(142)	5,108	–	–	–	–	4,966
Actuarial losses on defined benefit plans	–	–	(884)	–	–	–	–	–	(884)
Exchange differences	–	–	–	–	–	–	(4,042)	–	(4,042)
Total comprehensive income/(expense)	–	–	51,515	5,108	(1,220)	125	(4,042)	–	51,486
Dividends paid[2]	–	–	(37,405)	–	–	–	–	–	(37,405)
Movement in respect of share-based payment arrangements	–	–	12	–	–	–	–	329	341
Transfers and other movements[3]	–	–	965	(985)	–	–	–	(10)	(30)
At 31 December	96,052	14,737	214,938	33,056	1,355	19	(12,867)	(15,005)	332,285

For footnotes, please refer to page 70.

43 Legal proceedings and regulatory matters

The group 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, the Bank considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in note 1(b)(x). 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 2016. 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.

Anti-money laundering and sanctions-related matters

In October 2010, HSBC Bank USA entered into a consent order with the Office of the Comptroller of the Currency (the 'OCC') and the indirect parent of that company, HSBC North America Holdings Inc. ('HNAH'), entered into a consent order with the Federal Reserve Board (together 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 US Bank Secrecy Act ('BSA') and anti-money laundering ('AML') compliance. HSBC Bank USA is not currently in compliance with the OCC Order. Steps are being taken to address the requirements of the Orders.

In December 2012, HSBC Holdings plc, 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 plc and HSBC Bank USA entered into a five-year deferred prosecution agreement with, among others, the US Department of Justice ('DoJ') (the 'US DPA'); and HSBC Holdings plc consented to a cease-and-desist order and HSBC Holdings plc and HNAH consented to a civil money penalty order with the Federal Reserve Board. HSBC Holdings plc 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 Financial Conduct Authority to comply with certain forward-looking AML and sanctions-related obligations. In addition, HSBC Bank USA entered into civil money penalty orders with the Financial Crimes Enforcement Network of the US Treasury Department and the OCC.

Under these agreements, HSBC Holdings plc and HSBC Bank USA made payments totalling US$1.9bn to US authorities and undertook various further obligations, including, among others, to continue to cooperate fully with the DoJ in any and all investigations, not to commit any crime under US federal law subsequent to the signing of the agreement, and to retain an independent compliance monitor (the 'Monitor'). In February 2017, the Monitor delivered his third annual follow-up review report. Through his country-level reviews, the Monitor identified potential anti-money laundering and sanctions compliance issues that the DoJ and HSBC are reviewing further.

HSBC Bank USA also entered into two consent orders with the OCC. These required HSBC Bank USA to correct the circumstances noted in the OCC's report and to adopt an enterprise-wide compliance programme, and imposed restrictions on acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, without the OCC's prior approval.

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.

Tax investigations

The Bank continues to cooperate with the relevant US and other authorities, including with respect to US-based clients of the Bank in India.

In addition, various tax administration, regulatory and law enforcement authorities around the world, including in India, are conducting investigations and reviews of HSBC Swiss Private Bank and other HSBC companies in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation. The Indian tax authority issued a summons and request for information to the Bank in India.

43 Legal proceedings and regulatory matters *(continued)*

The Bank and other HSBC companies are cooperating with the relevant authorities. 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.

Mossack Fonseca & Co.

HSBC has received requests for information from various regulatory and law enforcement authorities around the world concerning persons and entities believed to be linked to Mossack Fonseca & Co., a service provider of personal investment companies. HSBC is cooperating with the relevant authorities.

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.

Singapore Interbank Offered Rate ('SIBOR'), Singapore Swap Offer Rate ('SOR') and Australia Bank Bill Swap Rate ('BBSW')

In July 2016 and August 2016, HSBC and other panel banks were named as defendants in two putative class actions filed in the New York District Court on behalf of persons who transacted in products related to the SIBOR, SOR and BBSW benchmark rates. The complaints allege, among other things, misconduct related to these benchmark rates in violation of US antitrust, commodities and racketeering laws, and state law.

These matters are at an early stage. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

Foreign exchange rate investigations

Various regulators and competition and law enforcement authorities around the world, including in South Korea, are conducting investigations and reviews into trading by HSBC and others on the foreign exchange markets. The Bank and other HSBC companies are cooperating with these investigations and reviews.

There are many factors that may affect the range of outcomes and the resulting financial impact of these investigations, which could be significant.

Hiring practices investigation

The US Securities and Exchange Commission (the 'SEC') is investigating multiple financial institutions, including HSBC Holdings plc, 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.

44 Ultimate holding company

The ultimate holding company of the Bank is HSBC Holdings plc, which is incorporated in England.

The largest group in which the accounts of the Bank are consolidated is that headed by HSBC Holdings plc. The consolidated accounts of HSBC Holdings plc are available to the public on the HSBC Group's web site at www.hsbc.com or may be obtained from 8 Canada Square, London E14 5HQ, United Kingdom.

45 Events after the balance sheet date

There have been no events after the balance sheet date that would require disclosure in these financial statements.

46 Approval of financial statements

The financial statements were approved and authorised for issue by the Board of Directors on 21 February 2017.

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The Hongkong and Shanghai Banking Corporation Limited
HSBC Main Building
1 Queen's Road Central, Hong Kong
Telephone: (852) 2822 1111
Facsimile: (852) 2810 1112
www.hsbc.com.hk