HSBC HOLDINGS PLC
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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13A - 16 OR 15D - 16 OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of May 2009

HSBC Holdings plc

42nd Floor, 8 Canada Square,
London E14 5HQ, England

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F).

Form 20-F Form 40-F

(Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934).

Yes No

(If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-.....).

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Certain defined terms

Unless the context requires otherwise, "HSBC Holdings" means HSBC Holdings plc and "HSBC" or the "Group" means HSBC Holdings 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".

Cautionary statement regarding forward-looking statements

These *Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 ("Pillar 3 Disclosures 2008")* contain certain forward-looking statements with respect to the financial condition, results of operations and business of HSBC. Statements that are not historical facts, including statements about HSBC's beliefs and expectations, are forward-looking statements. Words such as "expects", "anticipates", "intends", "plans", "believes", "se "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. Written and/or oral forward-looking statements may also be made in the periodic reports to the United States Securities and Exchange Commission, summary financial statements to shareholders, proxy statements, offering circulars and prospectuses, press releases and other written materials, and in oral statements made by HSBC's Directors, officers or employees to third parties, including financial analysts. 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. Trends and factors that are expected to affect HSBC's results of operations are described in the "Operating and Financial Review", "Impact of Market Turmoil" and "Risk" in the *Annual Report and Accounts 2008*. A more detailed cautionary statement is given on pages 6 and 7 of the *Annual Report and Accounts 2008*.

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H S B C H O L D I N G S P L C

Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008

Introduction

HSBC is one of the largest banking and financial services organisations in the world. Through its international network of subsidiaries and associates in 86 countries and territories, the Group offers a comprehensive range of financial services to more than 100 million customers through four customer groups and global businesses: Personal Financial Services (including consumer finance); Commercial Banking; Global Banking and Markets; and Private Banking.

Details of the Group's principal activities and its strategic direction can be found on page 12 of the *Annual Report and Accounts 2008*.

Basel II

In June 2006, the Basel Committee on Banking Supervision introduced a new capital adequacy framework to replace the 1988 Basel Capital Accord in the form of the 'International Convergence of Capital Measurement and Capital Standards' (commonly known as 'Basel II').

The supervisory objectives of Basel II are to promote safety and soundness in the financial system and maintain an appropriate level of capital in the system, enhance competitive equality, constitute a more comprehensive approach to addressing risks, and focus on internationally active banks. Basel II is structured around three 'pillars': pillar 1, 'minimum capital requirements', pillar 2, 'supervisory review' and pillar 3, 'market discipline'.

The UK Financial Services Authority ('FSA') supervises HSBC on a consolidated basis, in accordance with the relevant EU directives which give effect to Basel II.

The FSA's rules, as set out in the General Prudential Sourcebook ('GENPRU') and the Prudential Sourcebook for Banks, Building Societies and Investment Firms ('BIPRU'), took effect from 1 January 2007 and implemented Basel II in the UK. GENPRU introduced changes to the definition of capital and the methodology for calculating a firm's capital resources requirements. BIPRU sets out the FSA's rules implementing the other requirements for banks, building societies and investment firms, and groups containing such firms.

Pillar 3 disclosures 2008

Pillar 3 complements the minimum capital requirements and the supervisory review process. Its aim is to encourage market discipline by developing

a set of disclosure requirements which will allow market participants to assess certain specified information on the scope of application of Basel II, capital, particular risk exposures, risk assessment processes, and hence the capital adequacy of the institution. Disclosures consist of both quantitative and qualitative information and are provided at the consolidated level.

The FSA permits certain pillar 3 requirements to be satisfied by inclusion within a firm's financial statements. Where this is the case, page references are provided to the relevant sections in the *Annual Report and Accounts 2008*.

Frequency

The Group intends to publish comprehensive pillar 3 disclosures at least annually, in accordance with FSA requirements.

Media and location

The *Pillar 3 Disclosures 2008* and other information on HSBC are available on HSBC's website: www.hsbc.com.

Comparison with the *Annual Report and Accounts 2008*

The *Pillar 3 Disclosures 2008* have been prepared in accordance with regulatory capital adequacy concepts and rules, rather than in accordance with International Financial Reporting Standards ('IFRSs'). Therefore, information in the *Pillar 3 Disclosures 2008* is not directly comparable with information in the *Annual Report and Accounts 2008*. This is most pronounced for the credit risk disclosures, where credit exposure is defined as the maximum loss the Group has estimated under specified Basel II parameters. This differs from similar information in the *Annual Report and Accounts 2008,* which is mainly reported as at the balance sheet date and, therefore, does not reflect the likelihood of future drawings of committed credit lines.

The Group has not had and is not required to have the *Pillar 3 Disclosures 2008* audited by the external auditors.

Consolidation basis

The basis of consolidation for accounting purposes is described on page 341 of the *Annual Report and Accounts 2008.* The basis of consolidation for regulatory purposes differs from that used for the financial consolidation in that holdings in insurance

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and non-financial entities are excluded, and are instead deducted from regulatory capital. Holdings in non-financial entities are risk-weighted, subject to certain overall limits above which a deduction from regulatory capital is required. Investments in banking associates, which are equity accounted in the financial consolidation, are proportionally consolidated for regulatory purposes.

Scope of Basel II permissions

Credit risk

Basel II provides three approaches of increasing sophistication to the calculation of pillar 1 credit risk capital requirements. The most basic, the standardised approach, requires banks to use external credit ratings to determine the risk weightings applied to rated counterparties, group other counterparties into broad categories and apply standardised risk weightings to these categories. The next level, the internal ratings-based (IRB) foundation approach, allows banks to calculate their credit risk capital requirements on the basis of their internal assessment of the probability that a counterparty will default (PD), but subjects their quantified estimates of exposure at default (EAD) and loss given default (LGD) to standard supervisory parameters. Finally, the IRB advanced approach allows banks to use their own internal assessment in both determining PD and quantifying EAD and LGD.

For credit risk, with the FSA s approval, HSBC has adopted the IRB advanced approach for the majority of its business with effect from 1 January 2008, with the remainder on either IRB foundation or standardised approaches. For consolidated group reporting, the FSA s rules permit the use of other regulators standardised approaches where they are considered equivalent. The use of other regulators IRB approaches is subject to the agreement of the FSA. A rollout plan is in place to extend coverage of the advanced approach over the next few years for both local and consolidated Group reporting, leaving a small residue of exposures on the standardised approach.

Counterparty credit risk in both the trading and non-trading books is the risk that the counterparty to a transaction may default before completing the satisfactory settlement of the transaction. Three approaches to calculating counterparty credit risk and determining exposure values are defined by Basel II: standardised, mark-to-market and internal model method. These exposure values are used to determine capital requirements under one of the credit risk approaches; standardised, IRB foundation and IRB advanced.

HSBC uses the mark-to-market and internal model method approaches for counterparty credit risk. Its longer-term aim is to migrate more positions from the mark-to-market to the internal model method approach.

Market risk

Market risk is the risk that movements in market risk factors, including foreign exchange, commodity prices, interest rates, credit spread and equity prices will reduce HSBC s income or the value of its portfolios. Market risk is measured, with FSA permission, using Value at Risk (VAR) models, or the standard rules prescribed by the FSA.

HSBC uses both VAR and standard rules approaches for market risk. Its longer-term aim is to migrate more positions from standard rules to VAR.

Operational risk

Basel II also introduces capital requirements for operational risk, again utilising three levels of sophistication. The capital required under the basic indicator approach is a simple percentage of gross revenues, whereas under the standardised approach it is one of three different percentages of gross revenues allocated to each of eight defined business lines. Both these approaches use an average of the last three financial years revenues. Finally, the advanced measurement approach uses banks own statistical analysis and modelling of operational risk data to determine capital requirements.

HSBC has adopted the standardised approach in determining its Group operational risk capital requirements.

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Capital

Table 1: Capital structure at 31 December 2008

Composition of regulatory capital	At 31 December 2008 US$bn
Core equity tier 1 capital	**80.4**
Tier 1 capital	**95.3**
Total capital	**131.5**
Composition of regulatory capital - supplementary analysis[1]	
Tier 1 capital	
Tier 1 capital	**95.3**
Less innovative tier 1 securities	**(11.4)**
Total tier 1 capital excluding innovative tier 1 securities	**83.9**
Tier 2 capital	
Total qualifying tier 2 capital before deductions	**49.4**
Innovative tier 1 securities	**11.4**
Total tier 2 capital before deductions plus innovative tier 1 securities	**60.8**
Total deductions other than from tier 1 capital	**(13.2)**
Total capital	**131.5**

	At 31 December 2008	
	RWA US$bn	Capital requirement US$bn
Capital requirements		
Credit risk and counterparty risk	**956.6**	**76.5**
Market risk	**70.3**	**5.6**
Operational risk	**121.1**	**9.7**
Total capital requirements	**1,148.0**	**91.8**

	%
Capital ratios	
Core equity tier 1 capital	**7.0**
Tier 1 capital	**8.3**
Total capital	**11.4**

1 *All component items of and deductions from tier 1 and tier 2 capital are disclosed on page 278 of the* Annual Report and Accounts 2008. *Details of the terms and conditions of subordinated liabilities can be found on pages 424 to 428.*

Table 2: Risk-weighted assets – analysis by geographical region

	At 31 December 2008					
	Europe US$bn	**Hong Kong US$bn**	**Rest of Asia-Pacific US$bn**	**North America US$bn**	**Latin America US$bn**	**Total RWAs US$bn**
Total credit risk	**297.5**	**82.5**	**190.6**	**329.5**	**56.5**	**956.6**
– credit risk	**259.3**	**78.1**	**181.2**	**310.0**	**54.0**	**882.6**
– counterparty credit risk	**38.2**	**4.4**	**9.4**	**19.5**	**2.5**	**74.0**
Market risk[1]	**49.5**	**4.6**	**3.9**	**12.6**	**2.1**	**70.3**
Operational risk	**41.2**	**15.0**	**18.3**	**33.5**	**13.1**	**121.1**
Total RWAs	**388.2**	**102.1**	**212.8**	**375.6**	**71.7**	**1,148.0**

1 *Market risk RWAs are non-additive across geographical regions due to Group diversification effects.*

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Capital management and allocation

HSBC's capital management approach is driven by its strategy and organisational requirements, taking into account the regulatory, economic and commercial environment in which it operates. The Group's strategy underpins HSBC's Capital Management Framework, which has been approved by the Group Management Board ('GMB'). It is HSBC's policy to maintain a strong capital base to support the development of its business and to meet regulatory capital requirements at all times. Through its structured internal governance processes, HSBC also maintains discipline over its investment decisions and where it allocates its capital, seeking to ensure that returns on investment are appropriate after taking account of capital costs. In addition, the level of capital held by HSBC Holdings and certain subsidiaries, particularly HSBC Finance, is determined by rating targets.

HSBC's strategy is to allocate capital to businesses based on their economic profit generation and, within this process, regulatory and economic capital requirements and the cost of capital are key factors. The responsibility for global capital allocation principles and decisions rests with GMB.

Transferability of capital within the Group

HSBC Holdings is primarily a provider of equity capital to its subsidiaries. Each subsidiary manages its own capital required to support planned business growth and meet local regulatory requirements, within the context of the approved annual Group capital plan. As part of HSBC's Capital Management Framework, capital generated in excess of planned requirements is returned to HSBC Holdings, normally by way of dividends. During 2007 and 2008, none of the Group's subsidiaries experienced significant restrictions on paying dividends or repaying inter-company loans.

Internal assessment of capital adequacy

HSBC defines capital as the resources necessary to cover unexpected losses arising from discretionary risks, being those which it accepts such as credit risk and market risk, or non-discretionary risks, being those which arise by virtue of its operations, such as operational risk and reputational risk. The HSBC Capital Management Principles and related policies define the Internal Capital Adequacy Assessment Process ('the ICAAP') by which GMB examines the Group's risk profile from both regulatory and economic capital viewpoints and ensures that the level of capital:

- remains sufficient to support the Group's risk profile and outstanding commitments;
- exceeds the Group's formal minimum regulatory capital requirements by an agreed margin;
- is capable of withstanding a severe economic downturn stress scenario; and
- remains consistent with the Group's strategic and operational goals, and shareholder and rating agency expectations.

The regulatory and economic capital assessments rely upon the use of models that are integrated into the Group's management of risk. Economic capital is the capital requirement calculated internally by HSBC deemed necessary to support the risks to which it is exposed, and is set at a confidence level consistent with a target credit rating of AA. Regulatory capital is the capital which HSBC is required to hold as determined by the rules established by the FSA for the consolidated Group and by HSBC's local regulators for individual Group companies.

The economic capital assessment is the more risk-sensitive measure as it covers a wider range of risks and takes account of the substantial diversification of risk accruing from the Group's operations. HSBC's economic capital models are calibrated to quantify the level of capital that is sufficient to absorb potential losses over a one-year time horizon to a 99.95 per cent level of confidence for its banking activities and to a 99.5 per cent level of confidence for its insurance activities and pension risks. HSBC's approach to capital management is aligned to the Group's corporate structure, business model and strategic direction. The Group's discipline around capital allocation is maintained within established processes and benchmarks, in particular the approved annual Group capital plan of which further details can be found on page 275 of the *Annual Report and Accounts 2008*.

Economic capital is the metric by which risk is measured and linked to capital within the Group's risk appetite framework. The framework, which expresses the types and quantum of risks to which HSBC wishes to be exposed, is approved and monitored by the Board of Directors of HSBC Holdings plc ('the Board') and GMB.

HSBC identifies and manages the risks it faces through defined internal control procedures and stress testing. It assesses and manages certain of these risks via the capital planning process. Risks assessed via capital and those that are not are compared below.

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Risks assessed via capital

Credit, market and operational risk

HSBC assesses economic capital requirements for these risk types utilising the embedded operational infrastructure used for the pillar 1 capital calculation, together with an additional suite of models that take into account, in particular:

- the increased level of confidence required to meet HSBC's strategic goals (99.95 per cent); and
- diversification of risks within the Group's portfolios and, similarly, any concentrations of risk that arise.

The Group's economic capital assessment operates alongside the Group's regulatory capital assessment and consistently demonstrates a substantially lower overall capital requirement for credit risk than the regulatory equivalent, reflecting the empirical evidence of the benefits of global diversification. However, the Group maintains a prudent stance on capital coverage, ensuring that any model risk is mitigated. Economic capital requirements are the basis upon which the Group's risks are monitored against its risk appetite.

Interest rate risk in the banking book

Interest Rate Risk in the Banking Book ('IRRBB') is defined as the exposure of the non-trading products of the Group to interest rates. Non-trading portfolios include positions that arise from the interest rate management of HSBC's retail and commercial banking assets and liabilities, and financial investments designated as available for sale and held to maturity. IRRBB arises principally from mismatches between the future yields on assets and their funding costs, as a result of interest rate changes. Analysis of this risk is complicated by having to make assumptions on optionality in certain product areas, for example, mortgage prepayments, and from behavioural assumptions regarding the economic duration of liabilities which are contractually repayable on demand. Interest Rate Risk Economic Capital is measured as the amount of capital necessary to cover an unexpected loss in value of the Group's non-trading products over one year to a 99.95 per cent level of confidence.

Insurance risk

HSBC carries out insurance business by operating, primarily, a bancassurance model which provides insurance products for customers with whom the Group has a banking relationship. Many of these products are manufactured by HSBC subsidiaries,

but where the Group considers it operationally more effective, third parties are engaged to manufacture and provide insurance products which HSBC sells through its banking network. The Group works with a limited number of market-leading partners to provide these products. When manufacturing products, the Group underwrites the insurance risk and retains the risks and rewards associated with writing insurance contracts.

A risk-based capital methodology is currently being developed for the Group's insurance businesses. While this is being implemented across HSBC, a Net Asset Value capital deduction methodology is being employed for economic capital assessment purposes.

Pension risk

HSBC operates a number of pension plans throughout the world. Some of these pension plans are defined benefit plans, of which the largest is the HSBC Bank (UK) Pension Scheme. The benefits payable under the defined benefit plans are typically a function of salary and length of service. In order to fund these benefits, sponsoring Group companies (and in some instances, employees) make regular contributions in accordance with advice from actuaries and in consultation with the scheme's trustees (where relevant). The defined benefit plans invest these contributions in a range of investments designed to meet their long-term liabilities.

Pension risk arises from the potential for a deficit in a defined benefit plan to arise from a number of factors, which could include:

- investments delivering a return below that required to provide the projected plan benefits. This could arise, for example, when there is a fall in the market value of equities, or when increases in long-term interest rates cause a fall in the value of fixed income securities held;

- the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset (both equity and debt) values;

- a change in either interest rates or inflation which causes an increase in the value of the scheme liabilities; and

- scheme members living longer than expected (longevity risk).

Pension risk is assessed by way of an economic capital model that takes into account potential variations in these factors, using a Value at Risk model.

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Residual risk

Residual risk is, primarily, the risk that mitigation techniques prove less effective than expected. This category also includes risks that arise from specific reputational or business events that give rise to exposures not deemed to be included in the major risk categories. HSBC conducts economic capital assessments of such risks on a regular, forward-looking basis to ensure that their impact is adequately covered by the Group's capital base.

Risks not explicitly assessed via capital

Liquidity risk

Liquidity and funding risk management is described in detail on page 235 of the *Annual Report and Accounts 2008.*

The Group uses cash-flow stress testing as part of its control processes to assess liquidity risk. HSBC does not manage liquidity through the explicit allocation of capital as, in common with standard industry practice, this is not considered to be an appropriate or adequate mechanism for managing these risks. However, HSBC recognises that a strong capital base can help to mitigate liquidity risk both by providing a capital buffer to allow an entity to raise funds and deploy them in liquid positions and by serving to reduce the credit risk taken by providers of funds to the Group.

Reputational risk

Details of the Group's management of reputational risk can be found on page 254 of the *Annual Report and Accounts 2008.*

As a banking group, HSBC's reputation depends upon the way in which it conducts its business, but it can also be affected by the way in which clients to whom it provides financial services conduct themselves. A Group Reputational Risk Committee has been established at which relevant Group functions with responsibility for activities and functions which attract reputational risk are represented.

Sustainability risk

Sustainability (environmental and social) risks arise from the provision of financial services to companies or projects which run counter to the needs of sustainable development. Details of the Group's management of sustainability risk can be found on page 254 of the *Annual Report and Accounts 2008.*

Business risk

The FSA specifies that banks, as part of their internal assessment of capital adequacy process, should review their exposure to business risk.

Business risk is the potential negative impact on profits and capital as a result of the Group not meeting its strategic objectives, as set out in the rolling operating plan, caused by unforeseen changes in the business and

regulatory environment, exposure to economic cycles and technological changes. HSBC does not explicitly set aside capital against business risk as a distinct category as it believes that the capital requirements for such risks are effectively covered within the capital set aside for other major risks such as credit risk, market risk and operational risk.

Scenario analysis and stress testing

Scenario analysis and stress testing are important mechanisms in understanding the sensitivities of the Group Capital and Business plans to the adverse impacts of extreme, but plausible, events. As well as considering the potential financial impact upon plans, a key output of this tool is the consideration and establishment of management action plans for mitigating such events should they, or similar events, arise.

Group Risk regularly assesses regulatory capital supply against demand under a range of stress scenarios, including projected global economic downturns more severe than that which is currently being experienced in certain geographies. Qualitative and quantitative techniques are used to estimate the potential impact on HSBC's capital position under such scenarios.

In addition to macroeconomic analysis, a suite of event-driven scenarios, including operational, market and credit events, are regularly formulated and analysed in detail, ensuring that management has considered the potential impact, and what actions would be necessary, should a range of risks materialise.

In particular, this framework has aided management in mitigating some of the effects of the global financial crisis over the course of 2008. While the prediction of future events cannot cover all eventualities, nor precisely identify future events, a number of the scenarios analysed in 2007, such as the impact of the insolvency of an investment bank, provided additional management insight into the actions necessary to mitigate the risks when similar events occurred in 2008.

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In 2008, HSBC further expanded and deepened the framework for assessing scenarios and stresses. In addition to the suite of risk scenarios considered for the HSBC Group, each major subsidiary conducts regular macro-economic and event-driven scenario analyses specific to that region under the Group governance framework. Executive managers from across HSBC meet regularly to consider and debate the outcome of these scenarios and formulate recommended management actions. Macroeconomic analyses are considered regularly by GMB.

As part of the Group's risk appetite process, business and capital plans are supported by forecasts of the risk parameters that drive the Group's capital requirements. The Group and regional macroeconomic stress tests consider sensitivities of these drivers under a variety of potential economic forecasts in order to examine the possible capital positions that could arise. In any material economic downturn, proactive and structured intervention by management is both an inevitable and necessary consequence. Therefore, HSBC incorporates the impact of such management actions in determining whether or not the Group is likely to be able to withstand such an event.

Risk management objectives and policies

Overview

All HSBC's activities involve, to varying degrees, the measurement, evaluation, acceptance and management of risks or combinations of risks. The most important categories of risk that the Group is exposed to are credit risk (including cross-border country risk), market risk, operational risk in various forms, liquidity risk, insurance risk, pension risk, residual value risk, reputational risk, interest rate risk in the banking book, business risk and sustainability risks. Market risk includes foreign exchange, interest rate and equity price risks.

As risk is not static, the risk profiles of HSBC and its individual entities change continually as the scope and impact of a range of factors, from transactional to geopolitical, change. The risk environment requires continual monitoring and assessment in an integrated manner in order to understand and manage the complex risk interactions across the Group. The risk management framework that HSBC has put in place is designed to meet these challenges and is described below in terms of its organisational structure, governance, risk strategies and appetite, and supporting monitoring and reporting processes.

Organisational structure

Principal governing bodies

An established risk governance and ownership structure ensures oversight and accountability for the effective management of risk at Group, regional, customer group and operating entity levels.

The Board is the Group's senior "governing body" as defined by the FSA's rules. It approves the Group's risk appetite framework, plans and performance targets for the Group and its principal operating subsidiaries, the appointment of senior officers, the delegation of authorities for credit and other risks and the establishment of effective control procedures.

The Board delegates authority for the day-today management of the Group to GMB, the Group's senior executive committee. Chaired by the Group Chief Executive, GMB's members include the Group Finance Director, the Group Chief Technology and Services Officer, the Group Chief Risk Officer ("GCRO") and other executives appointed by the Board. GMB exercises the powers and authorities of the Board in so far as they concern the management and day-to-day running of the Group in accordance with policies and directions determined by the Board. GMB's performance is assessed against the achievement of HSBC's strategy, medium-term outlook and rolling operating plans, building sustainable business and brand value around its customers, and a strong competitive performance in earnings per share growth and efficiency.

When considering risk matters, GMB convenes as the Risk Management Meeting (□RMM□), chaired by the Group Finance Director. RMM is the Group□s senior □designated committee□ as defined by the FSA□s rules, and has responsibility for setting risk appetite and approving definitive risk policies and controls. It formulates high-level Group risk management policy, exercises delegated risk authorities and oversees the implementation of risk appetite and controls. It monitors all categories of risk, receives reports on actual performance and emerging issues, determines action to be taken and reviews the efficacy of HSBC□s risk management framework.

The Group Audit Committee, which is formed of non-executive directors, meets regularly with HSBC□s senior financial, internal audit, credit, legal and compliance management and the external auditor to consider HSBC Holdings□ financial reporting, the nature and scope of audit reviews and the effectiveness of the systems of internal control, compliance and risk management.

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Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 (continued)

The terms of reference of HSBC Holdings committees serve as models for those of Group companies. Further details on principal governing bodies are provided on pages 296 to 298 of the *Annual Report and Accounts 2008*.

The Global Risk function

Primary responsibility for managing risk at operating entity level lies with the respective boards and Chief Executive Officers, as custodians of their balance sheets and, at the most senior level, members of GMB. In their oversight and stewardship of risk management at Group level, however, GMB and RMM are supported by a dedicated Global Risk function, headed by the Group Chief Risk Officer, who reports to the Group Finance Director.

Global Risk has functional responsibility for the principal financial risk types, namely: retail and wholesale credit, market, operational, security and fraud risks. For these it establishes Group policy, exercises Group-wide oversight and provides reporting and analysis of portfolio composition/ trends on a global and regional basis to senior management. Accountability and consistent control across the Global Risk function is provided through the Global Risk Management Board, chaired by the GCRO, the members of which include the Chief Risk Officers of HSBC s regions and the heads of risk disciplines within Group Management Office (GMO). Regional Chief Risk Officers report both within the business line to their local CEOs and also functionally to the GCRO, who has joint responsibility with CEOs for the appointment of the most senior risk officers and the setting of their performance objectives.

Group Risk works closely with its functional colleagues across the Group to develop and communicate global strategies and to guide the setting of consistent performance measures, targets and key performance indicators. It also co-ordinates the continued development of the Group s risk appetite, economic capital and stress testing frameworks and participates in discussions with regulators and in industry fora on risk and regulatory policy developments, assesses their implications and makes recommendations accordingly.

The Global Risk function also works closely with the Group s Asset and Liability Committees to harmonise capital management disciplines across risk types.

Geographical regions, global businesses and customer groups

The Group is organised into five geographical regions: Europe, Hong Kong, Rest of Asia-Pacific (including the Middle East and Africa), North America and Latin America, within which country managers are the Group s principal representatives in their respective jurisdictions.

Regional heads and country managers are responsible for growing and controlling Group businesses in line with Group standards, policies and procedures, and for ensuring that the Group s corporate responsibilities are met in the communities in which it operates.

The Group manages its business around its customers through two global businesses, Global Banking and Markets and Private Banking, and two customer groups, Personal Financial Services, which incorporates the Group s consumer finance businesses, and Commercial Banking.

Group policy

HSBC's risk management policies, encapsulated in the Group Standards Manual and cascaded through a hierarchy of policy manuals across the Group, are designed to support the formulation of risk appetite, guide employees and establish procedures for monitoring and controlling risks, with timely and reliable reporting to management.

The principal risk categories to which the Group is exposed have each been assigned to 'risk owners' within GMO functions for the purposes of general oversight and the development of risk measures, key risk indicators and stress testing processes at Group level, to ensure that the Group's risk appetite is adhered to and that RMM is kept abreast of emerging risk issues. Risk ownership extends to Group policies and procedures documented in the policy manuals which all Group offices must observe, subject to dispensations agreed by the risk owner and reviewed by internal audit.

HSBC regularly reviews and updates its risk management policies, systems and methodologies to reflect changes in law, regulation, markets, products and emerging best practice.

It is a prime responsibility of HSBC's management to identify, assess and manage the broad spectrum of risks to which the Group is subject. Employees are expected to manage risk within the scope of their assigned responsibilities. Personal accountability, reinforced by the Group's governance structure and instilled by training and

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experience, helps to foster a disciplined and constructive culture of risk management and control.

Risk appetite

HSBC's risk appetite framework describes the quantum and types of risk that HSBC is prepared to take in executing its strategy. It is central to an integrated approach to risk, capital and business management and supports the Group in achieving its return on equity objectives, as well as being a key element of meeting the Group's obligations under pillar 2 of Basel II.

The formulation of risk appetite considers HSBC's risk capacity, its financial position, the strength of its core earnings and the resilience of its reputation and brand. It is expressed both qualitatively, describing which risks are taken and why, and quantitatively. HSBC's senior management attaches quantitative metrics to individual risk types to ensure that:

- underlying business activity may be guided and controlled so it continues to be aligned to the risk appetite framework;
- key assumptions underpinning risk appetite can be monitored and, as necessary, adjusted through subsequent business planning cycles; and
- business decisions anticipated to be necessary to mitigate risk are flagged and acted upon promptly.

The risk appetite framework, governed by the Board and overseen in its implementation on an ongoing basis by GMB and RMM, is also maintained at regional and customer group levels. It operates through two key mechanisms:

- the framework itself defines the governance bodies, processes, metrics and other features of how HSBC addresses risk appetite as part of its ongoing business; and
- periodic risk appetite statements define, at various levels in the business, the desired level of risk commensurate with return and growth targets and in line with the corporate strategy and stakeholder objectives.

The risk appetite framework covers both the beneficial and adverse aspects of risk. Within it, economic capital is the common currency through which risk is measured and used as the basis for risk evaluation, capital allocation and performance measurement across regions and customer groups. Risk appetite is executed through the operational limits that control the levels of risk run by the

Group, regions and customer groups and is measured using risk-adjusted performance metrics.

Scope and nature of risk measurement and reporting systems

The purpose of HSBC's risk measurement and reporting systems is to ensure that risks are comprehensively captured, with all the attributes necessary to support well-founded decisions, that those attributes are accurately assessed and that information is delivered in a timely way to the right points in the organisation for those risks to be successfully managed and mitigated.

Risk measurement and reporting systems are therefore themselves subject to a robust governance framework, to ensure that their design is fit for purpose and that they are functioning properly. Group risk IT systems development is a key responsibility of the GCRO, while the operation and development of risk rating and management systems and processes are ultimately subject to the oversight of RMM and the Board.

HSBC invests in information technology systems and processes to maintain and improve its risk management capabilities. Group policy promotes the deployment of preferred technology where practicable. Group standards govern the procurement and operation of systems used in the Group's subsidiaries, processing risk information within business lines and risk functions. The measurement and monitoring of the major risks encountered by the Group, including credit, market and operational risks, are increasingly delivered by central systems or, where this is for sound business reasons not the case, through structures and processes that nevertheless support comprehensive oversight by senior management.

Risk measurement, monitoring and reporting structures deployed at GMO level are replicated in global businesses and subsidiaries through a common target operating model for risk control and management. This model, whose implementation will be substantially complete during 2009, sets out for the major financial risks under the responsibility of the GCRO the respective inter-locking responsibilities of GMO Risk, regional and country risk functions in respect of such matters as lending guidelines, risk approval authorities, governance, management information, global and local scorecards, and relations with third parties such as regulators, rating agencies and auditors.

There is regular reporting on risk to business line management, to specialist functions and to the senior governance bodies of the Group. In the case

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of credit risk, this includes portfolio reporting using key risk indicators. Examples of credit risk portfolio reporting are detailed on page 194 of the *Annual Report and Accounts 2008*.

Credit risk

Credit risk is the risk of financial loss if a customer or counterparty fails to meet a payment obligation under a contract. It arises principally from direct lending, trade finance and leasing business, but also from off-balance sheet products such as guarantees and credit derivatives, and from the Group's holdings of debt securities. Among the risks the Group engages in, credit risk generates the largest regulatory capital requirement. This includes a capital requirement for counterparty credit risk in the banking and trading books. Further details regarding the Group's management of counterparty credit risk can be found on page 27 below.

Objectives

The aims of credit risk management, underpinning sustainably profitable business, are principally:

- to maintain a strong culture of responsible lending, supported by a robust risk policy and control framework;
- to both partner and challenge business originators effectively in defining and implementing risk appetite, and its re-evaluation under actual and scenario conditions; and
- to ensure independent, expert scrutiny and approval of credit risks, their costs and their mitigation.

Organisation and responsibilities

The Credit Risk function within GMO supports the GCRO in overseeing credit risks at the highest level. Its major duties comprise: undertaking independent reviews of larger and higher-risk credit proposals, the Group's wholesale and retail credit risk management disciplines, ownership of the Group's credit policy and credit systems programmes, and reporting on risk matters to senior executive management and to regulators. It works closely with other parts of the Risk function, for example: with Fraud/Security Risk on enhancement of protection against retail product fraud, with Market Risk on complex transactions, with Operational Risk on the internal control framework and with Risk Strategy on developing the Group's economic capital model, risk appetite process and stress testing. The responsibilities of the Credit Risk function within

GMO are set out in detail on pages 193 to 195 of the *Annual Report and Accounts 2008*.

Group-wide, the Credit Risk function comprises a network of credit risk management offices reporting within regional, integrated risk functions. Together with Group Risk, they fulfil an essential role as independent risk control units distinct from business line management, in providing an objective scrutiny of risk rating assessments, credit proposals for approval and other risk matters.

HSBC operates through a hierarchy of personal credit limit approval authorities, not committee structures. Risk officers of individual operating companies, acting under authorities delegated by their boards and executive bodies within local and Group standards, are accountable for their recommendations and credit approval

decisions. Each operating company is responsible for the quality and performance of its credit portfolios, and for monitoring and controlling all credit risks in those portfolios, to Group standards.

Above certain risk-based thresholds established in line with authorities delegated by the Board, GMO concurrence must be sought for locally-approved facilities before they are extended to the customer. Moreover, risk proposals in certain portfolios sovereign obligors, banks, some non-bank financial institutions and intra-Group exposures are approved centrally in GMO to facilitate efficient control and the reporting of regulatory large and cross-border exposures; most approval authorities for these exposures are delegated by the local CEO to the GCRO, with only limited levels of authority being maintained locally.

Credit Analytics

The Group Credit Analytics function is located within Group Risk as part of a wider analytics discipline supporting credit, economic capital and stress testing. Group Credit Analytics formulates technical responses to industry developments and regulatory policy in the field of credit risk analytics. It owns and develops HSBC s global credit risk models and maintains a directory of local models in use around the Group in order to facilitate governance, prioritise resources for independent review and inform the monitoring of progress toward the Group s implementation targets for the IRB advanced approach. It also provides support for the Group Credit Risk Analytics Oversight Committee (CRAOC) which meets monthly and reports to RMM. CRAOC is chaired by the GCRO, and its membership is drawn from Global Risk, Group global businesses and customer groups and major

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Group subsidiaries; its primary responsibilities are to oversee the governance of HSBC's risk rating models for both wholesale and retail business, to manage the development of global models and to oversee the development of local models.

Parallel model governance and decision-making arrangements are in place in the Group's major subsidiaries.

Measurement and monitoring – credit risk rating systems

HSBC's exposure to credit risks arises from a very wide range of customer and product types, and the risk rating systems in place to measure and monitor these risks are correspondingly diverse. Each major subsidiary typically has some exposures across this range, and requirements differ from place to place.

Credit risk exposures are generally measured and managed in portfolios of either distinct customer types or product categories. Risk rating systems for the former are designed to assess the default risk of, and loss severity associated with, customers who are typically managed as individual relationships; these rating systems tend to have a higher subjective content. Risk ratings systems for the latter are generally more purely analytical, applying techniques such as behavioural analysis across product portfolios comprising large numbers of homogeneous transactions.

Whatever the nature of the exposure, a fundamental principle of the Group's policy and approach is that analytical risk rating systems and scorecards are all merely tools at the disposal of management, serving ultimately judgmental decisions for which individual approvers are accountable. In the case of automated decisioning processes, therefore, as used in retail credit origination where risk decisions may be taken 'at the point of sale' with no management intervention, that accountability rests with those responsible for

the parameters built into those processes/systems and the controls surrounding their use. For distinct customers, the credit process provides for minimum annual review of facility limits granted. Review may be more frequent, as required by circumstances, such as the development of adverse risk factors, and any consequent amendments to risk ratings must be promptly implemented.

HSBC seeks constantly to improve the quality of its risk management. Thus, for central management and reporting purposes, Group IT systems have been deployed to process credit risk data efficiently and consistently; a database has been constructed within the central Finance and Risk function covering substantially all the Group's direct lending exposures and holding the output of risk rating systems Group-wide, to support regulatory reporting and to deliver comprehensive management information at an increasingly granular level.

Group standards govern the process through which risk rating systems are initially developed, judged fit for purpose, approved and implemented; the conditions under which analytical risk model outcomes can be overridden by decision-takers; and the process of model performance monitoring and reporting. The emphasis here is on an effective dialogue between business line and risk management, suitable independence of decision-takers, and a good understanding and robust challenge on the part of senior management.

Like other facets of risk management, analytical risk rating systems are not static and are subject to review and modification in the light of the changing environment and the greater availability and quality of data. Structured processes and metrics are in place to capture relevant data and feed this into continuous model improvement.

The following pages set out credit risk exposure values, RWAs and regulatory capital requirements as at 31 December 2008.

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Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 (continued)

Table 3: Credit risk capital requirements

	At 31 December 2008		
	Capital requirement US$bn	**RWA US$bn**	**%**
Total credit risk capital requirements			
Credit risk	**70.6**	**882.6**	
Counterparty credit risk[1]	**5.9**	**74.0**	
Total	**76.5**	**956.6**	
Credit risk analysis by exposure class			
Exposures under the IRB advanced approach	**38.4**	**480.2**	**54.4**
Retail:			
– secured on real estate property	**8.8**	**110.2**	
– qualifying revolving retail	**6.0**	**75.5**	
– small and medium-sized enterprises[2]	**0.6**	**7.1**	
– other retail[3]	**4.4**	**55.3**	
Total retail	**19.8**	**248.1**	
Central governments and central banks	**1.8**	**22.7**	
Institutions	**3.1**	**39.3**	
Corporates	**12.5**	**155.6**	
Securitisation positions	**1.2**	**14.5**	
Exposures under the IRB foundation approach	**8.3**	**103.8**	**11.8**
Corporates	**8.3**	**103.8**	
Exposures under the standardised approach	**23.9**	**298.6**	**33.8**
Central governments and central banks	**0.5**	**5.9**	
Institutions	**1.2**	**15.1**	
Corporates	**12.1**	**150.8**	
Retail	**3.7**	**45.7**	
Secured on real estate property	**1.2**	**14.8**	
Past due items	**0.4**	**4.3**	
Regulatory high-risk categories	**0.1**	**1.8**	
Short-term claims on institutions and corporates	**0.3**	**4.2**	
Other items other than equity[4]	**3.4**	**42.6**	
Institutions equity	**0.3**	**4.3**	

Non institutions equity	**0.6**	**8.1**	
Other[5]	**0.1**	**1.0**	
Total exposures	**70.6**	**882.6**	**100.0**

1 *For further details of counterparty credit risk, see page 27.*
2 *The FSA allows exposures to small and medium-sized enterprises to be treated under the Retail IRB approach, where the total amount owed to the Group by the counterparty is less than EUR 1 million and the customer is not managed as individually as a corporate counterparty.*
3 *Includes overdrafts and personal lending.*
4 *Includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness.*
5 *Includes immaterial exposures to Regional governments or local institutions, Administrative bodies and non-commercial undertakings and Multilateral development banks.*

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Table 4: Credit risk exposure – analysis by geographical region

Exposure values are allocated to a region based on the country of incorporation of the HSBC subsidiary or proportionally consolidated associate where the exposure was originated.

	Exposure value							
At 31 December 2008	**Europe US$bn**	**Hong Kong US$bn**	**Rest of Asia-Pacific US$bn**	**North America US$bn**	**Latin America US$bn**	**Total exposure US$bn**	**RWA US$bn**	**Average RW %**
IRB advanced approach								
Central governments and central banks	**24.0**	**28.3**	**52.0**	**18.2**	**21.0**	**143.5**	**22.7**	**16**
Institutions	**56.6**	**72.6**	**30.7**	**17.7**	**4.9**	**182.5**	**39.3**	**22**
Corporates	**119.3**	**0.1**	**0.1**	**141.8**	–	**261.3**	**155.6**	**60**
Retail	**184.7**	**56.7**	**15.6**	**245.5**	–	**502.5**	**248.1**	**49**
Securitisation positions	**67.7**	**9.0**	**0.2**	**12.9**	–	**89.8**	**14.5**	**16**
IRB foundation approach								
Corporates	**48.6**	**67.7**	**55.0**	–	–	**171.3**	**103.8**	**61**
Standardised approach								
Central governments and central banks	**32.3**	–	**26.9**	–	**0.2**	**59.4**	**5.9**	**10**
Institutions	**23.5**	**0.5**	**24.0**	–	**0.2**	**48.2**	**15.1**	**31**
Corporates	**51.2**	**2.7**	**89.2**	**2.8**	**22.6**	**168.5**	**150.8**	**89**
Retail	**11.1**	**4.0**	**23.0**	**4.2**	**18.9**	**61.2**	**45.7**	**75**
Secured on real estate property	**9.9**	**2.1**	**10.0**	**2.2**	**4.2**	**28.4**	**14.8**	**52**
Past due items	**0.4**	**0.1**	**1.2**	**0.1**	**1.6**	**3.4**	**4.3**	**126**
Regulatory high-risk categories	**0.4**	**0.8**	**0.1**	–	–	**1.3**	**1.8**	**138**
Short-term claims on institutions and corporates	**3.3**	–	**0.1**	–	**1.0**	**4.4**	**4.2**	**95**
Other items other than equity[1]	**23.7**	**21.8**	**8.2**	**15.5**	**5.2**	**74.4**	**42.6**	**57**
Institutions equity	**0.2**	**1.2**	**0.1**	**2.0**	–	**3.5**	**4.3**	**123**
Non institutions equity	**2.8**	**1.4**	**0.3**	–	–	**4.5**	**8.1**	**180**
Other[2]	–	–	**0.5**	–	**0.5**	**1.0**	**1.0**	**100**
Total exposures	**659.7**	**269.0**	**337.2**	**462.9**	**80.3**	**1,809.1**	**882.6**	**49**

1 *Includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness.*

2 *Includes immaterial exposures to Regional governments or local institutions, Administrative bodies and non-commercial undertakings and Multilateral development banks.*

Table 5: Risk weightings – analysis by geographical region

	At 31 December 2008					
	Europe US$bn	**Hong Kong US$bn**	**Rest of Asia-Pacific US$bn**	**North America US$bn**	**Latin America US$bn**	**Total US$bn**
IRB advanced approach						
Total exposure value	**452.3**	**166.7**	**98.6**	**436.1**	**25.9**	**1,179.6**
Total RWA	**138.7**	**24.3**	**20.7**	**287.3**	**9.2**	**480.2**
Average RW (%)	**31%**	**15%**	**21%**	**66%**	**36%**	**41%**
IRB foundation approach						
Total exposure value	**48.6**	**67.7**	**55.0**	–	–	**171.3**
Total RWA	**33.0**	**39.5**	**31.3**	–	–	**103.8**
Average RW (%)	**68%**	**58%**	**57%**	–	–	**61%**
Standardised approach						
Total exposure value	**158.8**	**34.6**	**183.6**	**26.8**	**54.4**	**458.2**
Total RWA	**87.6**	**14.3**	**129.2**	**22.7**	**44.8**	**298.6**
Average RW (%)	**55%**	**41%**	**70%**	**85%**	**82%**	**65%**
Total credit risk						
Total exposure value	**659.7**	**269.0**	**337.2**	**462.9**	**80.3**	**1,809.1**
Total RWA	**259.3**	**78.1**	**181.2**	**310.0**	**54.0**	**882.6**
Average RW (%)	**39%**	**29%**	**54%**	**67%**	**67%**	**49%**

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Table 6: Credit risk exposure analysis by counterparty sector

	Exposure value						
	Personal US$bn	**Corporate and Commercial US$bn**	**Govern-ment US$bn**	**Financial [1] US$bn**	**Banks US$bn**	**Total exposure US$bn**	**RWA US$bn**
At 31 December 2008							
IRB advanced approach							
Central governments and central banks			**141.3**		**2.2**	**143.5**	**22.7**
Institutions				**5.0**	**177.5**	**182.5**	**39.3**
Corporates		**254.2**		**7.1**		**261.3**	**155.6**
Retail	**488.0**	**14.5**				**502.5**	**248.1**
Securitisation positions				**89.8**		**89.8**	**14.5**
Total IRB advanced approach	**488.0**	**268.7**	**141.3**	**101.9**	**179.7**	**1,179.6**	**480.2**
IRB foundation approach							
Corporates		**161.4**		**9.9**		**171.3**	**103.8**
Total IRB foundation approach		**161.4**		**9.9**		**171.3**	**103.8**
Standardised approach							
Central governments and central banks			**59.3**		**0.1**	**59.4**	**5.9**
Institutions					**48.2**	**48.2**	**15.1**
Corporates		**167.6**		**0.9**		**168.5**	**150.8**
Retail	**56.2**	**5.0**				**61.2**	**45.7**
Secured on real estate property	**24.1**	**4.3**				**28.4**	**14.8**
Past due items	**2.4**	**1.0**				**3.4**	**4.3**
Regulatory high-risk categories		**0.9**		**0.4**		**1.3**	**1.8**
Short-term claims on institutions and corporates		**4.3**		**0.1**		**4.4**	**4.2**
Institutions equity		**1.4**			**2.1**	**3.5**	**4.3**
Non institutions equity		**4.5**				**4.5**	**8.1**

Other[2]	—	**0.2**	**0.8**	—	—	**1.0**	**1.0**
Total standardised approach[3]	**82.7**	**189.2**	**60.1**	**1.4**	**50.4**	**383.8**	**256.0**
Total	**570.7**	**619.3**	**201.4**	**113.2**	**230.1**	**1,734.7**	**840.0**
Other items other than equity[4]						**74.4**	**42.6**
Total exposures						**1,809.1**	**882.6**

1 *Includes non-bank financial institutions and non-bank financial institutions treated as Corporates under the IRB approach.*
2 *Includes immaterial exposures to Regional governments or local institutions, Administrative bodies and non-commercial undertakings and Multilateral development banks.*
3 *Excludes Other items other than equity for which a counterparty sector split is not appropriate.*
4 *Includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness.*

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Table 7: Credit risk exposure – analysis by residual maturity

The following is an analysis of exposures by period outstanding from the reporting date to the maturity date. The full exposure value is allocated to a residual maturity band based on the contractual end date.

	Exposure value					
	Less than 1 year[1] US$bn	Between 1 and 5 years US$bn	More than 5 years US$bn	Undated US$bn	Total exposure US$bn	RWA US$bn
At 31 December 2008						
IRB advanced approach						
Central governments and central banks	**74.3**	**52.5**	**15.4**	**1.3**	**143.5**	**22.7**
Institutions	**97.7**	**79.7**	**2.6**	**2.5**	**182.5**	**39.3**
Corporates	**77.7**	**118.0**	**65.3**	**0.3**	**261.3**	**155.6**
Retail	**136.4**	**140.5**	**225.6**	–	**502.5**	**248.1**
Securitisation positions	**71.7**	**3.0**	**15.1**	–	**89.8**	**14.5**
Total IRB advanced approach	**457.8**	**393.7**	**324.0**	**4.1**	**1,179.6**	**480.2**
IRB foundation approach						
Corporates	**80.5**	**64.2**	**25.1**	**1.5**	**171.3**	**103.8**
Total IRB foundation approach	**80.5**	**64.2**	**25.1**	**1.5**	**171.3**	**103.8**
Standardised approach						
Central governments and central banks	**0.6**	**58.7**	**0.1**	–	**59.4**	**5.9**
Institutions	**18.2**	**29.7**	**0.2**	**0.1**	**48.2**	**15.1**
Corporates	**61.1**	**91.2**	**15.1**	**1.1**	**168.5**	**150.8**
Retail	**24.0**	**31.2**	**6.0**	–	**61.2**	**45.7**
Secured on real estate property	**1.2**	**5.6**	**21.6**	–	**28.4**	**14.8**
Past due items	**2.0**	**0.9**	**0.5**	–	**3.4**	**4.3**
Regulatory high-risk categories	–	–	**0.9**	**0.4**	**1.3**	**1.8**
Short-term claims on institutions and corporates	**4.4**	–	–	–	**4.4**	**4.2**
Other items other than equity[2]	–	–	–	**74.4**	**74.4**	**42.6**
Institutions equity	–	–	–	**3.5**	**3.5**	**4.3**
Non institutions equity	–	–	–	**4.5**	**4.5**	**8.1**
Other[3]	**0.2**	**0.6**	**0.2**	–	**1.0**	**1.0**
Total standardised approach	**111.7**	**217.9**	**44.6**	**84.0**	**458.2**	**298.6**
Total	**650.0**	**675.8**	**393.7**	**89.6**	**1,809.1**	**882.6**

1 *Revolving exposures such as overdrafts are considered to have a residual maturity of less than one year.*
2 *Includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness.*

3 *Includes immaterial exposures to Regional governments or local institutions, Administrative bodies and non-commercial undertakings and Multilateral development banks.*

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Table 8: Credit risk exposure – exposure and average exposure analysis

	2008	At 31 December 2008	
	Average exposure value US$bn	Exposure value US$bn	RWA US$bn
Exposures under the IRB advanced approach			
Central governments and central banks	**130.3**	**143.5**	**22.7**
Institutions	**246.2**	**182.5**	**39.3**
Corporates	**280.7**	**261.3**	**155.6**
Retail	**549.6**	**502.5**	**248.1**
Securitisation positions	**88.4**	**89.8**	**14.5**
Total IRB advanced approach	**1,295.2**	**1,179.6**	**480.2**
Exposures under the IRB foundation approach			
Corporates	**186.0**	**171.3**	**103.8**
Total IRB foundation approach	**186.0**	**171.3**	**103.8**
Exposures under the standardised approach			
Central governments and central banks	**39.5**	**59.4**	**5.9**
Institutions	**37.1**	**48.2**	**15.1**
Corporates	**170.1**	**168.5**	**150.8**
Retail	**66.2**	**61.2**	**45.7**
Secured on real estate property	**29.0**	**28.4**	**14.8**
Past due items	**2.5**	**3.4**	**4.3**
Regulatory high-risk categories	**0.8**	**1.3**	**1.8**
Short-term claims on institutions and corporates	**3.6**	**4.4**	**4.2**
Other items other than equity[1]	**80.5**	**74.4**	**42.6**
Institutions equity	**4.7**	**3.5**	**4.3**
Non institutions equity	**3.5**	**4.5**	**8.1**
Other[2]	**0.8**	**1.0**	**1.0**
Total standardised approach	**438.3**	**458.2**	**298.6**
Total exposures	**1,919.5**	**1,809.1**	**882.6**

1 *Includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness.*
2 *Includes immaterial exposures to Regional governments or local institutions, Administrative bodies and non-commercial undertakings, Multilateral development banks and Collective investment undertakings.*

Application of the IRB approach for credit risk

This section sets out HSBC's overall risk rating systems, a description of the population of credit risk analytical models and the Group's approaches to model governance and the use of IRB metrics.

Risk rating systems

HSBC's Group-wide credit risk rating framework incorporates PD of an obligor and loss severity expressed in terms of EAD and LGD. These measures are used to calculate expected loss ('EL') and capital requirements. They are also used in conjunction with other inputs to inform rating assessments for the purpose of credit approval and many other risk management decisions.

The narrative explanations that follow relate to the IRB advanced approaches, that is: IRB advanced for distinct customers and Retail IRB for portfolio-managed retail business. Under the Group's Basel II roll-out plans, a number of Group offices are in

transition, with regard to some of their corporate portfolios, from an IRB foundation to an IRB advanced approach. For these portfolios, the only major difference in the derivation of IRB parameters is that LGD and EAD values are set by regulatory rules rather than being estimated by HSBC itself. Other offices and portfolios remain on the standardised approach under Basel II, (further details of HSBC's implementation of the standardised approach can be found on page 25), pending the definition of local regulations or model approval, or under exemptions from IRB treatment.

Wholesale business

PD is estimated using a Customer Risk Rating ('CRR') scale of 22 grades, of which 20 are non-default grades representing varying degrees of strength of financial condition and two are default grades. A score generated by a model for the individual obligor type is mapped to the corresponding CRR. The process through which this or a judgmentally amended CRR is then

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recommended to, and reviewed by, a credit approver takes into account all additional information relevant to the risk rating determination, including external ratings where available. The finally approved Customer Risk Rating is mapped to a PD value range of which the "mid-point" is used in the regulatory capital calculation.

LGD and EAD estimation for wholesale business is subject to a Group framework of basic principles which permits flexibility in the definition of parameters by HSBC's operating entities to suit conditions in their own jurisdictions. GMO Risk provides co-ordination, benchmarks and the sharing and promotion of best practice. EAD is estimated to a 12-month horizon and broadly represents the current exposure plus an estimate for future increases in exposure taking into account such factors as available but undrawn facilities and the crystallisation of contingent exposures, post-default. LGD focuses on the facility and collateral structure, involving such factors as facility priority/seniority, the type and value of collateral, type of client and regional variances in experience, and is expressed as a percentage of EAD.

Retail business

The wide range of application and behavioural models used in the management of retail portfolios has been supplemented with models used to derive the measures of PD, EAD and LGD required for Basel II. For management information and reporting purposes, retail portfolios are segmented according to local, analytically-derived criteria into 29 EL bands, facilitating comparability across the Group's retail customer segments, business lines and product types.

Global and local models

Global PD models have been developed for asset classes or clearly identifiable sub-classes where the customer relationship is managed on a global basis: sovereigns, banks, certain non-bank financial institutions and the largest corporate clients, typically operating internationally. Global management facilitates the consistent implementation by GMO and HSBC's operating subsidiaries worldwide of standards, policies, systems, approval procedures and other controls, reporting, pricing, performance guidelines and comparative analysis. All global models require FSA approval for IRB accreditation and fall directly under the remit of the Group CRAOC.

Local PD models are developed where the risk profile of obligors is specific to a country, sector or other non-global factor. This applies to large corporate clients having distinct characteristics in a particular geography, middle market corporates, corporate and retail small and medium-sized enterprises and all other retail segments. There are several hundred such models in use or under development around HSBC.

The Group's approach to LGD and EAD, the framework for which is described under "Risk rating systems" above, similarly encompasses both global and local models. The former include one LGD and one EAD model for each of sovereigns, banks, several categories of non-bank financial institution and global large corporates, exposure to the first two customer types being managed centrally by Group Risk. All local LGD and EAD models fall within the scope and principles of the Group LGD and EAD framework, subject to dispensation from Group Risk.

Model governance

This is under the general oversight of Group CRAOC, whose responsibilities are set out in "Credit Analytics" on page 12 above. Group CRAOC has regional and entity-level counterparts with comparable terms of reference, because the development, validation and monitoring of local models, to meet local requirements and using local data, are the responsibility of regional and/or local entities under the governance of their own management, subject to overall Group policy and oversight. Such models are typically approved by national or regional regulators and need to be passed to CRAOC at Group level only if they exceed a prescribed monetary threshold or are otherwise deemed material.

Group Risk publishes Group standards for the development, independent review, maintenance and performance monitoring of credit risk analytical models, including governance over the successive stages of a model's life-cycle. Group governance standards cover such topics as the delineation of the responsibilities of

various parties to model development: sponsor, owner, developer/validator, independent reviewer and performance monitoring activity. The standards provide for monetary and/or qualitative thresholds above which decisions must be escalated to higher authority, and establish minimum intervals at which activities must be carried out, e.g. all models must be reviewed at least annually, or more frequently as the need arises. The monetary materiality threshold for referral via Group CRAOC to RMM is a portfolio coverage of US$20 billion or more by risk-weighted assets. Group CRAOC may

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deem a model otherwise material, however, for example, due to the higher-risk nature of the customer sector in question.

Compliance with Group standards is subject to examination both by risk oversight and review from within the Risk function itself and by internal audit. While the standards set out minimum general requirements, Group Risk on the one hand has discretion to approve dispensations, and on the other fosters best practice between offices by means of regular contact, internet-based fora and seminars.

Use of internal estimates

Internal estimates derived from applying the IRB approach are not only employed in the calculation of RWAs for the purpose of determining regulatory capital requirements, but also in many other contexts within risk management and business processes. Such uses continue to develop and become more embedded in management practice, as experience grows and the repository of quality data enlarges.

These uses include:

- **credit approval**: authorities, including those for specific counterparty types and transactions, are delegated to HSBC's operating companies using a risk-based approach with authorities graded according to Customer Risk Rating;
- **credit risk analytical tools**: IRB models, scorecards and other methodologies are valuable tools deployed in the assessment of customer and portfolio risk;
- **risk appetite**: IRB measures are an important element of risk appetite definition at customer, sector and portfolio levels, and in the implementation of the Group risk appetite framework, for instance in subsidiaries' operating plans;
- **portfolio management**: regular reports to the Board, RMM and Group Audit Committee contain analyses of risk exposures, e.g. by customer segment and quality grade, employing IRB metrics;
- **pricing**: customer relationship managers apply an IRB Risk-Adjusted Return on Capital ('RAROC') methodology in RWA and profitability calculators; and
- **economic capital**: IRB measures provide customer risk components for the economic capital model that is being implemented across HSBC to improve the consistent analysis of economic returns, help determine which customers, business units and products add greatest value, and drive higher returns through effective economic capital allocation.

The following tables provide an analysis of the IRB risk measures used to calculate RWAs under the IRB approach and set out the distribution of IRB exposures by credit quality. The exposure weighted average PD (or LGD) are calculated as the sum of PD (or LGD) multiplied by the Exposure value, divided by the total Exposure value for the IRB advanced exposure class. The exposure weighted average risk weight is the average risk weight for the exposure class.

Table 9: IRB advanced exposure analysis of risk components

	At 31 December 2008					
IRB advanced exposure classes	**Exposure value US$bn**	**Exposure weighted average PD %**	**Exposure weighted average LGD %**	**Exposure weighted average risk weight %**	**Undrawn commitments US$bn**	**RWA US$bn**
Central governments and central banks	**143.5**	**0.20**	**20.3**	**16**	**6.2**	**22.7**
Institutions	**182.5**	**0.47**	**29.6**	**22**	**6.8**	**39.3**
Corporates	**261.3**	**2.17**	**37.8**	**60**	**43.9**	**155.6**

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Table 10: IRB advanced exposure analysis by obligor grade[1]

	At 31 December 2008				
	Exposure value US$bn	Exposure weighted average PD %	Exposure weighted average LGD %	Exposure weighted average risk weight %	RWA US$bn
Central governments and central banks					
Minimal risk	**106.6**	**0.03**	**14.1**	**5**	**4.8**
Low risk	**19.9**	**0.08**	**30.6**	**18**	**3.6**
Satisfactory risk	**7.1**	**0.34**	**44.2**	**59**	**4.2**
Fair default risk	**5.1**	**1.56**	**59.8**	**89**	**4.5**
Moderate default risk	**4.0**	**1.90**	**39.2**	**105**	**4.2**
Significant default risk	**0.6**	**3.43**	**30.5**	**133**	**0.8**
High default risk	**0.1**	**9.54**	**45.5**	**200**	**0.2**
Special management	**0.1**	**19.76**	**86.0**	**400**	**0.4**
	143.5	**0.20**	**20.3**	**16**	**22.7**
Institutions					
Minimal risk	**57.2**	**0.03**	**23.9**	**6**	**3.4**
Low risk	**85.9**	**0.08**	**29.9**	**13**	**11.1**
Satisfactory risk	**24.7**	**0.27**	**34.6**	**34**	**8.5**
Fair default risk	**9.9**	**1.28**	**39.1**	**79**	**7.8**
Moderate default risk	**2.5**	**2.60**	**50.6**	**156**	**3.9**
Significant default risk	**0.5**	**5.61**	**57.2**	**200**	**1.0**
High default risk	**1.2**	**12.78**	**51.0**	**242**	**2.9**
Special management	**0.3**	**24.18**	**39.1**	**233**	**0.7**
Default	**0.3**	**100.00**	**27.2**		
	182.5	**0.47**	**29.6**	**22**	**39.3**
Corporates					
Minimal risk	**42.7**	**0.03**	**34.9**	**16**	**6.7**
Low risk	**38.5**	**0.10**	**41.4**	**28**	**10.7**
Satisfactory risk	**83.1**	**0.39**	**38.7**	**49**	**41.0**
Fair default risk	**57.5**	**1.21**	**36.5**	**81**	**46.4**
Moderate default risk	**18.6**	**2.82**	**35.6**	**101**	**18.7**
Significant default risk	**11.3**	**6.26**	**37.7**	**144**	**16.3**
High default risk	**3.9**	**11.36**	**37.3**	**162**	**6.3**
Special management	**3.8**	**26.19**	**39.6**	**205**	**7.8**
Default[2]	**1.9**	**100.00**	**41.8**	**89**	**1.7**
	261.3	**2.17**	**37.8**	**60**	**155.6**

1 *See glossary for definition of obligor grades.*
2 *There is a requirement to hold additional capital for unexpected losses on defaulted exposures where LGD exceeds best estimate of EL. As a result, in some cases, RWAs arise for exposures in default.*

Table 11: IRB foundation exposure analysis by obligor grade

	At 31 December 2008		
	Exposure value US$bn	**Exposure weighted average risk weight %**	**RWA US$bn**
Corporates			
Minimal risk	**20.7**	**15**	**3.2**
Low risk	**41.7**	**26**	**10.8**
Satisfactory risk	**61.3**	**55**	**33.8**
Fair default risk	**28.7**	**106**	**30.3**
Moderate default risk	**13.0**	**131**	**17.0**
Significant default risk	**4.1**	**166**	**6.8**
High default risk	**0.5**	**180**	**0.9**
Special management	**0.5**	**200**	**1.0**
Default	**0.8**		
	171.3	**61**	**103.8**

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Table 12: Retail IRB exposure analysis by geographical region

The EL bandings for the retail business summarise a more granular underlying EL scale for these customer segments. Latin America is not included in this table as retail exposures in this region are calculated under the standardised approach.

	At 31 December 2008				
	Europe US$bn	**Hong Kong US$bn**	**Rest of Asia-Pacific US$bn**	**North America US$bn**	**Total exposure US$bn**
Secured by real estate					
Expected loss:					
less than or equal to 1%	**87.2**	**31.7**	**12.7**	**81.4**	**213.0**
greater than 1% and less than or equal to 5%	**2.4**	**0.5**	**0.3**	**15.7**	**18.9**
greater than 5% and less than or equal to 10%	**0.5**			**5.9**	**6.4**
greater than 10% and less than or equal to 20%	**0.2**			**3.9**	**4.1**
greater than 20% and less than or equal to 40%				**3.7**	**3.7**
greater than 40% and exposures in default	**0.8**	**0.2**	**0.2**	**9.3**	**10.5**
Total retail secured by real estate collateral exposures	**91.1**	**32.4**	**13.2**	**119.9**	**256.6**
Qualifying revolving retail exposures					
Expected loss:					
less than or equal to 1%	**26.8**	**12.2**		**48.9**	**87.9**
greater than 1% and less than or equal to 5%	**5.1**	**2.4**		**23.6**	**31.1**
greater than 5% and less than or equal to 10%	**1.1**	**0.4**		**8.7**	**10.2**
greater than 10% and less than or equal to 20%	**0.5**	**0.1**		**5.6**	**6.2**
greater than 20% and less than or equal to 40%	**0.2**	**0.1**		**1.8**	**2.1**
greater than 40% and exposures in default	**0.7**			**4.2**	**4.9**
Total qualifying revolving retail exposures	**34.4**	**15.2**		**92.8**	**142.4**
Small and medium-sized enterprises[1]					
Expected loss:					
less than or equal to 1%	**6.0**			**0.5**	**6.5**
greater than 1% and less than or equal to 5%	**6.8**				**6.8**
greater than 5% and less than or equal to 10%	**0.5**				**0.5**
greater than 10% and less than or equal to 20%	**0.2**				**0.2**
greater than 20% and less than or equal to 40%	**0.1**				**0.1**

▯ greater than 40% and exposures in default	**0.4**	▯	▯	▯	**0.4**
Total small and medium-sized enterprises exposures	**14.0**	▯	▯	**0.5**	**14.5**
Other retail[2]					
Expected loss:					
▯ less than or equal to 1%	**34.6**	**7.5**	**2.4**	**6.4**	**50.9**
▯ greater than 1% and less than or equal to 5%	**6.7**	**1.1**	▯	**11.8**	**19.6**
▯ greater than 5% and less than or equal to 10%	**1.5**	**0.3**	▯	**4.1**	**5.9**
▯ greater than 10% and less than or equal to 20%	**0.9**	**0.1**	▯	**3.8**	**4.8**
▯ greater than 20% and less than or equal to 40%	**0.3**	▯	▯	**2.2**	**2.5**
▯ greater than 40% and exposures in default	**1.2**	**0.1**	▯	**4.0**	**5.3**
Total other retail exposures	**45.2**	**9.1**	**2.4**	**32.3**	**89.0**
Total retail					
Expected loss:					
▯ less than or equal to 1%	**154.6**	**51.4**	**15.1**	**137.2**	**358.3**
▯ greater than 1% and less than or equal to 5%	**21.0**	**4.0**	**0.3**	**51.1**	**76.4**
▯ greater than 5% and less than or equal to 10%	**3.6**	**0.7**	▯	**18.7**	**23.0**
▯ greater than 10% and less than or equal to 20%	**1.8**	**0.2**	▯	**13.3**	**15.3**
▯ greater than 20% and less than or equal to 40%	**0.6**	**0.1**	▯	**7.7**	**8.4**
▯ greater than 40% and exposures in default	**3.1**	**0.3**	**0.2**	**17.5**	**21.1**
Total retail exposures	**184.7**	**56.7**	**15.6**	**245.5**	**502.5**

1 *The FSA allows* exposures to small and medium-sized enterprises to be treated under the Retail IRB approach, where the total amount owed to the Group by the counterparty is less than EUR 1 million and the customer is not managed as individually as a corporate counterparty.

2 *Includes overdrafts and personal lending.*

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Risk mitigation

HSBC's approach when granting credit facilities is to do so on the basis of capacity to repay, rather than place primary reliance on credit risk mitigation. Depending on a customer's standing and the type of product, facilities may be provided unsecured. Mitigation of credit risk is nevertheless a key aspect of effective risk management and, in a diversified financial services organisation such as HSBC, takes many forms. There is no material concentration of credit risk mitigation held.

The Group's general policy is to promote the use of credit risk mitigation, justified by commercial prudence and good practice as well as capital efficiency. Specific, detailed policies cover the acceptability, structuring and terms of various types of business with regard to the availability of credit risk mitigation, for example in the form of collateral security, and these policies, together with the determination of suitable valuation parameters, are subject to regular review to ensure that they are supported by empirical evidence and continue to fulfil their intended purpose.

The most common method of mitigating credit risk is to take collateral. In HSBC's residential and commercial real estate businesses, a mortgage over the property is usually taken to help secure claims. Physical collateral is also typically taken in vehicle financing in some jurisdictions, and in various forms of specialised lending and leasing transactions where physical assets form the principal source of facility repayment. In the commercial and industrial sectors, charges are created over business assets such as premises, stock and debtors. Loans to private banking clients may be made against the pledge of eligible marketable securities or cash (known as Lombard lending). Facilities to small and medium enterprises are commonly granted against guarantees given by their owners and/or directors. Guarantees from third parties can arise where the Group extends facilities without the benefit of any alternative form of security, e.g. where it issues a bid or performance bond in favour of a non-customer at the request of another bank.

In the institutional sector, trading facilities are supported by charges over financial instruments such as cash, debt securities and equities. Financial collateral in the form of marketable securities is used in much of the Group's over-the-counter ('OTC') derivatives activities and in its securities financing business (securities lending and borrowing or repos and reverse repos). Netting is extensively used and is a prominent feature of market standard documentation.

HSBC's Global Banking and Markets business utilises credit risk mitigation to actively manage the credit risk of its portfolios, with the goal of reducing concentrations in individual names, sectors or portfolios. The techniques in use include credit default swaps, structured credit notes and securitisation structures. Buying credit protection creates credit exposure against the protection provider, which is monitored as part of the overall credit exposure against the relevant name (see also 'Collateral arrangements' on page 28).

Settlement risk arises in any situation where a payment in cash, securities or equities is made in the expectation of a corresponding receipt of cash, securities or equities. Daily settlement limits are established to cover the aggregate of HSBC's transactions with a counterparty on any single day. Settlement risk on many transactions can be further substantially mitigated by settling through assured payment systems or on a delivery-versus-payment basis.

Policies and procedures govern the protection of the Group's position from the outset of a customer relationship, for instance in requiring standard terms and conditions or specifically agreed documentation permitting the offset of credit balances against debt obligations and through controls over the integrity, current valuation and, if necessary, realisation of collateral security.

The valuation of credit risk mitigants seeks to monitor and ensure that they will continue to provide the secure repayment source anticipated at the time they were taken. Where collateral is subject to high volatility, valuation is frequent; where stable, less so. Trading businesses typically carry out daily valuations. In residential mortgage business, on the other hand, Group policy prescribes valuation at intervals of up to three years, or more frequently as the need may arise, at the discretion of the business line, by a variety of methods ranging from use

of market indices to individual professional inspection.

In terms of their application within an IRB approach (for the standardised approach, please see page 27 below) risk mitigants are considered in two broad categories: first, those which reduce the intrinsic probability of default of an obligor and therefore operate as adjustments to PD estimation; secondly, those which affect the estimated recoverability of obligations and require adjustment of LGD and EAD. The first include, for example, full parental or third party guarantees; the second, collateral security of various kinds such as cash or mortgages over residential property.

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The adjustment of PD estimation is also subject to supplementary methodologies in respect of a "sovereign ceiling" constraining the risk ratings assigned to obligors in countries of higher risk, and of partial parental support.

LGD and EAD values, in the case of individually assessed exposures, are determined by reference to regionally approved internal risk parameters based on the nature of the exposure. For retail portfolios, credit mitigation data is incorporated into the internal risk parameters for risk exposures and feeds continuously into the calculation of the EL band value summarising both customer delinquency and product or facility risk. Credit and risk mitigation data forms part of the inputs submitted to a centralised database by all Group offices, upon which a risk engine then performs calculations applying the relevant Basel II rules and approach.

The table below details the effective value of credit risk mitigation taken into account in the calculation of RWAs for IRB exposures. Under the

IRB advanced approach, financial collateral is taken into account in the LGD. Under the IRB foundation approach, for financial collateral, an adjustment (or "haircut") is applied to the collateral to take account of price volatility. This adjusted collateral value is then subtracted from the exposure value to create an "adjusted exposure value". The exposure value covered by collateral is the difference between original exposure value and adjusted exposure value. An adjustment is then applied to LGD to reflect the credit risk mitigation. Similarly, for physical collateral, the LGD of an exposure will be adjusted depending on certain factors, including the value and type of the asset taken as collateral. For unfunded protection, which includes credit derivatives and guarantees, a "substitution method" is applied. The exposure value covered by collateral is substituted by a similar exposure to the protection provider. Under the foundation IRB approach, the PD of the obligor is substituted by the PD of the protection provider. Under the IRB advanced approach the recognition is more complicated and may involve a PD or LGD adjustment or both.

Table 13: IRB exposure – credit risk mitigation analysis

	At 31 December 2008		
	Exposure value covered by eligible financial and other collateral US$bn	**Exposure value covered by credit derivatives or guarantees US$bn**	**Exposure value US$bn**

Exposures under the IRB advanced approach[1]			
Central governments and central banks	**n/a**	**0.2**	**143.5**
Institutions	**n/a**	**20.0**	**182.5**
Corporates	**n/a**	**8.2**	**261.3**
Retail	**n/a**	**25.0**	**502.5**
Exposures under the IRB foundation approach			
Corporates	**18.3**	**22.8**	**171.3**

1 *Under the IRB advanced approach eligible financial collateral is reflected in the Group's loss given default (LGD) model. As such, separate disclosure of exposures covered by eligible financial collateral is not applicable.*

Loss experience and model validation

The disclosures below set out:

- a brief description of the principal factors affecting loss experience in 2008, as shown by the trends in average risk weights derived from PD and other IRB metrics, with analysis of the relationship between regulatory EL and impairments; and

- the Group's impairment charges in 2008, broken down by principal IRB exposure class and within Retail exposures under the IRB approach.

As part of its overall assessment of the performance of credit portfolios, and of the risk

rating systems which estimate the credit risks within them, HSBC compares EL estimates generated through those systems to determine regulatory capital demand with the actual loss outcomes represented by loan impairments recognised in the financial statements. Such a comparison is of growing usefulness over time, although it must be noted that it suffers from a number of inherent and current limitations.

These limitations arise both from the fundamental differences in the definitions of "loss", under Basel II principles on the one hand and within financial statements prepared under IFRSs on the other, and from the present limited availability of

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data over a sufficiently long period for any meaningful conclusions to be drawn concerning the overall performance of risk rating systems/models.

EL is the expected value of future loss over a one-year time horizon, applying various downturn and scaling factors, e.g. with regard to potential further facility drawdown. It is only calculated for IRB portfolios. For accounting purposes, impairment expresses losses estimated to have been incurred at the reporting date, in compliance with International Accounting Standard 39. Prudential reporting requires that, to the extent EL exceeds impairment allowances, it is to be deducted from capital.

The data-related factors underpinning the conclusion that it would be misleading for HSBC to present detailed quantitative IRB model disclosure information at this stage include:

- the lack of EL data across the whole of the extended cycles for which models have been built, as well as the limitations of comparing the available EL data with prior years impairments over less than full cycles; and

- the large number of models that HSBC operates in most exposure classes, such that data at an individual model level would in most cases be immaterial in the context of the Group as a whole, and otherwise risk disclosing proprietary information, while aggregation of data would reduce its usefulness.

There follows therefore a largely qualitative commentary, which HSBC will enhance in the future with further quantitative data as this becomes available.

Loss experience deteriorated during 2008. This was particularly marked in North America, where delinquency rose across personal portfolios as the economic situation worsened and personal finances were hit by unemployment and a lack of refinancing opportunities, but it appeared also in corporate and institutional portfolios to varying degrees in countries around the world.

Exposure-weighted average risk weights (as detailed in Tables 9 and 10) increased as PDs deteriorated, principally reflecting downgrades in internal customer credit risk ratings. EL remained broadly constant over the year as a whole in US dollar terms, however, as exchange rate movements partially offset the increase attributable to the underlying metrics. This increase was in line with management s expectations, in the light of deterioration in lending portfolios during the year.

Total EL exceeded total impairment allowances throughout the year, though the excess itself declined from US$9.0 billion to US$5.3 billion over the period as a result of timing differences in the development of economic drivers of each of impairment allowances and EL.

When impairment losses occur, HSBC reduces the carrying amount of loans and advances through the use of an allowance account. Impairment allowances may be assessed and created either for individually significant accounts or, on a collective basis, for groups of individually significant accounts for which no evidence of impairment has been individually identified or for high-volume groups of homogeneous loans that are not considered individually significant.

The table below details impairment charges for exposures under the IRB approach only. Full details of the Group s impaired loans and advances and impairment allowances and charges are set out on pages 219 to 234 of the *Annual Report and Accounts 2008*. The Group s approaches for determining impairment allowances are explained on pages 195 to 197 of the *Annual Report and Accounts 2008*. Details of the Group s past due but not impaired assets are provided on pages 219 to 220 of *the Annual Report and Accounts 2008*.

Table 14: IRB exposure impairment charges

At

	31 December 2008 US$bn
Impairment charges by IRB exposure classes	
Institutions	**0.1**
Corporates	**2.4**
Securitisations	**0.3**
Retail	**17.3**
□ secured on real estate property	**5.0**
□ qualifying revolving retail	**5.8**
□ other retail	**6.5**
Total	**20.1**

Application of the standardised approach for credit risk

The standardised approach is applied where exposures do not qualify for use of an IRB approach and/or where an exemption from IRB has been granted. It requires banks to use risk assessments prepared by External Credit Assessment Institutions (□ECAIs□) or Export Credit Agencies to determine the risk weightings applied to rated counterparties.

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ECAI risk assessments are used by HSBC as part of the determination of risk weightings for the following classes of exposure:

- central governments and central banks;
- regional governments and local authorities;
- multilateral development banks;
- institutions;
- corporates; and
- short-term claims on institutions and corporates.

HSBC has nominated three FSA-recognised ECAIs for this purpose – Moody's Investors Service, Standard & Poor's Ratings Group and the Fitch Group. HSBC has not nominated any Export Credit Agencies.

Data files of external ratings from the nominated ECAI are matched with customer records in the Group's centralised credit database.

When calculating the risk-weighted value of any exposure under the standardised approach, risk systems identify the customer in question and look up in the central database the available ratings, according to the FSA's rating selection rules. The systems then apply the FSA's prescribed credit

quality step mapping to derive from the rating the relevant risk weight.

Credit quality step	**Moody's assessments**	**S&P's assessments**	**Fitch's assessments**
1	Aaa to Aa3	AAA to AA-	AAA to AA-
2	A1 to A3	A+ to A-	A+ to A-
3	Baa1 to Baa3	BBB+ to BBB-	BBB+ to BBB-
4	Ba1 to Ba3	BB+ to BB-	BB+ to BB-
5	B1 to B3	B+ to B-	B+ to B-
6	Caa1 and below	CCC+ and below	CCC+ and below

All other exposure classes are assigned risk weightings as prescribed in the FSA's rulebook.

The tables below set out the distribution of standardised exposures across credit quality steps. Due to their aggregate immateriality as a proportion of the total standardised approach exposure value (1 per cent or less), an analysis of credit quality step allocations for Regional governments and local authorities, Multilateral development banks and Short-term claims on institutions and corporates is not set out below.

Table 15: Standardised approach exposure credit quality step analysis

	At 31 December 2008	
	Exposure value US$bn	**RWA US$bn**
Central governments and central banks		
Credit quality step 1	**32.2**	
Credit quality step 2	**26.6**	
Credit quality step unrated	**0.6**	
	59.4	**5.9**
Institutions		
Credit quality step 1	**18.9**	
Credit quality step 2	**0.1**	
Credit quality step 3	**0.1**	
Credit quality step 4	**0.7**	
Credit quality step 5	**0.2**	
Credit quality step 6	**0.1**	
Credit quality step unrated	**28.1**	
	48.2	**15.1**
Corporates		
Credit quality step 1	**10.3**	
Credit quality step 2	**4.1**	
Credit quality step 3	**27.1**	
Credit quality step 4	**3.8**	
Credit quality step 5	**0.9**	
Credit quality step 6	**0.2**	
Credit quality step unrated	**122.1**	
	168.5	**150.8**

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Risk mitigation

For exposures subject to the standardised approach covered by eligible guarantee, non-financial collateral, or credit derivatives the exposure is divided into covered and uncovered portions. The covered portion, determined by applying an appropriate haircut for currency mismatch (and for omission of restructuring clauses for credit derivatives where appropriate) to the amount of protection provided, attracts the risk weight applicable to the credit quality step associated with the protection provider, while the uncovered portion attracts the risk weight associated with the credit quality step of the obligor. For exposures fully or partially covered by eligible financial collateral, the

value of the exposure is adjusted under the Financial Collateral Comprehensive Method using supervisory volatility adjustments, including those arising from currency mismatch, which are determined by the specific type of collateral (and, in the case of eligible debt securities, their credit quality) and its liquidation period. The adjusted exposure value is subject to the risk weight associated with the credit quality step of the obligor.

The table below sets out the effective value of credit risk mitigation taken into account in the calculation of RWAs for exposures under the standardised approach, expressed as the exposure value covered by the credit risk mitigant.

Table 16: Standardised approach exposure credit risk mitigation analysis

	At 31 December 2008		
	Exposure value covered by eligible financial and other collateral US$bn	**Exposure value covered by credit derivatives or guarantees US$bn**	**Exposure value US$bn**
Exposures under the standardised approach			
Central governments and central banks		**0.2**	**59.4**
Institutions		**17.3**	**48.2**
Corporates	**3.9**	**4.7**	**168.5**
Retail	**0.8**	**0.7**	**61.2**
Secured on real estate property		**0.5**	**28.4**
Past due items	**0.1**		**3.4**
Short-term claims on institutions and corporates	**0.3**		**4.4**

Counterparty credit risk

Counterparty credit risk primarily arises for OTC derivatives and Security Finance Transactions but not in exchange-traded transactions, where the exchange guarantees the cash flow between the parties. It is calculated in both the trading and non-trading book, and is the risk that a counterparty to a transaction may default before completing the satisfactory settlement of the transaction. An economic loss occurs if the transaction or portfolio of transactions with the counterparty has a positive economic value at the time of default.

There are three approaches under Basel II to calculating exposure values for counterparty credit risk: the standardised, the mark-to-market and the internal model methods (IMM). Exposure values calculated under these methods are used to determine RWAs using one of the credit risk approaches. Across the Group, HSBC uses both the mark-to-market method and the IMM for counterparty credit risk. In the IMM, the EAD is calculated by multiplying the effective expected positive exposure (EEPE) with a multiplier called alpha. Alpha accounts for several portfolio features that increase the expected loss in the event of default above that

indicated by EEPE: co-variance of exposures, correlation between exposures and default, concentration risk and model risk. It also accounts for the level of volatility/correlation that might coincide with a downturn. The default alpha value of 1.4 is used. Limits for counterparty credit risk exposures are assigned within the overall credit process for distinct customer limit approval.

Credit risk adjustment

HSBC incorporates counterparty creditworthiness in the fair value of OTC derivative transactions through adoption of a credit risk adjustment. The adjustment aims to calculate at each HSBC legal entity level some calibration, according to a set of formulae, of the potential loss arising from the portfolio of derivative transactions against each third party, based upon a modelled expected positive exposure profile, including allowance for credit risk mitigants such as netting agreements and credit support annexes. The scenario analyses used to generate the exposure profiles are consistent with the analysis tools and methodological approach used to generate the exposure profiles used by the Groups risk functions for exposure management purposes or,

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where applicable, as the basis for portfolios where exposures are calculated under the IMM.

Collateral arrangements

To calculate a counterparty's net risk position, for counterparty credit risk, HSBC revalues all financial instruments and associated collateral positions on a daily basis. A dedicated Collateral Management function independently monitors counterparties' associated collateral positions and manages a process which ensures that calls for collateral top-ups or exposure reductions are made promptly. Processes exist for the resolution of trades where the level of collateral is disputed or the collateral sought is not received.

Eligible collateral types are documented by a Credit Support Annex ('CSA') of the International Swaps and Derivatives Association ('ISDA') Master Agreement and are controlled under a policy which ensures the collateral agreed to be taken exhibits characteristics such as price transparency, price stability, liquidity, enforceability, independence, reusability and eligibility for regulatory purposes. A valuation 'haircut' policy reflects the fact that collateral may fall in value between the date the collateral was called and the date of liquidation or enforcement. In practice at least 95 per cent of collateral held as credit risk mitigation under CSA is either cash or government securities.

Credit ratings downgrade

It has increasingly become the practice for market participants to employ credit ratings downgrade language clauses in industry standard master agreements such as the ISDA Master Agreement as a form of risk control. These clauses are designed to trigger a series of events which may include the termination of transactions by the non-affected party, or assignment by the affected party, if its credit rating falls below a specified level.

HSBC controls the inclusion of credit ratings downgrade language in industry standard master agreements by requiring each Group office to obtain the endorsement of a senior member of the Treasury function and the relevant local Credit authority prior to obtaining approval from GMO.

HSBC's position with regard to credit ratings downgrade language is monitored through reports which are produced on a regular basis. A report is produced which identifies the trigger ratings and individual details for documentation where credit

ratings downgrade language exists within an ISDA. A further report is produced which identifies the additional collateral requirements where credit ratings downgrade language affects the threshold levels within a collateral agreement. At 31 December 2008, the additional collateral required to be posted for a one notch downgrade was US$426 million and for a two notch downgrade was US$789 million.

Wrong-way risk

Wrong-way risk arises in a situation where there is an adverse correlation between the counterparty's probability of default and the mark-to-market value of the underlying transaction. Wrong-way risk can be seen in the following examples:

- where the counterparty is resident and/or incorporated in an emerging market and seeks to sell a

non-domestic currency in exchange for its home currency;

- where the trade involves the purchase of an equity put option from a counterparty whose shares are the subject of the option; and

- the purchase of credit protection from a counterparty who is closely associated with the reference entity of the credit default swap or total return swap.

HSBC uses a range of tools to control and monitor wrong-way risk. These include the requirement to obtain prior approval before undertaking wrong-way risk transactions outside pre-agreed guidelines. The Credit Risk Management functions undertake control and monitoring processes and a regular meeting of a designated committee comprising senior management from Global Markets, Credit, Market Risk Management and Finance is responsible for reviewing and actively managing wrong-way risk, including allocating capital.

Table 17: Counterparty credit risk – net derivative credit exposure

	At 31 December 2008 US$bn
Counterparty credit risk[1]	
Gross positive fair value of contracts	**494.9**
Less netting benefits	**(355.9)**
Netted current credit exposure	**139.0**
Less collateral held	**(27.4)**
Net derivative credit exposure	**111.6**

1 *Add-on for potential future exposures is not included in the above numbers.*

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Table 18: Counterparty credit risk by method

	At 31 December 2008	
	Exposure value US$bn	**RWA US$bn**
Mark-to-market method[1]	**153.1**	**63.4**
Internal models method	**31.3**	**10.6**
	184.4	**74.0**

1 *Includes add-on for potential future exposure.*

Table 19: Counterparty credit risk by product

	At 31 December 2008	
	Exposure value US$bn	**RWA US$bn**
OTC derivatives[1]	**169.0**	**70.2**
Securities financing transactions	**10.3**	**2.5**
Other[2]	**5.1**	**1.3**
Total counterparty credit risk exposure value	**184.4**	**74.0**

1 *Includes add-on for potential future exposure.*
2 *Includes free deliveries not deducted from capital.*

Table 20: Credit derivative transactions

	At 31 December 2008	
	Protection bought US$bn	**Protection sold US$bn**
Credit derivative products used for own credit portfolio		
Credit default swaps	**8.0**	**0.2**
Total return swaps	**0.4**	—
Total notional value	**8.4**	**0.2**
Credit derivative products used for intermediation		
Credit default swaps	**750.8**	**779.1**
Total return swaps	**16.4**	**22.8**
Credit spread options	**1.0**	**1.1**
Other	**1.0**	**2.6**
Total notional value	**769.2**	**805.6**

Securitisation

Objectives of the Group's securitisation activity

HSBC uses Special Purpose Entities (□SPEs□) to securitise customer loans and advances that it has originated, mainly in order to diversify its sources of funding for asset origination and for capital efficiency purposes. In such cases, the loans and advances are transferred by HSBC to the SPEs for cash, and the SPEs issue debt securities to investors to fund the cash purchases, commonly known as a traditional securitisation. Credit enhancements to the underlying assets may be used to obtain investment grade ratings on the senior debt issued by the SPEs. Except in one instance, these securitisations are all consolidated for accounting purposes by HSBC.

HSBC has also established securitisation programmes in the US and Germany where loans originated by third parties are securitised. Most of these vehicles are not consolidated by HSBC as it is not exposed to the majority of risks and rewards of ownership in the SPEs.

In addition, HSBC uses SPEs to mitigate the capital absorbed by some of the customer loans and advances it has originated. Credit derivatives are used to transfer the credit risk associated with such customer loans and advances to an SPE, using securitisations commonly known as synthetic securitisations. These SPEs are consolidated when HSBC is exposed to the majority of risks and rewards of ownership.

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Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 (continued)

HSBC's securitisation strategy is driven by aggregate funding, capital requirements and customer facilitation. HSBC acts as originator, sponsor, liquidity provider and derivative counterparty to its own originated and sponsored securitisations as well as those of third party securitisations.

The roles played by HSBC in the securitisation process are as follows:

- Originator: where HSBC originates the assets being securitised, either directly or indirectly;
- Sponsor: where HSBC establishes and manages a securitisation programme that purchases exposures from third parties. These are also known as Structured Investment Conduits ('SICs') or Structured Investment Vehicles ('SIVs'); and
- Investor: where HSBC invests in a securitisation transaction directly or provides derivatives or liquidity facilities to a securitisation.

Group securitisation activities in 2008

HSBC's securitisation activities in 2008 mainly consisted of transactions entered into with customers, as both sponsor and investor, in the normal course of business. The other main securitisation activity conducted in the period was the establishment of three HSBC sponsored SICs. Full details of these vehicles can be found on page 173 of the *Annual Report and Accounts 2008*.

Calculation of risk weighted assets for securitisation exposures

HSBC uses the IRB approach for its securitisation exposures, which assigns risk weights to exposures based on their credit rating. Within this approach, the internal assessment approach is used to calculate risk weightings for unrated liquidity facilities and programme wide enhancements of its asset-backed commercial paper securitisations.

HSBC uses credit ratings from those ECAIs approved for use by the FSA.

Securitisation accounting treatment

For accounting purposes, HSBC consolidates SPEs when the substance of the relationship indicates that HSBC controls them. In assessing control, all relevant factors are considered, including qualitative and quantitative aspects. Full details of these assessments can be found on page 173 of the *Annual Report and Accounts 2008.* Synthetic securitisations are accounted for under the same accounting policies

as non-synthetic securitisations, in accordance with the relevant accounting standards.

HSBC reassesses the required consolidation accounting tests whenever there is a change in the substance of the relationship between HSBC and an SPE, for example, when the nature of HSBC's involvement or the governing rules, contractual arrangements or capital structure of the SPE change.

The transfer of assets to an SPE may give rise to the full or partial derecognition of the financial assets concerned. Only in the event that de-recognition is achieved are sales and any resultant gains on sales recognised

in the financial statements. In a traditional securitisation, assets are sold to an SPE and no gain or loss on sale is recognised at inception.

Full derecognition occurs when HSBC transfers its contractual right to receive cash flows from the financial assets, or retains the right but assumes an obligation to pass on the cash flows from the assets, and transfers substantially all the risks and rewards of ownership. The risks include credit, interest rate, currency, prepayment and other price risks.

Partial derecognition occurs when HSBC sells or otherwise transfers financial assets in such a way that some but not substantially all of the risks and rewards of ownership are transferred but control is retained. These financial assets are recognised on the balance sheet to the extent of HSBC□s continuing involvement.

The valuation of retained interests in securitisations where the underlying assets have been derecognised are valued with reference to the market prices of similar portfolios.

Loans, credit cards, debt securities and trade receivables that have been securitised under arrangements by which HSBC retains a continuing involvement in such transferred assets do not generally qualify for derecognition. Continuing involvement may entail retaining the rights to future cash flows arising from the assets after investors have received their contractual terms (for example, interest rate strips); providing subordinated interest; liquidity support; continuing to service the underlying asset; or entering into derivative transactions with the securitisation vehicles. As such, HSBC continues to be exposed to risks associated with these transactions.

Where assets have been derecognised in whole or in part, the rights and obligations that HSBC retains from its continuing involvement in securitisations are initially recorded as an allocation of the fair value of the financial asset between the

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part that is derecognised and the part that continues to be recognised on the date of transfer.

Securitisation regulatory treatment

For regulatory purposes, there is no requirement to consolidate SPEs where there is no ownership of or influence over the SPE. HSBC will then risk weight any positions retained in the securitisation, including

any derivatives or liquidity facilities. The US$21.4 billion of unrealised fair value losses on AFS debt securities disclosed in the *Annual Report and Accounts 2008* included US$16.2 billion relating to SPEs that are not consolidated for regulatory purposes. The FSA's prudential filter that removes these unrealised losses from capital also increases the exposure value of the positions by the same amount before the relevant risk weighting is applied.

Table 21: Securitisation exposures

	Activity during 2008			**At 31 December**
Aggregate amount of securitisation exposures (retained or purchased)	**As sponsor**[1] **US$bn**	**As investor US$bn**	**Total US$bn**	**2008 US$bn**
Residential mortgages	—	**0.8**	**0.8**	**5.7**
Commercial mortgages	**0.1**	—	**0.1**	**3.0**
Credit cards	—	—	—	**0.1**
Leasing	—	—	—	**0.7**
Loans to corporates or SMEs	**3.5**	—	**3.5**	**8.9**
Consumer loans	—	—	—	**1.4**
Trade receivables	**0.5**	—	**0.5**	**17.3**
Re-securitisations	**4.8**	**1.7**	**6.5**	**54.3**
Total	**8.9**	**2.5**	**11.4**	**91.4**

1 *Current year figures do not include activity relating to Cullinan and Asscher. During 2008, HSBC established three new SICs (namely Mazarin, Barion and Malachite) to which assets held by Cullinan and Asscher were transferred. See page 174 of the* Annual Report and Accounts 2008 *for further details.*

Table 22: Securitisation exposures outstanding

Outstanding securitisation exposures analysed include those deducted from capital, rather than risk weighted. There were no synthetic transactions outstanding where the Group acted as securitisation sponsor or investor.

	At 31 December 2008	
	Traditional	**Synthetic**

	transactions US$bn	transactions US$bn	Total US$bn
As originator[1]	**0.9**	**1.0**	**1.9**
Commercial mortgages	–	**0.1**	**0.1**
Loans to corporates or SMEs	**0.9**	**0.9**	**1.8**
As sponsor	**67.3**	–	**67.3**
Commercial mortgages	**0.2**	–	**0.2**
Leasing	**0.5**	–	**0.5**
Loans to corporates or SMEs	**0.4**	–	**0.4**
Consumer loans	**0.5**	–	**0.5**
Trade receivables	**17.3**	–	**17.3**
Re-securitisations	**48.4**	–	**48.4**
As investor	**22.2**	–	**22.2**
Residential mortgages	**5.7**	–	**5.7**
Commercial mortgages	**2.7**	–	**2.7**
Credit cards	**0.1**	–	**0.1**
Leasing	**0.2**	–	**0.2**
Loans to corporates or SMEs	**6.7**	–	**6.7**
Consumer loans	**0.9**	–	**0.9**
Re-securitisations	**5.9**	–	**5.9**
Total	**90.4**	**1.0**	**91.4**

1 *For securitisations in which HSBC acts as both originator and sponsor, the exposure is disclosed under originator only.*

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Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 (continued)

Table 23: Impaired and past due securitised assets

	Impaired and past due US$bn
At 31 December 2008	
As sponsor: Loans to corporates or SMEs	**0.1**

Table 24: Securitisation exposures analysed by risk weighting

The analysis includes risk weightings of exposures arising from activity during the year which are a subset of the total securitisation exposures at the reporting date.

	Activity during 2008 US$bn	Total at 31 December 2008 US$bn
Long-term category - risk weights		
□ less than or equal to 10%	**9.4**	**67.3**
□ greater than 10% and less than or equal to 20%	**1.3**	**13.3**
□ greater than 20% and less than or equal to 50%	□	**2.6**
□ greater than 50% and less than or equal to 100%	□	**0.7**
□ greater than 100% and less than or equal to 650%	□	**0.9**
Deductions from regulatory capital	**0.7**	**1.6**
Total	**11.4**	**86.4**
Short-term category - risk weights		
□ less than or equal to 20%	□	**5.0**
Total	□	**5.0**

Table 25: Securitised revolving exposures

When securitising a revolving pool of exposures, the originator transfers a pool of exposures to an SPE. The SPE then issues notes to external investors backed by this pool. The originator□s interest is the proportion of the pool which has not yet been used as collateral backing for notes issued to investors.

	At 31 December 2008	
	Originator□s	**Investors□**

	interest US$bn	interest US$bn
Average outstanding amount of securitised revolving exposures	**1.8**	**1.7**

Market risk

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

HSBC separates exposures to market risk into trading and non-trading portfolios. Trading portfolios include those positions arising from market-making, proprietary position-taking and other marked-to-market positions so designated. Non-trading portfolios primarily arise from the interest rate management of HSBC's retail and commercial banking assets and liabilities and financial investments classified as available-for-sale and held to maturity.

Objectives

The objectives of HSBC's market risk management are to manage and control market risk exposures in order to optimise return within the Group's risk appetite, as defined by GMB.

Organisation and responsibilities

The management of market risk is principally undertaken in Global Banking and Markets using risk limits approved by RMM. The market risk limits set by RMM dictate the level of the Group's market risk appetite, and cover sensitivity, value at risk and stress exposures.

Traded Credit and Market Risk, an independent unit within Group Risk, develops the Group's market risk management policies and measurement techniques. Each major operating entity has an

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independent market risk management and control function which is responsible for measuring market risk exposures in accordance with the policies defined by Traded Credit and Market 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 which arise on each product in its business and to transfer these risks to either its local Global Markets unit for management, or to separate books managed under the supervision of the local Asset and Liability Management Committee. The aim is to ensure that all market risks are consolidated within operations which have the necessary skills, tools, management and governance to manage such risks professionally. It is the responsibility of each operating unit to ensure that market risk exposures remain within the limits specified for that entity. The nature of the hedging and risk mitigation strategies performed across the Group corresponds to the market 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.

Measurement and monitoring

HSBC uses a range of tools to monitor and limit market risk exposures. These include sensitivity analysis, VAR and stress testing.

Table 26: Market risk capital requirements

	At 31 December 2008	
	Capital requirement US$bn	**RWA US$bn**
Market risk		
Interest rate position risk requirement[1]	**1.4**	**17.1**
Foreign exchange position risk requirement	**0.1**	**0.6**
VAR requirement	**1.8**	**23.2**
Capital requirement calculated under local regulatory rules	**2.3**	**29.2**
Equity position risk	—	**0.1**
Commodity position risk	—	**0.1**
Total market risk	**5.6**	**70.3**

1 *FSA Standard rules.*

Sensitivity analysis

Sensitivity measures are used to monitor the market risk positions within each risk type, for example, for interest rate risk, the present value of a basis point movement in interest rates. 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. Sensitivity limits are used to ensure that there is sufficient diversification of risk both across and within asset classes.

VAR

VAR is a technique that estimates the potential losses that could be exceeded 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 VAR models used by HSBC are based predominantly on historical simulation. These models derive plausible future scenarios from past series of recorded market rates and prices, taking into account inter-relationships between different markets and rates such as interest rates and foreign exchange rates. The models also incorporate the effect of option features on the underlying exposures.

The historical simulation models used by HSBC incorporate the following features:

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

The nature of the VAR models mean that an increase in observed market volatility will lead to an increase in VAR without any changes in the underlying positions.

HSBC routinely validates the accuracy of its VAR models by back-testing the actual daily profit and loss results, adjusted to remove non-modelled items such as fees and commissions, against the corresponding VAR numbers. Statistically, HSBC would expect to see losses in excess of VAR only one per cent of the time over a one-year period. The actual number of excesses over this period can therefore be used to gauge how well the models are performing.

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

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potential events, particularly those which are extreme in nature;

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

Stress testing

In recognition of the limitations of VAR, HSBC augments VAR with stress testing to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables.

Stress testing is performed at a portfolio level, as well as on the consolidated positions of the Group, and covers the following scenarios:

- sensitivity scenarios, which consider the effect of market moves on any single risk factor or a set of factors. For example, the impact of a break of a currency peg that is unlikely to be captured within the VAR models;
- technical scenarios, which consider the largest move in each risk factor, without considering any underlying market correlation;
- hypothetical scenarios, which consider potential macro-economic events; and
- historical scenarios, which incorporate historical observations of market moves during periods of stress which would not be captured within VAR.

Stress testing is governed by the Stress Testing Review Group forum that coordinates the Group's stress testing scenarios in conjunction with the regional risk managers. Consideration is given to the actual market risk exposures, along with market events, in determining the stress scenarios.

Stress testing results are reported to senior management and provide them with an assessment

of the financial impact such events would have on the profit of HSBC.

Interest rate risk

Interest rate risk arises within the trading portfolios and non-trading portfolios, principally from mismatches between the future yield on assets and their funding cost, as a result of interest rate changes. Analysis of this risk is complicated by having to make assumptions on embedded optionality within certain product areas such as the incidence of mortgage prepayments, and from behavioural assumptions regarding the economic duration of

liabilities which are contractually repayable on demand such as current accounts. The prospective change in future net interest income from non-trading portfolios will be reflected in the current realisable value of these positions, should they be sold or closed prior to maturity. In order to manage this risk optimally, market risk in non-trading portfolios is transferred to Global Banking and Markets or to separate books managed under the supervision of the local Asset and Liability Management Committee.

The transfer of market risk to books managed by Global Markets or supervised by Asset and Liability Management Committees 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. Behavioural assumptions of a product are assessed with respect to each local market in which the product is offered. Local Asset and Liability Management Committees are required to regularly monitor all such behavioural assumptions and interest rate risk positions to ensure they comply with interest rate risk limits established by RMM.

In certain cases, the non-linear characteristics of products cannot be adequately captured by the risk transfer process. For example, both the flow from customer deposit accounts to alternative investment products and the precise prepayment speeds of mortgages will vary at different interest rate levels, and where expectations about future moves in interest rates change. In such circumstances, simulation modelling is used to identify the impact of varying scenarios on valuations and net interest income.

HSBC aims, through its management of interest rate risk, to mitigate the effect of prospective interest rate movements which could reduce its future net interest income, balanced against the cost of

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associated hedging activities, on the current net revenue stream.

Interest rate risk arising within the trading portfolios and non-trading portfolios is measured, where practical, on a daily basis. HSBC uses a range of tools to monitor and limit interest rate risk exposures. These include the present value of a basis point movement in interest rates, VAR, stress testing and sensitivity analysis. For more details of the Group's monitoring of the sensitivity of projected net interest income under varying interest rate scenarios please see pages 246 to 248 of the *Annual Report and Accounts 2008*.

Foreign exchange risk

Foreign exchange risk arises as a result of movements in the relative value of currencies. The foreign exchange risk arising within the non-trading portfolios is transferred to the trading portfolios for management. As well as VAR and stress testing, HSBC controls the foreign exchange risk within the trading portfolio by limiting the open exposure to individual currencies, and on an aggregate basis.

HSBC is also subject to structural foreign exchange exposures that arise from net investments in subsidiaries, branches or associated undertakings, the functional currencies of which are currencies other than the US dollar.

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

Specific issuer risk

Specific issuer (credit spread) risk arises from a change in the value of debt instruments due to a perceived change in the credit quality of the issuer or underlying assets. As well as VAR and stress testing, HSBC manages the exposure to credit spread movements within the trading portfolios through the use of limits referenced to the sensitivity of the present value of a basis point movement in credit spreads.

Equity risk

Equity risk arises from the holding of open positions, either long or short, in equities or equity based instruments, which create exposure to a change in the market price of the equities or underlying equity instruments. As well as VAR and stress testing, HSBC controls the equity risk within its trading portfolios by limiting the size of the net open equity exposure.

Non-trading book exposures in equities

At 31 December 2008, on a regulatory consolidation basis, the Group had equity investments in the non-trading book of US$7.0 billion These are classified as available for sale for accounting purposes and consisted of investments held for the following purposes:

Table 27: Equity investments held as available for sale

	At 31 December 2008 US$bn
Strategic investments	**2.7**
Private equity investments	**2.5**

Business facilitation[1]	**1.0**
Short-term cash management	**0.8**
Total	**7.0**

1 *Includes holdings in government-sponsored enterprises and local stock exchanges.*

Investments in private equity are primarily made through managed funds that are subject to limits on the amount of investment. Potential new commitments are subject to risk appraisal to ensure that industry and geographical concentrations remain within acceptable levels for the portfolio as a whole. Regular reviews are performed to substantiate the valuation of the investments within the portfolio. A detailed description of the valuation techniques applied to private equity can be found on page 164 of the *Annual Report and Accounts 2008*.

Exchange traded investments amounted to US$0.4 billion, with the remainder being unlisted. These investments are held at fair value in line with market prices.

Unrealised gains on available-for-sale equity included in Tier 2 capital equated to US$0.9 billion. Details of the Group's accounting policy for available-for-sale equity investments and the valuation of financial instruments are detailed on pages 350 to 351 and 63 to 65, respectively, of the *Annual Report and Accounts 2008*.

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Operational risk

Operational risk is the risk of loss arising through fraud, unauthorised activities, error, omission, inefficiency, systems failure or from external events. It is inherent to every business organisation and covers a wide spectrum of issues. The terms "error", "omission" and "inefficiency" include process failures, systems/machine failures and human error.

The Group has historically experienced operational risk losses in the following major categories:

- fraudulent and other external criminal activities;
- breakdowns in processes/procedures due to human error, misjudgement or malice;
- terrorist attacks;
- system failure or non-availability; and
- in certain parts of the world, vulnerability to natural disasters.

The Group recognises that operational risk losses can be incurred for a wide variety of reasons, including rare but extreme events.

Objectives

The objective of HSBC's operational risk management is to manage and control operational risk in a cost-effective manner within targeted levels of operational risk consistent with the Group's risk appetite, as defined by GMB.

Organisation and responsibilities

Operational risk management is primarily the responsibility of employees and business management. The Group Operational Risk function and the operational risk management framework assist business management with discharging this responsibility. Designated Operational Risk Coordinators work within key business units and have responsibility for ensuring that the operational risk management framework is effectively implemented in their assigned business units.

A formal governance structure provides oversight over the management of operational risk across the Group's five geographical regions and its global businesses.

The Global Operational Risk and Control Committee which reports to RMM and meets quarterly discusses key risk issues and reviews the effective implementation of the Group's operational risk management framework.

Operational risk is organised as an independent risk discipline within Group Risk. The Group Operational Risk function reports to the GCRO and supports the Global Operational Risk and Control Committee. It is responsible for establishing and maintaining the operational risk framework, monitoring the level of operational losses and the effectiveness of the control environment, and operational risk reporting at Group level. It is also responsible for the preparation and reporting of operational risk data for consideration by RMM and Group Audit Committee.

Measurement and monitoring

HSBC has codified its operational risk management framework in a high level standard, supplemented by detailed policies. The detailed policies explain HSBC's approach to identifying, assessing, monitoring and controlling operational risk and give guidance on mitigating action to be taken when weaknesses are identified.

In each of HSBC's subsidiaries, business managers are responsible for maintaining an acceptable level of internal control, commensurate with the scale and nature of operations. They are responsible for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The operational risk management framework helps managers to fulfil these responsibilities by defining a standard risk and control assessment methodology and providing a tool for the systematic reporting of operational loss data.

Operational risk capital requirements are calculated under the standardised approach, as a percentage of the average of the last three financial years' gross revenues. The table below sets out a geographical analysis of the Group's operational risk capital requirement as at 31 December 2008.

Table 28: Operational risk capital requirements

	At 31 December 2008	
	Capital requirement US$bn	**RWA US$bn**
Operational risk		
Europe	**3.3**	**41.2**
Hong Kong	**1.2**	**15.0**
Rest of Asia-Pacific	**1.5**	**18.3**
North America	**2.7**	**33.5**
Latin America	**1.0**	**13.1**
Total	**9.7**	**121.1**

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Operational risk assessment approach

Operational risk self assessments are performed by individual business units and functions. The risk assessment process is designed to support the management rather than total avoidance of risk. Each business and function carries out a risk identification and assessment process at least annually. Where risk is assessed as high, business management either proposes a cost-effective action plan to mitigate the risk or provide a rationale as to why the risk is acceptable at the current level.

All appropriate means of mitigation and controls are considered. These include:

- making specific changes to strengthen the internal control environment;
- investigating whether cost-effective insurance cover is available to mitigate the risk; and
- other means of protecting the Group from loss.

Recording

HSBC has constructed a centralised database (the Group Operational Risk Database) to record the results of its operational risk management processes. Operational risk self-assessments as described above, comprising the identified risks, related scoring, action plans and proposed implementation dates, are input and maintained at business unit level in the Group Operational Risk Database. Business management and Operational Risk Business Coordinators monitor and follow up the progress of documented action plans.

Operational risk loss reporting

To ensure that operational risk losses can be monitored at a 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 Group Operational Risk function on a quarterly basis.

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Glossary

Available-for-sale financial assets	Those non-derivative financial assets that are designated as available for sale or are not classified as a) loans and receivables b) held-to-maturity investments or c) financial assets at fair value through profit or loss.
Back-testing	The process of using historical data to monitor the performance of risk models.
Basel II	The June 2006 capital adequacy framework issued by the Basel Committee on Banking Supervision in the form of the "International Convergence of Capital Measurement and Capital Standards".
BIPRU	The FSA's rules, as set out in Prudential Sourcebook for Banks, Building Societies and Investment Firms.
Core equity tier 1 capital	Tier 1 capital less innovative tier 1 securities and preference shares.
CRAOC	Credit Risk Analytics Oversight Committee.
Credit default swap	A derivative contract that transfers the credit exposure of a financial instrument from the buyer (who receives credit protection) to the seller (who guarantees the creditworthiness of the instrument).
Credit quality step	A step in the FSA credit quality assessment scale which is based on the credit ratings of External Credit Assessment Institutions ("ECAIs"). It is used to assign risk weights under the standardised approach.
Credit risk mitigation	A technique to reduce the credit risk associated with an exposure by application of credit risk mitigants such as collateral, guarantees and credit protection.
Credit spread option	A derivative that transfers risk from one party to another. The buyer pays an initial premium in exchange for potential cash flows if the credit spread changes from its current level.
CSA	Credit Support Annex.
Customer risk rating (CRR)	Internal obligor probability of default scale of 22 grades, of which 20 are non-default grades representing varying degrees of strength of financial condition and two are default grades.
Derivatives	A derivative is a financial instrument that derives its value from one or more underlying assets, for example bonds or currencies.
ECAI	External Credit Assessment Institution, such as Moody's Investors Service, Standard & Poor's Ratings Group or Fitch Group.
Economic capital	An internal assessment of the amount of capital required to protect against potential unexpected future losses arising from business activities, across a defined time horizon and confidence interval.
Equity risk	The risk arising from positions, either long or short, in equities or equity-based instruments, which create exposure to a change in the market price of the equities or equity instruments.
Expected loss (EL)	A regulatory calculation of the amount expected to be lost on an exposure using a 12 month time horizon and downturn loss estimates. EL is calculated by multiplying the Probability of Default (a percentage) by the Exposure at Default (an amount) and Loss Given Default (a percentage).
Exposure	A claim, contingent claim or position which carries a risk of financial loss.

Exposure at default (EAD)	The amount expected to be outstanding, after any credit risk mitigation, if and when a counterparty defaults. EAD reflects drawn balances as well as allowance for undrawn amounts of commitments and contingent exposures.

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Exposure value	Exposure at default (EAD).
Fair value	Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm s length transaction.
FSA	The Financial Services Authority of the United Kingdom.
GCRO	Group Chief Risk Officer.
GENPRU	The FSA s rules, as set out in the General Prudential Sourcebook.
GMB	Group Management Board.
GMO	Group Management Office.
Haircut	With respect to credit risk mitigation, an adjustment to collateral value to reflect any currency or maturity mismatches between the credit risk mitigant and the underlying exposure to which it is being applied. Also a valuation adjustment to reflect any fall in value between the date the collateral was called and the date of liquidation or enforcement.
Held-to-maturity	An accounting classification for investments acquired with the intention of being held until they mature.
IFRS	International Financial Reporting Standards.
IMM	Internal Model Method (IMM), used to determine exposure values for Counterparty Credit Risk.
Institutions	Under the Standardised approach, Institutions are classified as credit institutions or investment firms. Under the IRB approach, Institutions also include regional governments and local authorities, public sector entities and multilateral development banks.
Insurance risk	A risk, other than financial risk, transferred from the holder of a contract to the insurance provider. The principal insurance risk is that, over time, the combined cost of claims, administration and acquisition of the contract may exceed the aggregate amount of premiums received and investment income.
Internal Capital Adequacy Assessment Process (ICAAP)	The Group s own assessment of the levels of capital that it needs to hold through an examination of its risk profile from regulatory and economic capital viewpoints.
Internal ratings-based approach (IRB)	A method of calculating credit risk capital requirements using internal, rather than supervisory, estimates of risk parameters.
IRB advanced approach	The IRB advanced approach is a method of calculating credit risk capital requirements using internal PD, LGD and EAD models.
IRB foundation approach	The IRB foundation approach is a method of calculating credit risk capital requirements using internal PD models but supervisory estimates of LGD and conversion factors for the calculation of EAD.
ISDA	International Swaps and Derivatives Association.
ISDA Master agreement	Standardised contracts developed by ISDA (International Swaps and Derivatives Association) used to enter into bilateral derivatives contracts.
Loss given default (LGD)	The estimated ratio (percentage) of the loss on an exposure to the amount outstanding at default (EAD) upon default of a counterparty.

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Capital and Risk Management Pillar 3 Disclosures as at 31 December 2008 (continued)

Obligor grade

Obligor grades, summarising a more granular underlying counterparty risk rating scale for estimates of probability of default, are defined as follows:

- *'Minimal Default Risk':* The strongest credit risk, with a negligible probability of default.
- *'Low Default Risk':* A strong credit risk, with a low probability of default.
- *'Satisfactory Default Risk':* A good credit risk, with a satisfactory probability of default.
- *'Fair Default Risk'*: The risk of default remains fair, but identified weaknesses may warrant more regular monitoring.
- *'Moderate Default Risk':* The overall position will not be causing any immediate concern, but more regular monitoring will be necessary as a result of sensitivities to external events that give rise to the possibility of risk of default increasing.
- *'Significant Default Risk':* Performance may be limited by one or more troublesome aspect, known deterioration, or the prospect of worsening financial status. More regular monitoring required.
- *'High Default Risk':* Continued deterioration in financial status, that requires frequent monitoring and ongoing assessment. The probability of default is of concern but the borrower currently has the capacity to meet its financial commitments.
- *'Special Management':* The probability of default is of increasing concern and the borrower's capacity to fully meet its financial commitments is becoming increasingly less likely.
- *'Default':* A default is considered to have occurred with regard to a particular obligor when either or both of the following events has taken place: the bank considers that the obligor is unlikely to pay its credit obligations in full, without recourse by the bank to actions such as realising security, or: the obligor is

	past due more than 90 days on any material credit obligation to the banking group.
Over-the-counter (OTC)	A bilateral transaction (e.g. derivatives) that is not exchange traded.
Probability of default (PD)	The probability that an obligor will default within a one-year time horizon.
Qualifying revolving retail	Retail IRB exposures that are revolving, unsecured, and, to the extent they are not drawn, immediately and unconditionally cancellable, such as credit cards.
RAROC	Risk-Adjusted Return on Capital.
Regulatory high risk	Standardised approach exposures that have been defined by the FSA as "high risk exposures". These include exposures arising out of venture capital business (whether or not the firm itself carries on the venture capital business) and any high risk positions in Collective Investment Undertakings that are illiquid and held with a view to long-term sale or realisation.
Residual maturity	The period outstanding from the reporting date to the maturity or end date of an exposure.
Retail IRB	Retail exposures that are treated under the IRB approach.
Risk appetite	A definition of the types and quantum of risks to which HSBC wishes to be exposed.

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Risk-weighted asset (RWA)	Calculated by assigning a degree of risk expressed as a percentage (risk weight) to an exposure in accordance with the applicable Standardised or IRB approach rules.
RMM	Risk Management Meeting. RMM oversees risk management across HSBC with responsibility for setting risk appetite and approving definitive risk policies and controls.
Securitisation	A transaction or scheme whereby the credit risk associated with an exposure, or pool of exposures, is tranched and where payments to investors in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures. A traditional securitisation involves the transfer of the exposures being securitised to an SPE which issues securities. In a synthetic securitisation, the tranching is achieved by the use of credit derivatives and the exposures are not removed from the balance sheet of the originator.
Securitised revolving exposure	The securitisation of revolving exposures. Revolving exposures are those where the balance fluctuates depending on customers decisions to borrow or repay, such as credit cards.
Special Purpose Entity (SPE)	A corporation, trust or other non-bank entity, established for a narrowly defined purpose, typically for carrying on securitisation activities. The structure of the entity and activities are intended to isolate the obligations of the SPE from those of the originator and the holders of the beneficial interests in the securitisation.
Specific issuer risk	Specific issuer (credit spread) risk arises from a change in the value of debt instruments due to a perceived change in the credit quality of the issuer or underlying assets.
Standardised approach	In relation to credit risk, a method for calculating credit risk capital requirements using ECAI ratings and supervisory risk weights. In relation to operational risk, a method of calculating the operational capital requirement by the application of a supervisory defined percentage charge to the gross income of eight specified business lines.
Tier 1 and Tier 1 capital	Have the meanings given to such terms in the General Prudential Sourcebook (as set out in the FSA s Handbook) as at 31 December 2008.
Tier 2 capital	Has the meaning given to this term in the General Prudential Sourcebook (as set out in the FSA s Handbook) as at 31 December 2008.
Total return swap	A credit derivative transaction that swaps the total return on a financial instrument, cash flows and capital gains and losses, for a guaranteed interest rate, such as an inter-bank rate, plus a margin.
Value at risk (VAR)	An estimate of potential losses that could occur on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence.
Wrong-way risk	

Defined by the FSA as a situation where there is an adverse correlation between the counterparty's probability of default and the mark-to-market value of the underlying transaction.

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Contacts

Group Management Office – London

Patrick McGuinness
Head of Group Press Office
Telephone: +44 (0)20 7991 0111

Richard Lindsay
Head of Media Relations
Telephone +44 (0)20 7992 1555

Alastair Brown
Manager Investor Relations
Telephone: +44 (0)20 7992 1938

Hong Kong

David Hall
Head of Group Communications (Asia)
Telephone: +852 2822 1133

Gareth Hewett
Head of Investor Relations (Asia)
Telephone: +852 2822 4929

Chicago

Lisa Sodeika
Executive Vice President
Corporate Affairs
Telephone: +1 224 544 3299

Paris

Chantal Nedjib
Director of Communications
Telephone: +33 1 40 70 7729

Gilberte Lombard
Investor Relations Director
Telephone: +33 1 40 70 2257

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HSBC Holdings plc
8 Canada Square
London E14 5HQ
United Kingdom
Telephone: 44 020 7991 8888
Facsimile: 44 020 7992 4880

www.hsbc.com

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

HSBC Holdings plc

By: /s/ DOUGLAS J FLINT

Name: Douglas J Flint
Title: Group Finance Director

Date: 13 May 2009