

# HSBC Holdings plc

**Report on Transition to IFRS 9 'Financial Instruments'**  
**1 January 2018**

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As at 1 January 2018  
Issued 27 February 2018

The financial information on which this supplement is based is unaudited and has been prepared in accordance with the significant accounting policies of HSBC Holdings plc ('HSBC') as described in the *Annual Report and Accounts 2017* and, for those policies impacted by HSBC's adoption of IFRS 9 and IFRS 7 'Financial Instruments: Disclosures', within the appendix to this supplement. The financial information does not constitute financial statements prepared in accordance with International Financial Reporting Standards ('IFRSs'), is not complete and should be read in conjunction with the *Annual Report and Accounts 2017* and other reports and financial information published by HSBC.

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On 1 January 2018, HSBC implemented the requirements of IFRS 9 'Financial Instruments'. This *Report on Transition to IFRS 9 'Financial Instruments'* provides information relevant to understanding the impact of the new accounting standard on HSBC's financial position at 1 January 2018. The information supplements disclosures made in the *Annual Report and Accounts 2017* and precedes those required in our 2018 financial statements. The transition disclosures provide a bridge between IAS 39 'Financial Instruments: Recognition and Measurement', IAS 37 'Provisions, Contingent Liabilities and Contingent Assets' and IFRS 9 results. They provide context for changes in the recognition of credit losses, changes in the classification and measurement of financial instruments on our balance sheet and the resulting impact on regulatory capital.

We continue to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. Therefore the estimation of expected credit losses ('ECL') and related impacts remains subject to change until finalisation of the financial statements for the year ending 31 December 2018.

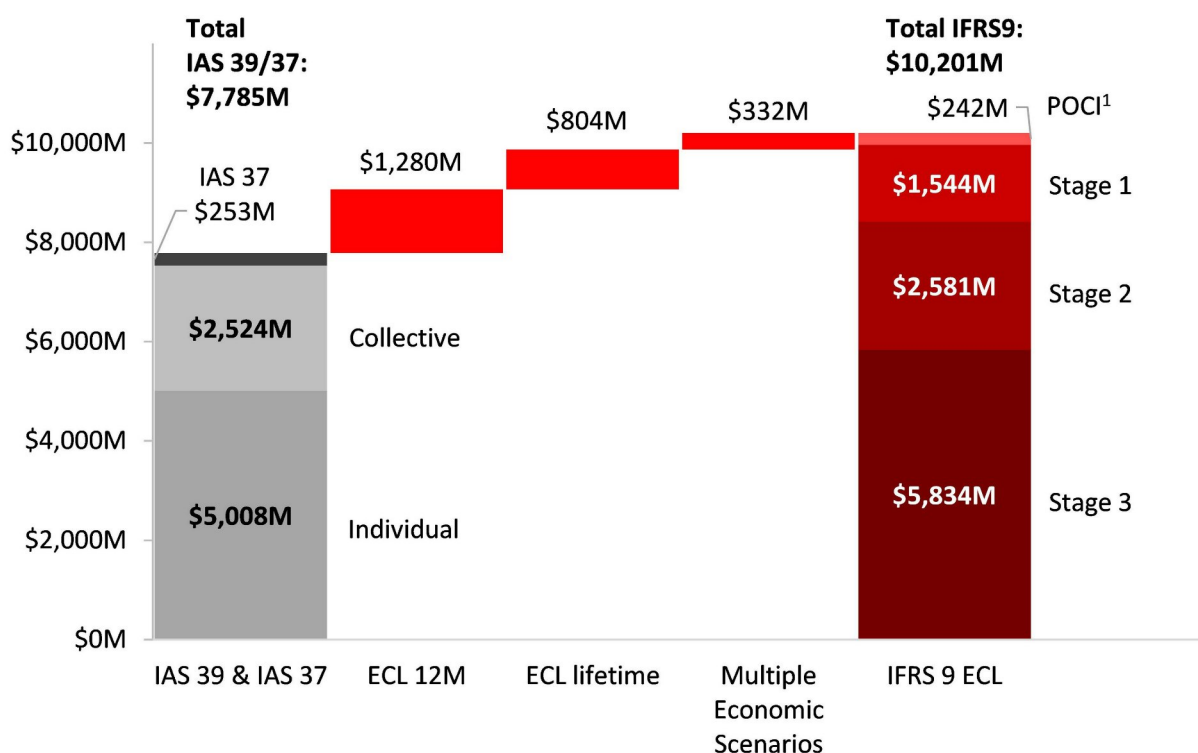
## Impact of IFRS 9

HSBC adopted the requirements of IFRS 9 'Financial Instruments' on 1 January 2018, with the exception of the provisions relating to the presentation of gains and losses on financial liabilities designated at fair value, which were adopted on 1 January 2017. The impact of transitioning to IFRS 9 at 1 January 2018 on the consolidated financial statements of HSBC was a decrease in net assets of \$1,004m, arising from:

- a decrease of \$2,232m from additional impairment allowances;
- an increase of \$908m from the remeasurement of financial assets and liabilities as a consequence of classification changes, mainly from revoking fair value accounting designations for certain long-dated issued debt instruments; and
- an increase in net deferred tax assets of \$320m.

HSBC remains strongly capitalised following the adoption of IFRS 9 which, based on the transition impact, will result in a 12bps increase in the common equity tier 1 ratio, applying the EU regulatory transitional arrangements, and a 1bp increase on a fully loaded basis at 1 January 2018.

## IAS 39/IAS 37 allowances to IFRS 9 ECL walk



<sup>1</sup> POCI - Purchased or originated credit impaired

Presented above is a high level walk of the IAS 39/IAS 37 credit-related allowances/provisions to the final IFRS 9 ECL allowance.

'ECL 12M' represents the increase in the allowance between IAS 39/IAS 37 and an IFRS 9 ECL associated with defaults in the next 12 months across all stages incorporating only the 'Central' scenario. The \$1,280m increase is mainly a result of moving to an expected credit loss model from an incurred-loss model with loss emergence periods of generally less than 12 months.

'ECL lifetime' represents the incremental stage 2 ECL associated with defaults beyond 12 months under a lifetime expected credit loss estimation incorporating only the Central scenario (\$804m). 'Multiple economic scenarios' represents the increase in ECL as a result of using multiple economic scenarios rather than a single Central scenario (\$332m).

There was an immaterial change in allowances related to changes in classification and measurement and therefore this is not presented separately in the table above.

## Transition to IFRS 9 'Financial Instruments'

### Effect on business model

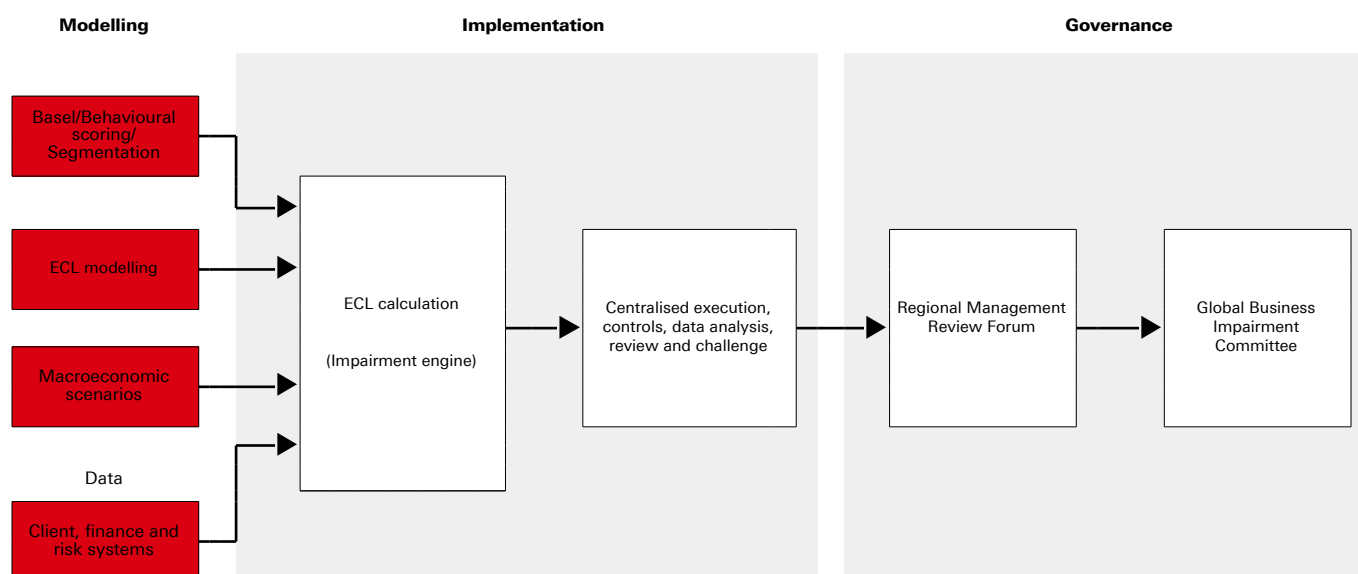
We do not expect the implementation of IFRS 9 to result in a significant change to HSBC's business model, or that of our four global businesses. This includes our strategy, country presence, product offerings and target customer segments.

Exposures in certain industry sectors, in particular those most sensitive to changes in economic conditions, will be affected to a greater degree under IFRS 9. However, we have established credit risk management processes in place and we actively assess the impact of economic developments in key markets on specific customers, customer segments or portfolios. If we foresee

changes in credit conditions, we will take mitigating action, including the revision of risk appetites or limits and tenors, as appropriate. In addition, we will continue to evaluate the terms under which we provide credit facilities within the context of individual customer requirements, the quality of the relationship, local regulatory requirements, market practices and our local market position.

Under IFRS 9, we will recognise expected credit losses on committed, undrawn exposures, including credit cards, loan commitments and financial guarantees. This will have the most significant impact on our credit card portfolio. We will continue to manage undrawn exposures and credit limits as part of our overall approach to capital management.

### IFRS 9 process



The implementation of IFRS 9 represents a significant challenge to the risk and finance functions across the bank. IFRS 9 introduces new concepts and measures such as significant increase in credit risk and lifetime expected credit losses. Existing stress testing and regulatory models, skills and expertise were adapted in order to meet IFRS 9 requirements. Data from various client, finance and risk systems has been integrated and validated. As a result of IFRS 9 adoption, management has additional insight and measures not previously utilised which, over time, may influence our risk appetite and risk management processes. The IFRS 9 process comprises three main areas: modelling and data, implementation and governance.

#### Modelling

The risk function had pre-existing Basel and behavioural scorecards in most geographies. These models were enhanced or supplemented by additional models to deal with significant credit deterioration, lifetime expected credit losses and forward economic guidance as required by IFRS 9. The impairment models vary in complexity and inputs depending on the size of the portfolio, the amount of data available and the sophistication of the market concerned. The risk modelling function followed HSBC's standard governance processes for developing new models as described in our *Pillar 3 Disclosures at 31 December 2017* on page 20. Significant newly developed models have also been subject to independent review by our Independent Model Review function ('IMR').

IFRS 9 requires our measurement of ECL to consider forecasts of future economic conditions and to consider the possibility of more than one outcome. Our Group Risk Economics team has therefore developed new processes as described further on pages 7-10.

#### Implementation

A centralised impairment engine has been implemented to perform the ECL calculation in a globally consistent manner. The impairment calculation engine receives data from a variety of client, finance and risk systems. A number of data validation checks and enhancements are then performed prior to the ECL calculation taking place. Once the ECL calculation has been executed there are further data analysis checks and review and challenge of the results of the ECL calculation prior to commencing formal governance. As far as possible these checks and processes are performed in a globally consistent and centralised manner in order to achieve optimal effectiveness. Risk and Finance work closely together throughout the execution of this process.

#### Governance

A series of Regional Management Review Forums has been established in key sites/regions in order to review and approve the impairment results. Regional Management Review Forums have representatives from Credit Risk and Finance. The key site/regional approvals are reported up to the Global Business Impairment Committee for final approval of the Group's ECL for the period. The Global Heads of Wholesale Credit and Market Risk and Retail Banking and Wealth Management ('RBWM') Risk, the global business CFOs and the Group Chief Accounting Officer are required members of the committee.

## Credit risk profile

The Group's total allowance for ECL is \$10,201m. This comprises \$9,480m in respect of assets held at amortised cost, \$537m in respect of loan commitments and financial guarantees and \$184m in respect of debt instruments measured at fair value through other comprehensive income ('FVOCI'). The following tables analyse the financial instruments to which the impairment requirements of IFRS 9 are applied and the related allowance for ECL.

### Summary of financial instruments to which the impairment requirements in IFRS 9 are applied

	Gross carrying/ nominal amount \$m	Allowance for ECL <sup>1</sup> \$m
Loans and advances to customers at amortised cost	959,080	(9,343)
– personal	375,069	(3,047)
– corporate and commercial	520,137	(6,053)
– non-bank financial institutions	63,874	(243)
Loans and advances to banks at amortised cost	82,582	(23)
Other financial assets measured at amortised cost	557,864	(114)
– cash and balances at central banks	180,624	(3)
– items in the course of collection from other banks	6,628	–
– Hong Kong Government certificates of indebtedness	34,186	–
– reverse repurchase agreements – non-trading	201,553	–
– financial investments	59,539	(16)
– prepayments, accrued income and other assets <sup>2</sup>	75,334	(95)
<b>Total gross carrying amount on balance sheet</b>	<b>1,599,526</b>	<b>(9,480)</b>
Loan and other credit related commitments	501,361	(376)
– personal	196,093	(14)
– corporate and commercial	262,391	(355)
– financial	42,877	(7)
Financial guarantees and similar contracts	89,382	(161)
– personal	791	(4)
– corporate and commercial	78,102	(153)
– financial	10,489	(4)
<b>Total nominal amount off-balance sheet<sup>3</sup></b>	<b>590,743</b>	<b>(537)</b>
<b>At 1 Jan 2018</b>	<b>2,190,269</b>	<b>(10,017)</b>

	Fair value \$m	Memorandum allowance for ECL <sup>4</sup> \$m
<b>At 1 Jan 2018</b>		
Debt instruments measured at fair value through other comprehensive income	322,163	(184)

<sup>1</sup> As explained further on page 19 of the Technical Appendix, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.

<sup>2</sup> Includes only those financial instruments which are subject to the impairment requirements of IFRS 9. 'Prepayments, accrued income and other assets' as presented within the consolidated balance sheet on page 22 includes both financial and non-financial assets.

<sup>3</sup> Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

<sup>4</sup> For debt instruments measured at FVOCI, the allowance for ECL is a memorandum item. The debt instruments continue to be measured at fair value. The accounting for financial assets measured at FVOCI is explained further on page 17 of the Technical Appendix.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector

	Gross carrying/nominal amount <sup>1</sup>							Allowance for ECL							ECL coverage %						
	Stage 1	Stage 2	Of which:	Of which:	Stage 3	POCI <sup>3</sup>	Total	Stage 1	Stage 2	Of which:	Of which:	Stage 3	POCI <sup>3</sup>	Total	Stage 1	Stage 2	Of which:	Of which:	Stage 3	POCI <sup>3</sup>	Total
			1 to 29 DPD <sup>2</sup>	30 and > 29 DPD <sup>2</sup>						1 to 29 DPD <sup>2</sup>	30 and > 29 DPD <sup>2</sup>						1 to 29 DPD <sup>2</sup>	30 and > 29 DPD <sup>2</sup>			
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	%	%	%	%	%	%	%
Loans and advances to customers at amortised cost	871,566	72,658	2,393	2,447	13,882	974	959,080	(1,309)	(2,201)	(261)	(261)	(5,591)	(242)	(9,343)	0.2	3.0	10.9	10.7	40.3	24.8	1.0
– personal	354,305	16,354	1,683	1,428	4,410	–	375,069	(581)	(1,156)	(218)	(230)	(1,310)	–	(3,047)	0.2	7.1	13.0	16.1	29.7	–	0.8
– corporate and commercial	456,837	53,262	684	977	9,064	974	520,137	(701)	(1,037)	(42)	(31)	(4,073)	(242)	(6,053)	0.2	1.9	6.1	3.2	44.9	24.8	1.2
– non-bank financial	60,424	3,042	26	42	408	–	63,874	(27)	(8)	(1)	–	(208)	–	(243)	–	0.3	3.8	–	51.0	–	0.4
Loans and advances to banks at amortised cost	81,027	1,540	7	66	15	–	82,582	(17)	(4)	(2)	–	(2)	–	(23)	–	0.3	28.6	–	13.3	–	–
Other financial assets measured at amortised cost	556,185	1,517	133	46	155	7	557,864	(28)	(4)	–	(1)	(82)	–	(114)	–	0.3	–	2.2	52.9	–	–
Loan and other credit related commitments	475,986	24,330			999	46	501,361	(126)	(183)			(67)	–	(376)	–	0.8			6.7	–	0.1
– personal	194,320	1,314			459	–	196,093	(13)	(1)			–	–	(14)	–	0.1			–	–	–
– corporate and commercial	240,854	20,951			540	46	262,391	(108)	(180)			(67)	–	(355)	–	0.9			12.4	–	0.1
– financial	40,812	2,065			–	–	42,877	(5)	(2)			–	–	(7)	–	0.1			–	–	–
Financial guarantee and similar contracts	77,921	11,014			413	34	89,382	(36)	(47)			(78)	–	(161)	–	0.4			18.9	–	0.2
– personal	768	18			5	–	791	–	(2)			(2)	–	(4)	–	11.1			40.0	–	0.5
– corporate and commercial	67,596	10,064			408	34	78,102	(35)	(44)			(74)	–	(153)	0.1	0.4			18.1	–	0.2
– financial	9,557	932			–	–	10,489	(1)	(1)			(2)	–	(4)	–	0.1			–	–	–
<b>At 1 Jan 2018</b>	<b>2,062,685</b>	<b>111,059</b>			<b>15,464</b>	<b>1,061</b>	<b>2,190,269</b>	<b>(1,516)</b>	<b>(2,439)</b>			<b>(5,820)</b>	<b>(242)</b>	<b>(10,017)</b>	<b>0.1</b>	<b>2.2</b>			<b>37.6</b>	<b>22.8</b>	<b>0.5</b>

<sup>1</sup> Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

<sup>2</sup> Days past due ('DPD'). Up to date accounts in Stage 2 are not shown in amounts presented above.

<sup>3</sup> Purchased or originated credit-impaired ('POCI').

Personal lending – geographical summary of loans and advances at amortised cost by stage distribution and ECL coverage

	Gross carrying amount				Allowance for ECL				ECL coverage %
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>First lien residential mortgages</b>	<b>266,879</b>	<b>8,299</b>	<b>2,921</b>	<b>278,099</b>	<b>(60)</b>	<b>(67)</b>	<b>(533)</b>	<b>(660)</b>	<b>0.2</b>
Europe	123,925	1,647	1,203	126,775	(14)	(34)	(272)	(320)	0.3
– of which: UK	117,725	1,170	876	119,771	(8)	(22)	(155)	(185)	0.2
Asia	106,926	2,289	247	109,462	(36)	(11)	(26)	(73)	0.1
– of which: Hong Kong	69,460	748	36	70,244	–	–	(3)	(3)	–
MENA	2,081	79	214	2,374	(2)	(2)	(117)	(121)	5.1
North America	32,021	4,191	1,118	37,330	(4)	(13)	(109)	(126)	0.3
Latin America	1,926	93	139	2,158	(4)	(7)	(9)	(20)	0.9
<b>Credit cards</b>	<b>22,576</b>	<b>2,797</b>	<b>422</b>	<b>25,795</b>	<b>(298)</b>	<b>(663)</b>	<b>(273)</b>	<b>(1,234)</b>	<b>4.8</b>
Europe	9,470	643	89	10,202	(84)	(124)	(42)	(250)	2.5
– of which: UK	9,051	617	87	9,755	(82)	(120)	(39)	(241)	2.5
Asia	9,871	1,420	99	11,390	(121)	(253)	(58)	(432)	3.8
– of which: Hong Kong	6,707	1,121	18	7,846	(37)	(187)	(16)	(240)	3.1
MENA	1,239	152	140	1,531	(41)	(86)	(103)	(230)	15.0
North America	816	206	15	1,037	(9)	(49)	(11)	(69)	6.7
Latin America	1,180	376	79	1,635	(43)	(151)	(59)	(253)	15.5
<b>Other personal lending</b>	<b>64,850</b>	<b>5,258</b>	<b>1,067</b>	<b>71,175</b>	<b>(223)</b>	<b>(426)</b>	<b>(504)</b>	<b>(1,153)</b>	<b>1.6</b>
Europe	29,501	2,234	453	32,188	(79)	(108)	(188)	(375)	1.2
– of which: UK	8,459	1,440	151	10,050	(74)	(92)	(66)	(232)	2.3
Asia	27,281	1,411	312	29,004	(43)	(102)	(108)	(253)	0.9
– of which: Hong Kong	18,601	772	127	19,500	(34)	(62)	(29)	(125)	0.6
MENA	2,607	248	111	2,966	(21)	(35)	(93)	(149)	5.0
North America	3,582	469	102	4,153	(16)	(35)	(27)	(78)	1.9
Latin America	1,879	896	89	2,864	(64)	(146)	(88)	(298)	10.4
<b>At 1 Jan 2018</b>	<b>354,305</b>	<b>16,354</b>	<b>4,410</b>	<b>375,069</b>	<b>(581)</b>	<b>(1,156)</b>	<b>(1,310)</b>	<b>(3,047)</b>	<b>0.8</b>

Stage distribution is fairly consistent across First Lien Mortgages, Credit Cards, and Other Personal Lending with a higher proportion in Stage 1 in Asia and Europe than the other regions. The ECL coverage is lower in mortgages relative to credit cards and other personal lending, driven by the collateralised nature of the mortgage portfolio. The higher ECL coverage in MENA mortgages is due to the significant levels of ECL on defaulted mortgages. The higher ECL coverage on credit cards and other personal lending in Latin America and MENA is due to relative differences in credit outcomes as compared to the other regions.

Wholesale lending – geographical summary of loans and advances at amortised cost by stage distribution and ECL coverage

	Gross carrying amount					Allowance for ECL					ECL coverage %
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>Corporate and Commercial</b>	<b>456,837</b>	<b>53,262</b>	<b>9,064</b>	<b>974</b>	<b>520,137</b>	<b>(701)</b>	<b>(1,037)</b>	<b>(4,073)</b>	<b>(242)</b>	<b>(6,053)</b>	<b>1.2</b>
Europe	161,907	14,455	4,925	558	181,845	(359)	(497)	(1,869)	(99)	(2,824)	1.6
– of which: UK	114,999	10,340	3,377	297	129,013	(298)	(435)	(1,197)	(19)	(1,949)	1.5
Asia	224,858	23,040	1,480	158	249,536	(181)	(158)	(967)	(24)	(1,330)	0.5
– of which: Hong Kong	139,554	14,636	590	124	154,904	(89)	(90)	(399)	(22)	(600)	0.4
MENA	15,035	4,910	1,361	218	21,524	(47)	(105)	(856)	(115)	(1,123)	5.2
North America	43,993	9,756	1,018	–	54,767	(24)	(255)	(251)	–	(530)	1.0
Latin America	11,044	1,101	280	40	12,465	(90)	(22)	(130)	(4)	(246)	2.0
<b>Non-bank financial institutions</b>	<b>60,424</b>	<b>3,042</b>	<b>408</b>	<b>–</b>	<b>63,874</b>	<b>(27)</b>	<b>(8)</b>	<b>(208)</b>	<b>–</b>	<b>(243)</b>	<b>0.4</b>
Europe	28,063	932	305	–	29,300	(7)	(3)	(145)	–	(155)	0.5
– of which: UK	24,007	828	230	–	25,065	(4)	(3)	(140)	–	(147)	0.6
Asia	22,578	759	26	–	23,363	(6)	(3)	(18)	–	(27)	0.1
– of which: Hong Kong	11,874	602	26	–	12,502	(3)	(1)	(18)	–	(22)	0.2
MENA	1,038	1	68	–	1,107	(10)	(1)	(39)	–	(50)	4.5
North America	7,609	1,346	9	–	8,964	(1)	(1)	(6)	–	(8)	0.1
Latin America	1,136	4	–	–	1,140	(3)	–	–	–	(3)	0.3
<b>Banks</b>	<b>81,027</b>	<b>1,540</b>	<b>15</b>	<b>–</b>	<b>82,582</b>	<b>(17)</b>	<b>(4)</b>	<b>(2)</b>	<b>–</b>	<b>(23)</b>	<b>–</b>
Europe	12,886	342	15	–	13,243	(5)	(2)	(2)	–	(9)	0.1
– of which: UK	4,563	261	–	–	4,824	(3)	(1)	–	–	(4)	0.1
Asia	49,598	475	–	–	50,073	(6)	(1)	–	–	(7)	–
– of which: Hong Kong	20,318	132	–	–	20,450	(4)	–	–	–	(4)	–
MENA	6,402	72	–	–	6,474	(1)	(1)	–	–	(2)	–
North America	8,690	642	–	–	9,332	(1)	–	–	–	(1)	–
Latin America	3,451	9	–	–	3,460	(4)	–	–	–	(4)	0.1
<b>At 1 Jan 2018</b>	<b>598,288</b>	<b>57,844</b>	<b>9,487</b>	<b>974</b>	<b>666,593</b>	<b>(745)</b>	<b>(1,049)</b>	<b>(4,283)</b>	<b>(242)</b>	<b>(6,319)</b>	<b>0.9</b>

Stage distribution is fairly consistent across the regions except MENA and North America where certain obligors have significantly deteriorated in credit risk. The higher ECL coverage in the MENA corporate and commercial industry sector is driven by long-dated exposures in the oil and gas sector. In Asia the ECL coverage is lower due to the shorter average contractual tenor in this region particularly in China and Hong Kong.

The Group's defaulted and credit deteriorated exposures are concentrated in the UK, Hong Kong, US and MENA, typically relating to the oil and gas and commercial real estate sectors.

## Measurement uncertainty and sensitivity analysis of ECL estimates

The recognition and measurement of ECL is highly complex and involves the use of significant judgement and estimation, including in the formulation and incorporation of multiple forward-looking economic conditions into the ECL estimates to meet the measurement objective of IFRS 9.

### Methodology

HSBC has adopted the use of three economic scenarios in most economic environments. These scenarios are representative of HSBC's view of forecast economic conditions, sufficient to calculate unbiased ECL. They represent a 'most likely outcome', (the Central scenario) and two, less likely, 'Outer' scenarios on either side of the Central, referred to as an 'Upside' and a 'Downside' scenario respectively. Each Outer scenario is consistent with a probability of 10% while the Central scenario is assigned the remaining 80%. This weighting scheme is deemed as being appropriate for the computation of unbiased ECL. Key scenario assumptions are set using the average of forecasts from external economists. This helps ensure that the IFRS 9 scenarios are unbiased and maximise the use of independent information.

For the Central scenario, HSBC sets key assumptions such as GDP growth, inflation, unemployment and policy rates using either the average of external forecasts (commonly referred to as consensus forecasts) for most economies or market prices. An external vendor's global macro model, which is conditioned to follow the consensus forecasts, projects the other paths required as inputs to credit models. This vendor model is subject to HSBC's risk governance framework with oversight by a specialist internal unit.

Upside and Downside scenarios are designed to be cyclical in that GDP growth, inflation and unemployment usually revert back to the Central scenario after the first three years for major economies. We determine the maximum divergence of GDP growth from the Central scenario using the 10<sup>th</sup> and the 90<sup>th</sup> percentile of the entire distribution of forecast outcomes for major economies. Using externally available forecast distributions ensures independence in scenario construction. While key economic variables are set with reference to external distributional forecasts, we also align the overall narrative of the scenarios to the macroeconomic risks described in HSBC's top and emerging risks. This ensures that scenarios remain consistent with the more qualitative assessment of risks captured in top and emerging risks. We project additional variable paths using the external vendor's global macro model.

The Central, Upside and Downside scenarios selected with reference to external forecast distributions using the above approach are termed the 'Consensus Economic Scenarios'.

We apply the following to generate the three economic scenarios:

- **Economic risk assessment** – We develop a shortlist of the downside and upside economic and political risks most relevant to HSBC and the IFRS 9 measurement objective. These risks include local and global economic/political risks that together impact on economies that materially matter to HSBC, namely UK, euro area, Hong Kong, China and US. We compile this list by monitoring developments in the global economy, assessing the risks identified in HSBC's top and emerging risks, and through external and internal consultations with subject matter experts.

- **Scenario generation** – For the Central scenario, we obtain a pre-defined set of economic forecasts from the average forecast taken from the consensus forecast survey of professional forecasters. Paths for the Outer scenarios are benchmarked to the Central scenario and reflect the economic risk assessment. Scenario probabilities reflect management judgement and are informed by data analysis of past recessions (transitions in and out of recession) and the current economic outlook. For any scenario, the key assumptions made and the accompanying paths represent our 'best estimate' of a scenario at a specified probability. Suitable narratives are developed for the Central scenario and the paths of the Outer scenarios.
- **Variable enrichment** – We expand each scenario through enrichment of variables. This includes the production of 400+ variables that are required by the businesses. The external vendor expands these scenarios by using as inputs the agreed scenario narratives and the variables aligned to these narratives. Scenarios, once expanded, continue to be benchmarked to the latest events and information. Late breaking events could lead to revision of scenarios to reflect management judgement.

HSBC recognises that the Consensus Economic Scenario approach using three scenarios will be insufficient in certain economic environments. Additional analysis may be requested at management's discretion, including the production of extra scenarios. While we anticipate that there will be only limited instances when the standard approach will not apply, we have occasion to invoke this additional step at 1 January 2018, due to the specific uncertainties facing the UK economy at this time, resulting in the recognition of additional ECL, 'a management overlay' for economic uncertainty.

## Description of Consensus Economic Scenarios

### The Central scenario

HSBC's Central scenario is one of steady growth over the forecast period 2018–2022. Global GDP growth is expected to be 2.9% on average over the period, which is marginally higher than the average growth rate over the period 2011–2016. Across the key markets, we note that:

- Expected average rates of growth over the 2018–2022 period are lower than those experienced in the recent past for the UK, China, Hong Kong, Canada and the UAE. For the UK, this forecast reflects current views on the UK's exit from the EU, while for China, this suggests rebalancing at a pace in line with expectations.
- French GDP forecasts are stronger for the forecast period compared with recent history. Supportive factors include the recent cyclical upswing, longer-term expectations of reform and euro-area recovery.

Core inflation has remained stable and inflation in the US and euro area is expected to only slowly converge back towards central bank targets over the next two years. As a consequence, US and euro area central banks are expected to raise rates very gradually. In the UK, the Bank of England is expected to look through near-term, above-target inflation and raise interest rates slowly.

Unemployment rates displayed considerable positive cyclical momentum in 2017 across our key markets and such momentum is expected to continue to underpin labour market performance in the forecast period. Central scenario forecasts of the unemployment rate are stable and, for some markets, at historical lows.

Stabilisation of oil prices in 2017, helped by the Organization of Petroleum Exporting Countries' output cuts and a fall in inventory, has enabled a stronger price outlook to develop. Despite this, Central scenario oil price forecasts are moderate with the price reaching \$68 per barrel by the end of the forecast period.

### Central scenario (average 2018–2022)

	UK	France	Hong Kong	Mainland China	UAE	US	Canada	Mexico
GDP growth rate (%)	1.8	1.5	2.4	5.8	3.5	2.1	1.8	2.7
Inflation (%)	2.2	N/A	2.5	2.3	2.9	2.1	2.0	3.5
Unemployment (%)	5.2	8.6	3.4	4.0	N/A	4.6	6.3	4.0
House price growth (%)	2.8	3.9	3.6	5.4	6.2	3.6	3.1	6.2

Note: N/A - not required in credit models

### The Upside scenario

Global real GDP growth rises in the first two years of the Upside before converging to the Central scenario. Improved confidence, accommodative monetary policy, fiscal expansion across major

economies, including tax reform in the US and diminished political risk are the key risk themes that support the year-end Upside scenario.

### Upside scenario (average 2018–2022)

	UK	France	Hong Kong	Mainland China	UAE	US	Canada	Mexico
GDP growth rate (%)	2.5	1.9	2.8	6.0	4.0	2.7	2.2	3.2
Inflation (%)	2.5	N/A	2.9	2.7	3.3	2.4	2.2	3.9
Unemployment (%)	4.8	8.3	3.2	3.7	N/A	4.1	6.1	3.6
House price growth (%)	4.0	4.6	4.0	6.9	7.7	4.9	4.3	6.8

Note: N/A - not required in credit models

### The Downside scenario

Globally, real GDP growth declines for two years in the Downside scenario before recovering to the Central scenario. House price growth either stalls or contracts and equity markets correct abruptly. The global slowdown in demand drives commodity

prices lower and inflation falls. Central banks remain accommodative. This is consistent with the risk themes of rising protectionism, central bank policy uncertainty, mainland China choosing to rebalance at a faster pace and an absence of fiscal support.

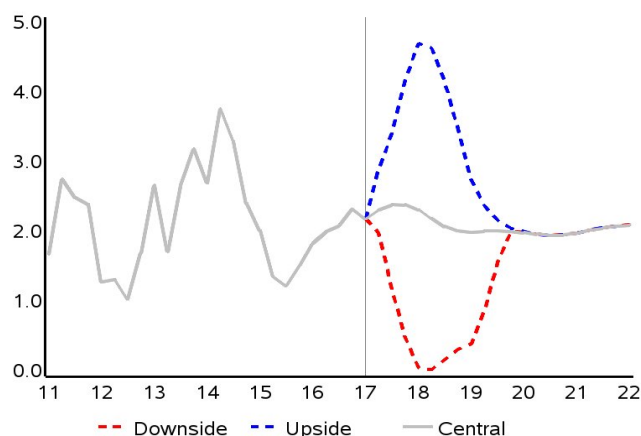
### Downside scenario (average 2018–2022)

	UK	France	Hong Kong	Mainland China	UAE	US	Canada	Mexico
GDP growth rate (%)	1.2	1.1	2.0	5.5	3.0	1.3	1.6	2.1
Inflation (%)	1.8	N/A	2.2	2.0	2.6	1.8	1.9	3.1
Unemployment (%)	5.6	9.0	3.8	4.2	N/A	5.1	6.7	4.5
House price growth (%)	0.9	0.8	1.7	3.0	4.5	1.1	0.6	5.4

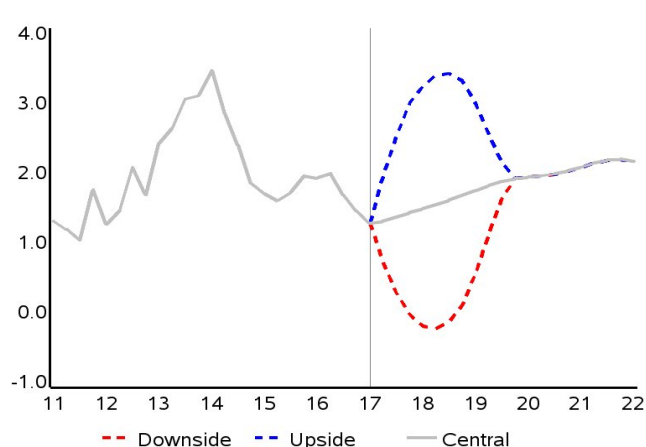
Note: N/A - not required in credit models

The following graphs show the historical and forecasted GDP growth for the three economic scenarios for the four largest economies where HSBC has operations.

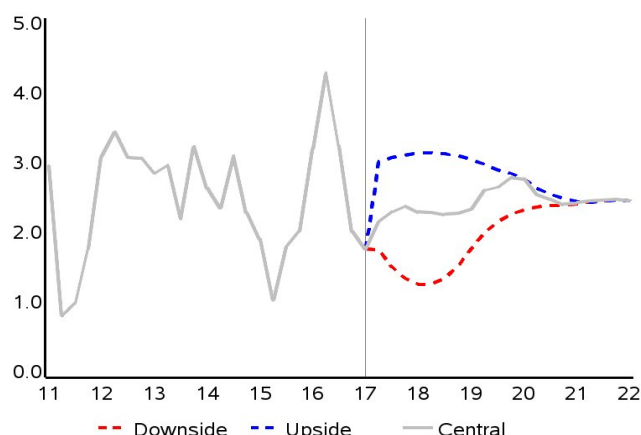
### US



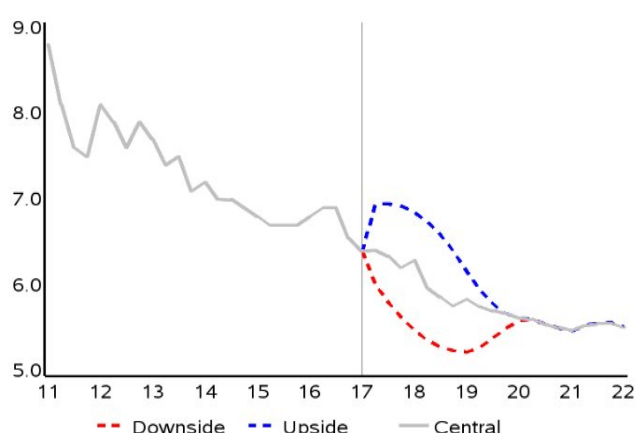
### UK



## Hong Kong



## Mainland China



## How economic scenarios are reflected in the wholesale calculation of ECL

HSBC has developed a globally consistent methodology for the application of forward economic guidance ('FEG') into the calculation of ECL by incorporating FEG into the estimation of the term structure of probability of default ('PD') and loss given default ('LGD'). For PDs, we consider the correlation of FEG to default rates for a particular industry in a country. For LGD calculations we consider the correlation of FEG to collateral values and realisation rates for a particular country and industry. PDs and LGDs are estimated for the entire term structure of each instrument.

For stage 3 impaired loans, LGD estimates take into account independent recovery valuations provided by external consultants where available, or internal forecasts corresponding to anticipated economic conditions and individual company conditions. In estimating the ECL on impaired loans that are individually considered not to be significant, HSBC incorporates FEG via the application of a scalar. The scalar reflects the ratio of the probability-weighted outcome to the Central scenario outcome for non-stage 3 populations.

## How economic scenarios are reflected in the retail calculation of ECL

The impact of FEG on PD is modelled at a portfolio level. Historic relationships between observed default rates and macroeconomic variables are integrated into IFRS 9 ECL estimates by leveraging economic response models. The impact of FEG on PD is modelled

over a period equal to the remaining maturity of underlying asset(s). The impact on LGD is modelled for mortgage portfolios by forecasting future loan-to-value ('LTV') profiles for the remaining maturity of the asset by leveraging national level forecasts of the house price index ('HPI') and applying the corresponding LGD expectation.

## Impact of multiple economic scenarios on ECL

The ECL recognised in the financial statements (the 'IFRS 9 ECL') reflects the effect on expected credit losses of a range of possible outcomes, calculated on a probability-weighted basis, based on the economic scenarios described above, including management overlays where required. The probability-weighted amount is typically a higher number than would result from using only the Central (most likely) economic scenario. Expected losses typically have a non-linear relationship to the many factors which influence credit losses such that more favourable macroeconomic factors do not reduce defaults as much as less favourable macroeconomic factors increase defaults. The tables below compares IFRS 9 ECL and the ECL number prepared using only Central Scenario assumptions. A higher number indicates a more non-linear relationship between these factors and credit losses across the range of possible outcomes considered, and therefore a greater degree of uncertainty in loss outcome. The amount of this difference is approximately 3% of ECL across the Group reflecting the relatively stable and benign economic outlook across most markets. Larger differences are shown in the below table.

## IFRS 9 ECL as compared to Central scenario ECL

Country of booking	Central scenario ECL	IFRS 9 ECL	Difference
	\$m	\$m	\$m
UK	2,751	3,068	317
Mexico	761	779	18
US	587	590	3
Hong Kong	1,050	1,035	(15)
Other	4,720	4,729	9
<b>Total</b>	<b>9,869</b>	<b>10,201</b>	<b>332</b>

## UK economic uncertainty

A management overlay of \$245m has been included in the IFRS 9 ECL numbers in the table above, adding to the result from the consensus economic scenarios, of which \$150m relates to wholesale and \$95m to retail, to address the current economic uncertainty in the UK. The overlay reflects management's judgement that the consensus economic scenarios do not fully reflect the high degree of uncertainty in estimating the distribution of ECL for UK portfolios under these conditions. In arriving at the overlay, the following risks were considered and alternative scenarios modelled to understand potential impacts:

- Alternative scenario (a): While the Central scenario reflects current consensus forecasts, there is the potential for large forecast revisions in the coming quarters, as economic and political events unfold. The consensus Downside scenario was modelled as an alternative to the consensus Central scenario to understand the impact of a significant downward shift in consensus forecasts.
- Alternative scenario (b): Management modelled a further downside scenario of similar severity to but longer duration than the consensus Downside scenario, to reflect the risk that in a downside scenario there may be a longer term impact on growth than that currently envisaged.
- Alternative scenario (c): Finally, management modelled an alternative severe downside scenario reflecting a deeper cyclical shock resulting in a steep depreciation in sterling and an increase in inflation with an associated monetary policy response.

The table below compares the core macroeconomic variables under the consensus Central and Upside scenarios, shown as averages 2018–2022, to the most severe assumptions relating to the consensus and alternative scenarios:

## UK

	GDP growth %	Unemployment level %
Consensus upside (5 year average)	2.5	4.8
Consensus central (5 year average)	1.8	5.2
Consensus downside (central under Alternative (a)) (most severe value)	0.1	6.3
Alternative (b) (most severe value)	(1.0)	7.2
Alternative (c) (most severe value)	(2.4)	8.9

The overlay adjusts the ECL calculated on the UK consensus economic scenarios to reflect the alternative scenarios described above, within the 10:80:10 weighting scheme, as follows: half the impact of Alternative scenario (a) is included, in effect giving equal weighting within the central band to consensus Central and consensus Downside assumptions. For the downside, the overlay has the effect of replacing the consensus Downside with Alternative scenario (b) but including a small risk of Alternative scenario (c).

The management overlay for UK economic uncertainty will be reviewed regularly in the light of new information about the macroeconomic outlook and leading credit risk indicators, and adjusted as necessary to reflect movements in the consensus economic assumptions and the degree of uncertainty with which they are associated.

## Credit quality of financial instruments

The following tables summarise the credit quality of the financial instruments that are subjected to IFRS 9 impairment requirement by stages. The credit quality disclosed in the tables is point-in-time as at 1 January 2018. It is not directly comparable to the significant increase in credit risk of the financial instruments as this is determined based on the relative increase in credit risk since initial recognition.

**Distribution of financial instruments to which the impairment requirements in IFRS 9 are applied, by credit quality and stage allocation**

	Gross carrying/notional amount						Allowance for ECL	Net
	Strong \$m	Good \$m	Satisfactory \$m	Sub-standard \$m	Credit-impaired \$m	Total \$m		
Loans and advances to customers at amortised cost	479,067	227,146	220,089	17,922	14,856	959,080	(9,343)	949,737
– stage 1	475,881	211,084	180,002	4,599	–	871,566	(1,309)	870,257
– stage 2	3,186	16,062	40,087	13,323	–	72,658	(2,201)	70,457
– stage 3	–	–	–	–	13,882	13,882	(5,591)	8,291
– POCI	–	–	–	–	974	974	(242)	732
Loans and advances to banks at amortised cost	70,959	7,692	3,890	26	15	82,582	(23)	82,559
– stage 1	70,024	7,351	3,642	10	–	81,027	(17)	81,010
– stage 2	935	341	248	16	–	1,540	(4)	1,536
– stage 3	–	–	–	–	15	15	(2)	13
– POCI	–	–	–	–	–	–	–	–
Other financial assets measured at amortised	469,898	47,347	39,595	862	162	557,864	(114)	557,750
– stage 1	469,691	47,019	38,929	546	–	556,185	(28)	556,157
– stage 2	207	328	666	316	–	1,517	(4)	1,513
– stage 3	–	–	–	–	155	155	(82)	73
– POCI	–	–	–	–	7	7	–	7
Loan and other credit-related commitments	297,683	121,508	74,694	6,431	1,045	501,361	(376)	500,985
– stage 1	294,958	115,008	64,429	1,591	–	475,986	(126)	475,860
– stage 2	2,725	6,500	10,265	4,840	–	24,330	(183)	24,147
– stage 3	–	–	–	–	999	999	(67)	932
– POCI	–	–	–	–	46	46	–	46
Financial guarantees and similar contracts	35,537	27,084	23,366	2,948	447	89,382	(161)	89,221
– stage 1	33,558	25,009	18,095	1,259	–	77,921	(36)	77,885
– stage 2	1,979	2,075	5,271	1,689	–	11,014	(47)	10,967
– stage 3	–	–	–	–	413	413	(78)	335
– POCI	–	–	–	–	34	34	–	34
<b>At 1 Jan 2018</b>	<b>1,353,144</b>	<b>430,777</b>	<b>361,634</b>	<b>28,189</b>	<b>16,525</b>	<b>2,190,269</b>	<b>(10,017)</b>	<b>2,180,252</b>
<b>Debt instruments at FVOCI<sup>1</sup></b>								
– stage 1	297,753	6,678	12,941	2,450	–	319,822	(28)	319,794
– stage 2	208	108	147	1,826	–	2,289	(142)	2,147
– stage 3	–	–	–	–	584	584	(14)	570
– POCI	–	–	–	–	–	–	–	–
<b>At 1 Jan 2018</b>	<b>297,961</b>	<b>6,786</b>	<b>13,088</b>	<b>4,276</b>	<b>584</b>	<b>322,695</b>	<b>(184)</b>	<b>322,511</b>

<sup>1</sup> For the purposes of this disclosure gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.

**Quality classification definitions**

- ‘Strong’ exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default.
- ‘Good’ exposures demonstrate a good capacity to meet financial commitments, with low default risk.
- ‘Satisfactory’ exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk.
- ‘Sub-standard’ exposures require varying degrees of special attention and default risk is of greater concern.
- ‘Credit-impaired’ exposures have been assessed as impaired.

The five credit quality classifications defined above each encompass a range of granular internal credit rating grades assigned to wholesale and retail lending businesses and the external ratings attributed by external agencies to debt securities, as shown in the table below. Under IAS 39 retail lending credit quality was disclosed based on expected-loss percentages. Under IFRS 9 retail lending credit quality is now disclosed based on a twelve-month probability-weighted PD. The credit quality classifications for wholesale lending are unchanged and are based on internal credit risk ratings.

**Credit quality classification**

Quality classification	Debt securities and other bills	Wholesale lending		Retail lending	
	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12 month probability-weighted PD %
Strong	A- and above	CRR1 to CRR2	0.000 - 0.169	Band 1 and 2	0.000 - 0.500
Good	BBB+ to BBB-	CRR3	0.170 - 0.740	Band 3	0.501 - 1.500
Satisfactory	BB+ to B and unrated	CRR4 to CRR5	0.741 - 4.914	Band 4 and 5	1.501 - 20.000
Sub-standard	B- to C	CRR6 to CRR8	4.915 - 99.999	Band 6	20.001 - 99.999
Credit-impaired	Default	CRR9 to CRR10	100.000	Band 7	100.000

Personal lending – credit risk profile by internal PD band for loans and advances at amortised cost

	PD range <sup>1</sup> %	Gross carrying amount				Allowance for ECL				ECL coverage %
		Stage 1 \$m	Stage 2 \$m	Stage 3 \$m	Total \$m	Stage 1 \$m	Stage 2 \$m	Stage 3 \$m	Total \$m	
<b>First lien residential mortgages</b>		266,879	8,299	2,921	278,099	(60)	(67)	(533)	(660)	0.2
Band 1	0.000 to 0.250	235,249	339	—	235,588	(43)	(1)	—	(44)	—
Band 2	0.251 to 0.500	17,350	535	—	17,885	(3)	(2)	—	(5)	—
Band 3	0.501 to 1.500	9,316	3,975	—	13,291	(7)	(6)	—	(13)	0.1
Band 4	1.501 to 5.000	3,524	1,236	—	4,760	(6)	(8)	—	(14)	0.3
Band 5	5.001 to 20.000	1,414	1,177	—	2,591	(1)	(21)	—	(22)	0.8
Band 6	20.001 to 99.999	26	1,037	—	1,063	—	(29)	—	(29)	2.7
Band 7	100.000	—	—	2,921	2,921	—	—	(533)	(533)	18.2
<b>Other personal lending</b>		87,426	8,055	1,489	96,970	(521)	(1,089)	(777)	(2,387)	2.5
Band 1	0.000 to 0.250	41,026	369	—	41,395	(73)	—	—	(73)	0.2
Band 2	0.251 to 0.500	9,761	342	—	10,103	(48)	—	—	(48)	0.5
Band 3	0.501 to 1.500	20,971	657	—	21,628	(117)	(1)	—	(118)	0.5
Band 4	1.501 to 5.000	12,930	2,091	—	15,021	(172)	(157)	—	(329)	2.2
Band 5	5.001 to 20.000	2,719	3,403	—	6,122	(111)	(469)	—	(580)	9.5
Band 6	20.001 to 99.999	19	1,193	—	1,212	—	(462)	—	(462)	38.1
Band 7	100.000	—	—	1,489	1,489	—	—	(777)	(777)	52.2
<b>At 1 Jan 2018</b>		354,305	16,354	4,410	375,069	(581)	(1,156)	(1,310)	(3,047)	0.8

<sup>1</sup> 12 month point-in-time (PiT) PD adjusted for multiple economic scenarios.

Wholesale lending – credit risk profile by obligor grade for loans and advances at amortised cost

	Basel one-year PD range %	Gross carrying amount					Allowance for ECL					ECL coverage %	Mapped external rating
		Stage 1 \$m	Stage 2 \$m	Stage 3 \$m	POCI \$m	Total \$m	Stage 1 \$m	Stage 2 \$m	Stage 3 \$m	POCI \$m	Total \$m		
<b>Corporate &amp; commercial</b>		456,837	53,262	9,064	974	520,137	(701)	(1,037)	(4,073)	(242)	(6,053)	1.2	
CRR 1	0.000 to 0.053	43,578	440	—	—	44,018	(7)	(3)	—	—	(10)	—	AA- and above
CRR 2	0.054 to 0.169	96,876	1,016	—	—	97,892	(25)	(1)	—	—	(26)	—	A+ to A-
CRR 3	0.170 to 0.740	163,453	10,373	—	—	173,826	(173)	(86)	—	—	(259)	0.1	BBB+ to BBB-
CRR 4	0.741 to 1.927	107,755	16,368	—	20	124,143	(256)	(232)	—	—	(488)	0.4	BB+ to BB-
CRR 5	1.928 to 4.914	41,042	14,337	—	—	55,379	(190)	(192)	—	—	(382)	0.7	BB- to B
CRR 6	4.915 to 8.860	2,641	6,363	—	27	9,031	(35)	(272)	—	(1)	(308)	3.4	B-
CRR 7	8.861 to 15.000	881	2,528	—	—	3,409	(6)	(107)	—	—	(113)	3.3	CCC+
CRR 8	15.001 to 99.999	611	1,837	—	—	2,448	(9)	(144)	—	—	(153)	6.3	CCC to C
CRR 9/10	100.000	—	—	9,064	927	9,991	—	—	(4,073)	(241)	(4,314)	43.2	D
<b>Non-bank financial institutions</b>		60,424	3,042	408	—	63,874	(27)	(8)	(208)	—	(243)	0.4	
CRR 1	0.000 to 0.053	14,210	1	—	—	14,211	(1)	—	—	—	(1)	—	AA- and above
CRR 2	0.054 to 0.169	17,831	144	—	—	17,975	(2)	—	—	—	(2)	—	A+ to A-
CRR 3	0.170 to 0.740	17,344	1,057	—	—	18,401	(7)	—	—	—	(7)	—	BBB+ to BBB-
CRR 4	0.741 to 1.927	6,167	1,102	—	—	7,269	(4)	(2)	—	—	(6)	0.1	BB+ to BB-
CRR 5	1.928 to 4.914	4,451	373	—	—	4,824	(4)	(3)	—	—	(7)	0.1	BB- to B
CRR 6	4.915 to 8.860	417	345	—	—	762	(9)	(2)	—	—	(11)	1.4	B-
CRR 7	8.861 to 15.000	4	8	—	—	12	—	—	—	—	—	—	CCC+
CRR 8	15.001 to 99.999	—	12	—	—	12	—	(1)	—	—	(1)	8.3	CCC to C
CRR 9/10	100.000	—	—	408	—	408	—	—	(208)	—	(208)	51.0	D
<b>Banks</b>		81,027	1,540	15	—	82,582	(17)	(4)	(2)	—	(23)	—	
CRR 1	0.000 to 0.053	55,343	529	—	—	55,872	(4)	—	—	—	(4)	—	AA- and above
CRR 2	0.054 to 0.169	14,681	406	—	—	15,087	(5)	(2)	—	—	(7)	—	A+ to A-
CRR 3	0.170 to 0.740	7,351	341	—	—	7,692	(5)	(1)	—	—	(6)	0.1	BBB+ to BBB-
CRR 4	0.741 to 1.927	3,072	47	—	—	3,119	(3)	—	—	—	(3)	0.1	BB+ to BB-
CRR 5	1.928 to 4.914	570	201	—	—	771	—	(1)	—	—	(1)	0.1	BB- to B
CRR 6	4.915 to 8.860	4	13	—	—	17	—	—	—	—	—	—	B-
CRR 7	8.861 to 15.000	2	1	—	—	3	—	—	—	—	—	—	CCC+
CRR 8	15.001 to 99.999	4	2	—	—	6	—	—	—	—	—	—	CCC to C
CRR 9/10	100.000	—	—	15	—	15	—	—	(2)	—	(2)	13.3	D
<b>At 1 Jan 2018</b>		598,288	57,844	9,487	974	666,593	(745)	(1,049)	(4,283)	(242)	(6,319)	0.9	

Note: Due to the assignment of CRR to exposures classified as past due but not impaired under IFRS 9 which were not assigned under IAS 39 and data refinements made during IFRS 9 implementation process the above credit quality table is not directly comparable with disclosures made within the Annual Report and Accounts 2017.

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the Group to support calculation of our minimum credit regulatory capital requirement. The customer risk rating ('CRR') 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All corporate customers are rated using the 10- or 23-grade scale, depending on the degree of sophistication of the Basel approach adopted for the exposure. Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time. The PD ranges above are the Basel one year PD ranges.

## Impact on regulatory capital

### Key capital metrics

	Footnotes	At		
		31 Dec 2017 IAS 39	1 Jan 2018 IFRS 9 transitional	1 Jan 2018 IFRS 9 full adoption
<b>Own funds (\$bn)</b>	1			
Common equity tier 1 capital		126.1	127.3	126.3
Tier 1 capital		151.0	152.1	151.1
Total capital		182.4	183.1	182.1
<b>Risk-weighted assets (\$bn)</b>				
Credit risk		685.2	686.0	685.5
– Internal ratings based ('IRB') approach		510.7	510.6	510.6
– Standardised ('STD') approach		174.5	175.4	174.9
Counterparty credit risk		54.5	54.5	54.5
Market risk		38.9	38.9	38.9
Operational risk		92.7	92.7	92.7
<b>Total risk-weighted assets</b>		<b>871.3</b>	<b>872.1</b>	<b>871.6</b>
<b>Capital ratios (%)</b>	1			
Common equity tier 1		14.48	14.60	14.49
Tier 1		17.32	17.44	17.34
Total capital		20.93	21.00	20.90
<b>Leverage ratio</b>	2			
Leverage ratio total exposure (\$bn)		2,557.1	2,556.4	2,556.3
Leverage ratio (%)		5.58	5.63	5.59

1 Own funds and capital ratios are presented on a CRD IV transitional basis at 31 December 2017 for consistency.

2 Leverage ratio is calculated on a fully phased-in basis.

### IFRS 9 full adoption

#### CET1 capital and RWAs under full adoption

Adoption is expected to increase common equity tier 1 ('CET1') capital at 1 January 2018 by \$0.2bn principally as a result of the following movements:

- a \$1.1bn increase due to classification and measurement changes;
- a \$1.2bn decrease due to a rise in impairment allowances; and
- a \$0.3bn increase primarily due to the impact of these changes on deferred tax.

The classification and measurement changes mainly relate to the reclassification to amortised cost of certain external debt issuances, previously designated at fair value.

The decrease in CET1 as a result of changes in impairment allowances comprises:

- a decrease of \$2.4bn for additional allowances; and
- an increase of \$1.2bn due to lower deductions from CET1 for excess expected loss.

The additional \$2.4bn impairment allowances under full IFRS 9 implementation are reflected in credit risk RWAs as follows:

- for the internal ratings based ('IRB') exposures, impairment allowances increase by \$1.2bn. This reduces the deduction from CET1 for excess expected loss by the same amount;
- for the Standardised ('STD') exposures, impairment allowances increase by \$1.2bn. This reduces RWAs by \$0.9bn.

Including a \$1.2bn increase in risk-weighted deferred tax assets, RWAs increase by \$0.3bn.

The impact upon capital ratios is as follows:

- the Group's CET1 ratio increases by 1bp as a result of the \$0.2bn increase in CET1, the effect of which is reduced by the \$0.3bn increase in RWAs.
- the Group's leverage ratio increases by 1bp. The \$0.2bn increase in tier 1 capital is magnified by a reduction of \$0.8bn in the Group's total leverage exposure.

### IFRS 9 regulatory transitional arrangements

The Group has adopted the regulatory transitional arrangements published by the EU on 27 December 2017. These permit banks to add back to their capital base a proportion of the impact that

IFRS 9 has upon their loan loss allowances during the first five years of use. The proportion that banks may add back starts at 95% in 2018, and reduces to 25% by 2022.

The impact of IFRS 9 on loan loss allowances is defined as:

- the increase in loan loss allowances on day one of IFRS 9 adoption; plus
- any subsequent increase in expected credit losses in the non-credit-impaired book thereafter.

The impact is calculated separately for portfolios using the STD and IRB approaches and, for IRB portfolios, there is no add-back to capital unless loan loss allowances exceed regulatory 12-month expected losses.

Any add-back must be tax-affected and accompanied by a recalculation of capital deduction thresholds, exposure and RWAs.

EBA guidelines entering into force in March 2018 require banks using the transitional arrangements to disclose a table comparing their reported capital, RWAs and capital ratios to these measures on a fully phased-in basis.

#### CET1 capital and RWAs under IFRS 9 regulatory transitional arrangements

Under the EU regulatory transitional arrangements, the Group expects to add back \$1.0bn to CET1. This comprises \$1.2bn impairment allowances, less a \$0.2bn charge for deferred tax.

The corresponding impact on RWAs is an increase of \$0.5bn.

The impact of these adjustments is expected to be a day one increase of:

- 12bps in the Group's CET1 ratio; and
- 5bps in the Group's leverage ratio.

## Own funds disclosure

Ref <sup>1</sup>		At		
		31 Dec 2017	1 Jan 2018	1 Jan 2018
		IAS 39	IFRS 9 Transitional	IFRS 9 Full Adoption
		\$m	\$m	\$m
	<b>Common equity tier 1 ('CET1') capital: instruments and reserves</b>			
2	Retained earnings	124,679	125,206	124,302
5a	Independently reviewed interim net profits net of any foreseeable charge or dividend	608	608	608
	Other CET1: instruments and reserves	33,270	33,109	33,109
6	<b>Common equity tier 1 capital before regulatory adjustments</b>	<b>158,557</b>	<b>158,923</b>	<b>158,019</b>
	<b>Common equity tier 1 capital: regulatory adjustments</b>			
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	(1,181)	(1,181)	(1,181)
12	Negative amounts resulting from the calculation of expected loss amounts	(2,820)	(1,637)	(1,637)
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions)	(7,553)	(7,409)	(7,499)
	Other regulatory adjustments	(20,859)	(21,386)	(21,387)
28	<b>Total regulatory adjustments to common equity tier 1</b>	<b>(32,413)</b>	<b>(31,613)</b>	<b>(31,704)</b>
29	<b>Common equity tier 1 capital</b>	<b>126,144</b>	<b>127,310</b>	<b>126,315</b>
36	Additional tier 1 capital before regulatory adjustments	24,922	24,922	24,922
43	Total regulatory adjustments to additional tier 1 capital	(112)	(112)	(112)
44	<b>Additional tier 1 capital</b>	<b>24,810</b>	<b>24,810</b>	<b>24,810</b>
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>150,954</b>	<b>152,120</b>	<b>151,125</b>
51	<b>Tier 2 capital before regulatory adjustments</b>	<b>31,932</b>	<b>31,517</b>	<b>31,517</b>
57	<b>Total regulatory adjustments to tier 2 capital</b>	<b>(503)</b>	<b>(503)</b>	<b>(503)</b>
58	<b>Tier 2 capital</b>	<b>31,429</b>	<b>31,014</b>	<b>31,014</b>
59	<b>Total capital (TC = T1 + T2)</b>	<b>182,383</b>	<b>183,134</b>	<b>182,139</b>

1 The references identify the lines prescribed in the European Banking Authority ("EBA") template, which are applicable and where there is a value.

## Capital management

Our objective in the management of Group capital is to maintain appropriate levels of capital to support our business strategy, and meet our regulatory and stress testing related requirements.

### Assessment of capital adequacy

The management of the Group's capital position is underpinned by a capital management framework and our internal capital adequacy assessment process ('ICAAP'). Through this process the impact of IFRS 9 is considered for both regulatory and internal capital requirements. Expected increases in credit loss provisioning, as a result of IFRS 9, have also been factored into internal stress testing, which forms an integral part of the ICAAP process.

Group regulatory minimum capital requirements may increase as a result of increased provisioning under stress associated with IFRS 9 compared to IAS 39, the magnitude of which will depend upon several factors including the specified stress scenario. However, we do not anticipate that the increase will be material. We expect further communication from the BOE's Financial Policy Committee ('FPC') during the year, which should clarify the interaction between IFRS 9 and stress testing frameworks.

HSBC has also reviewed the level of internal capital held in excess of regulatory minima at Group and key operating entities in light of measurement uncertainty and expected changes in volatility. This assessment focuses on the sensitivity of ratios to reasonably possible changes in the Central scenario used to estimate ECL. It did not highlight any capital shortfall across the Group, as provisioning increases were largely offset. The primary offset is against excess expected loss which forms part of the IRB approaches, used by HSBC Group and certain key operating entities. As at December 2017, HSBC had excess EL of \$1.5bn.

Regulatory transitional arrangements, adopted by the Group, provide further protection against increased provisioning, measurement uncertainty and volatility. Where appropriate, transitional arrangements have also been adopted for local consolidations.

HSBC will continue to assess capital adequacy and refine ratio sensitivity analysis in light of IFRS 9, as impacts are seen in practice and industry experience grows.

### Planning and performance

The impact of IFRS 9 is included within capital and RWA plans, which form part of the Annual Operating Plan ('AOP') that is approved by the Board. No strategic changes were made to the current AOP or are envisaged, as we do not expect the implementation of IFRS 9 to result in a significant change to the business model of HSBC, or of our four global businesses.

We manage business returns by use of a return on risk-weighted assets measure and a return on tangible equity measure. The impact of IFRS 9 has been embedded into these measures.

*A summary of our policies and practices regarding capital management, measurement and allocation is provided on page 117 of the Annual Report and Accounts 2017.*

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## Technical appendix

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### Transition disclosures required by accounting standards

#### 1.1 Basis of preparation

##### Standards adopted during the year ended 31 December 2018

With the exception of the provisions relating to the presentation of gains and losses on financial liabilities designated at fair value, which were adopted from 1 January 2017, the requirements of IFRS 9 'Financial Instruments' were adopted from 1 January 2018. This includes the adoption of 'Prepayment Features with Negative Compensation (Amendments to IFRS 9)' which is effective for annual periods beginning on or after 1 January 2019 with early adoption permitted. While this amendment has not yet been endorsed by the EU, the effect of its adoption is not considered to be significant. IFRS 9 includes an accounting policy choice to remain with IAS 39 hedge accounting, which HSBC has exercised. The classification and measurement and impairment requirements are applied retrospectively by adjusting the opening balance sheet at the date of initial application, with no requirement to restate comparative periods. HSBC does not intend to restate comparatives. Adoption reduced net assets at 1 January 2018 by \$1,004m as set out on pages 22 to 24.

However, the Group is continuing to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. The new accounting policies, assumptions, judgements and estimation techniques remain subject to change until the Group finalises its financial statements for the year ending 31 December 2018. In addition, the effect of IFRS 9 on the carrying value of investments in associates cannot be finalised until the entities publicly report. Therefore, the impacts disclosed in this document may be amended during 2018.

In addition, HSBC has adopted the requirements of IFRS 15 'Revenue from contracts with customers' and a number of interpretations and amendments to standards which have had an insignificant effect on the consolidated financial statements of HSBC.

##### IFRS 9 transitional requirements

The transition requirements of IFRS 9 have necessitated a review of the designation of financial instruments at fair value. IFRS 9 requires that the designation is revoked where there is no longer an accounting mismatch at 1 January 2018 and permits designations to be revoked or additional designations created at 1 January 2018 if there are accounting mismatches at that date. As a result:

- fair value designations for financial liabilities have been revoked where the accounting mismatch no longer exists, as required by IFRS 9;
- fair value designations have been revoked for certain long-dated securities where accounting mismatches continue to exist, but where HSBC has revoked the designation as permitted by IFRS 9 since it will better mitigate the accounting mismatch by undertaking fair value hedge accounting.

The results of these changes are included in the reconciliation set out on pages 22 to 24.

HSBC has been able to use reasonable and supportable information to determine the credit risk at initial recognition of financial assets, particularly wholesale loans. Therefore we have not relied on the transitional provisions for determination of whether there has been a significant increase in credit risk since initial recognition.

### Changes in accounting policy

While not necessarily required by the adoption of IFRS 9, the following voluntary changes in accounting policy and presentation have been made as a result of reviews carried out in conjunction with its adoption. The effect of presentational changes at 1 January 2018 is included in the reconciliation on pages 22 to 24.

- We have considered market practices for the presentation of certain financial liabilities which contain both deposit and derivative components. We have concluded that a change in accounting policy and presentation from 'trading customer accounts and other debt securities in issue' would be appropriate, since it would better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on our financial position and performance. As a result, rather than being classified as held for trading, we will designate these financial liabilities as at fair value through profit or loss since they are managed and their performance evaluated on a fair value basis. A further consequence of this change in presentation is that the effects of changes in the liabilities' credit risk will be presented in Other comprehensive income with the remaining effect presented in profit or loss in accordance with Group accounting policy adopted in 2017 (following the adoption of the requirements in IFRS 9 relating to the presentation of gains and losses on financial liabilities designated at fair value).
- Cash collateral, margin and settlement accounts have been reclassified from 'Trading assets' and 'Loans and advances to banks and customers' to 'Prepayments, accrued income and other assets' and from 'Trading liabilities' and 'Deposits by banks' and 'Customer accounts' to 'Accruals, deferred income and other liabilities'. The change in presentation for financial assets is in accordance with IFRS 9 and the change in presentation for financial liabilities is considered to provide more relevant information, given the change in presentation for the financial assets. The change in presentation for financial liabilities has had no effect on measurement of these items and therefore on retained earnings or profit for any period.
- Certain stock borrowing assets have been reclassified from 'Loans and advances to banks and customers' to 'Trading assets'. The change in measurement is a result of the determination of the global business model for this activity in accordance with IFRS 9 and will align the presentation throughout the Group.

#### 1.2 Summary of significant accounting policies

Set out below are the new or substantially revised accounting policies implementing IFRS 9 which replace the existing IAS 39 policies. The accounting policies on hedge accounting are substantially unchanged and are not repeated. The following policies will substantially replace existing policies (d) and (e) in the *Annual Report and Accounts 2017* with subsequent policies in the *Annual Report and Accounts 2018* being renumbered:

##### (d) Financial instruments measured at amortised cost

Financial assets that are held to collect the contractual cash flows and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest, such as most loans and advances to banks and customers and some debt securities, are measured at amortised cost. In addition, most financial liabilities are measured at amortised cost. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan through the recognition of interest income, unless the loan becomes impaired.

HSBC may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When HSBC

intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

**(e) Financial assets measured at fair value through other comprehensive income ('FVOCI')**

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at FVOCI. These comprise primarily debt securities. They are recognised on the trade date when HSBC enters into contractual arrangements to purchase and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses) are recognised in other comprehensive income until the assets are sold. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses arising from derecognition of debt instruments measured at fair value through other comprehensive income'. Financial assets measured at FVOCI are included in the impairment calculations set out below and impairment is recognised in profit or loss.

**(f) Equity securities measured at fair value with fair value movements presented in OCI**

The equity securities for which fair value movements are shown in OCI are business facilitation and other similar investments where HSBC holds the investments other than to generate a capital return. Gains or losses on the derecognition of these equity securities are not transferred to profit or loss. Otherwise equity securities are measured at fair value through profit or loss (except for dividend income which is recognised in profit or loss).

**(g) Financial instruments designated at fair value**

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where the financial liability contains one or more non-closely related embedded derivatives.

Designated financial assets are recognised when HSBC enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognised when HSBC enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income from financial instruments designated at fair value'.

Under the above criterion, the main classes of financial instruments designated by HSBC are:

- Long-term debt issues.

The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.

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

A contract under which HSBC does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries are determined based on the fair value of the assets held in the linked

funds. If no fair value designation was made for the related assets, at least some of the assets would otherwise be measured at either fair value through other comprehensive income or amortised cost. The related financial assets and liabilities are managed and reported to management on a fair value basis. Designation at fair value of the financial assets and related liabilities allows changes in fair values to be recorded in the income statement and presented in the same line.

**(h) Derivatives**

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

Where the derivatives are managed with debt securities issued by HSBC that are designated at fair value, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

**(i) Impairment of amortised cost and FVOCI financial assets**

Expected credit losses are recognised for loans and advances to banks and customers, non-trading reverse repurchase agreements, other financial assets held at amortised cost, debt instruments measured at fair value through other comprehensive income, and certain loan commitments and financial guarantee contracts. At initial recognition, allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months (or less, where the remaining life is less than 12 months) ('12-month ECL'). In the event of a significant increase in credit risk, allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit-impaired are in 'stage 3'. Purchased or originated credit-impaired financial assets (POCI) are treated differently as set out below.

**Credit-impaired (stage 3)**

HSBC determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default.

If such unlikelihood to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore the definitions of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans which are considered defaulted or otherwise credit-impaired.

Interest income is recognised by applying the effective interest rate to the amortised cost amount, i.e. gross carrying amount less ECL allowance.

**Write-off**

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is

generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

### Renegotiation

Loans are identified as renegotiated and classified as credit-impaired when we modify the contractual payment terms due to significant credit distress of the borrower. Renegotiated loans remain classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows and retain the designation of renegotiated until maturity or derecognition.

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

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit-impaired and, in the case of renegotiated loans, there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, over the minimum observation period, and there are no other indicators of impairment. These loans could be transferred to stage 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

### Loan modifications that are not credit-impaired

Loan modifications that are not identified as renegotiated are considered to be commercial restructuring. Where a commercial restructuring results in a modification (whether legalised through an amendment to the existing terms or the issuance of a new loan contract) such that HSBC's rights to the cash flows under the original contract have expired, the old loan is derecognised and the new loan is recognised at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided.

### Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared to that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multifactor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk and these criteria will differ for different types of lending, particularly between retail and wholesale. However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when 30 days past due. In addition, wholesale loans that are individually assessed, typically corporate and commercial customers, and included on a watch or worry list are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default which encompasses a wide range of information including the obligor's customer risk rating, macroeconomic condition forecasts and credit transition probabilities. Significant increase in credit risk is measured by comparing the average PD for the remaining term estimated at origination with the equivalent estimation at reporting date (or that the origination PD has doubled in the case of origination CRR greater than 3.3). The significance of changes in PD was informed by expert credit risk judgement, referenced to historical credit migrations and to relative changes in external market rates. The quantitative measure of significance varies depending on the credit quality at origination as follows:

Origination CRR	Significance trigger – PD to increase by
0.1–1.2	15bps
2.1–3.3	30 bps
Greater than 3.3 and not impaired	2x

For loans originated prior to the implementation of IFRS 9, the origination PD does not include adjustments to reflect expectations of future macroeconomic conditions since these are not available without the use of hindsight. In the absence of this data, origination PD must be approximated assuming through-the-cycle ('TTC') PDs and TTC migration probabilities, consistent with the instrument's underlying modelling approach and the CRR at origination. For these loans, the quantitative comparison is supplemented with additional CRR deterioration based thresholds as set out in the table below:

Origination CRR	Additional significance criteria – Number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1–4.2	4 notches
4.3–5.1	3 notches
5.2–7.1	2 notches
7.2–8.2	1 notch
8.3	0 notch

Further information about the 23-grade scale used for CRR can be found on page 72 of the *Annual Report and Accounts 2017*.

For certain portfolios of debt securities where external market ratings are available and credit ratings are not used in credit risk management, the debt securities will be in stage 2 if their credit risk increases to the extent they are no longer considered investment grade. Investment grade is where the financial instrument has a low risk of incurring losses, the structure has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil their contractual cash flow obligations.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores which incorporate all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogeneous portfolios, generally by country, product and brand. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgement is that no prior increase in credit risk is significant. This portfolio-specific threshold identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than that which would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

### Unimpaired and without significant increase in credit risk – (stage 1)

ECL resulting from default events that are possible within the next 12 months ('12-month ECL') are recognised for financial instruments that remain in stage 1.

### Purchased or originated credit-impaired

Financial assets that are purchased or originated at a deep discount that reflects the incurred credit losses are considered to be POCI. This population includes the recognition of a new financial instrument following a renegotiation where concessions have been granted for economic or contractual reasons relating to the borrower's financial difficulty that otherwise would not have been considered. The amount of change-in-lifetime ECL is recognised in profit or loss until the POCI is derecognised, even if the lifetime ECL are less than the amount of ECL included in the estimated cash flows on initial recognition.

### Movement between stages

Financial assets can be transferred between the different categories (other than POCI) depending on their relative increase in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. Except for renegotiated loans, financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment as described above. Renegotiated loans that are not POCI will continue to be in stage 3 until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period and there are no other indicators of impairment. For loans that are assessed for impairment on a portfolio basis, the evidence typically comprises a

history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case-by-case basis.

### Measurement of ECL

The assessment of credit risk, and the estimation of ECL, are unbiased and probability-weighted, and incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money.

In general, HSBC calculates ECL using three main components, a probability of default, a loss given default and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

HSBC leverages the Basel II IRB framework where possible, with recalibration to meet the differing IFRS 9 requirements as follows.

Model	Regulatory capital	IFRS 9
PD	<ul style="list-style-type: none"> <li>Through the cycle (represents long-run average PD throughout a full economic cycle)</li> <li>The definition of default includes a backstop of 90+ days past due, although this has been modified to 180+ days past due for some portfolios, particularly UK and US mortgages</li> </ul>	<ul style="list-style-type: none"> <li>Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD)</li> <li>Default backstop of 90+ days past due for all portfolios</li> </ul>
EAD	<ul style="list-style-type: none"> <li>Cannot be lower than current balance</li> </ul>	<ul style="list-style-type: none"> <li>Amortisation captured for term products</li> </ul>
LGD	<ul style="list-style-type: none"> <li>Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn)</li> <li>Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data</li> <li>Discounted using cost of capital</li> <li>All collection costs included</li> </ul>	<ul style="list-style-type: none"> <li>Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as changes in value of collateral)</li> <li>No floors</li> <li>Discounted using the original effective interest rate of the loan</li> <li>Only costs associated with obtaining/selling collateral included</li> </ul>
Other		<ul style="list-style-type: none"> <li>Discounted back from point of default to balance sheet date</li> </ul>

While 12-month PDs are recalibrated from Basel models where possible, the lifetime PDs are determined by projecting the 12-month PD using a term structure. For the wholesale methodology, the lifetime PD also takes into account credit migration, i.e. a customer migrating through the CRR bands over its life.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flow ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as at the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest. Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realisation of collateral based on its estimated fair value of collateral at the time of expected realisation, less costs for obtaining and selling the collateral. The cash flows are discounted at a reasonable approximation of the original effective interest rate. For significant cases, cash flows under four different scenarios are probability-weighted by reference to the three economic scenarios applied more generally by the Group and the judgement of the credit risk officer in relation to the likelihood of the workout strategy succeeding or receivership being required. For less significant cases, the effect of different economic scenarios and work-out strategies is approximated and applied as an adjustment to the most likely outcome.

### Period over which ECL is measured

Expected credit loss is measured from the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which HSBC is exposed to credit risk. For wholesale overdrafts, credit risk management actions are taken no less frequently than on an annual basis and therefore this period is to the expected date of the next substantive credit review. The date of the substantive credit review also represents the initial recognition of the new facility. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit HSBC's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period HSBC remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between two and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying

amount of the financial asset, in which case the ECL is recognised as a provision.

### Forward-looking economic inputs

HSBC will in general apply three forward-looking global economic scenarios determined with reference to external forecast distributions, the Consensus Economic Scenario approach. This approach is considered sufficient to calculate unbiased expected loss in most economic environments. They represent a 'most likely outcome' (the Central scenario) and two, less likely, 'Outer' scenarios on either side of the Central, referred to as an Upside and a Downside scenario respectively. The Central scenario is used by the annual operating planning process and, with regulatory modifications, will also be used in enterprise-wide stress tests. The Upside and Downside are constructed following a standard process supported by a scenario narrative reflecting the Group's current top and emerging risks. The relationship between the Outer scenarios and Central scenario will generally be fixed with the Central scenario being assigned a weighting of 80% and the Upside and Downside scenarios 10% each, with the difference between the Central and Outer scenarios in terms of economic severity being informed by the spread of external forecast distributions among professional industry forecasts. The Outer scenarios are economically plausible, internally consistent states of the world and will not necessarily be as severe as scenarios used in stress testing. The period of forecast is five years, after which the forecasts will revert to a view based on average past experience. The central forecast and spread between the Central and Outer scenarios is grounded on the expected gross domestic product of the following major countries: UK, France, Hong Kong, mainland China, US, Canada, Mexico and the UAE. The economic factors include, but are not limited to, gross domestic product, unemployment, interest rates, inflation and commercial property prices across all the countries in which HSBC operates.

In general, the consequences of the assessment of credit risk and the resulting ECL outputs will be probability-weighted using the standard probability weights. This probability weighting may be applied directly or the effect of the probability weighting determined on a periodic basis, at least annually, and then applied as an adjustment to the outcomes resulting from the central economic forecast. The central economic forecast is updated quarterly.

HSBC recognises that the Consensus Economic Scenario approach using three scenarios will be insufficient in certain economic environments. Additional analysis may be requested at management's discretion, including the production of extra scenarios. If conditions warrant, this could result in a management overlay for economic uncertainty which is included in the ECL estimates.

### Critical accounting estimates and judgements

In determining ECL, management is required to exercise judgement in defining what is considered to be a significant increase in credit risk and in making assumptions and estimates to incorporate relevant information about past events, current conditions and forecasts of economic conditions. Further information about the judgements involved is included in the earlier sections 'Significant increase in credit risk (stage 2)' and 'Forward-looking economic inputs'. In addition, as set out in the earlier section 'Period over which ECL is measured', judgement has been applied in determining the lifetime and point of initial recognition of revolving facilities.

The PD, LGD and EAD models which support these determinations are reviewed regularly in light of differences between loss estimates and actual loss experience, but given that IFRS 9 requirements have only just been applied, there has been little time available to make these comparisons. Therefore, the underlying models and their calibration, including how they react to forward-looking economic conditions remain subject to review and refinement. This is particularly relevant for lifetime PDs, which have not been previously used in regulatory modelling and for the incorporation of 'Upside scenarios' which have not generally been subject to experience gained through stress testing.

The exercise of judgement in making estimations requires the use of assumptions which are highly subjective and very sensitive to the risk factors, in particular to changes in economic and credit conditions across a large number of geographical areas. Many of the factors have a high degree of interdependency and there is no single factor to which loan impairment allowances as a whole are sensitive. Therefore, sensitivities are considered in relation to key portfolios which are particularly sensitive to a few factors and the results should not be further extrapolated.

Pages 7 to 10 set out the assumptions underlying the Central scenario and information about how that scenario and the Upside and Downside scenarios have been developed in relation to the Group's top and emerging risks and its judgements, informed by consensus forecasts of professional industry forecasters. The adjustment from the ECL determined by using the Central scenario alone, which is used to calculate an unbiased expected loss, provides an indication of the overall sensitivity of ECL to different economic assumptions.

## 1.3 Differences between IAS 39 and IFRS 9

### Classification and measurement

Key similarities and differences between IAS 39 and IFRS 9 for the classification and measurement of financial assets are set out below. There are no differences for financial liabilities, except for the presentation of gains and losses on financial liabilities designated at fair value and the requirements to reconsider fair value designation on transition to IFRS 9.

	IAS 39	IFRS 9
Classification criteria	Financial assets are measured at amortised cost (loans & receivables and held to maturity), FVOCI (AFS), or fair value through profit or loss (derivatives and trading) based on the nature of the instrument and the purpose for which it is held. Embedded derivatives are separated from their host contract unless the contract as a whole is measured at fair value through profit or loss. The fair value option applies where there are non-closely related embedded derivatives that are not bifurcated, financial instruments are managed on a fair value basis or where measuring at fair value through profit or loss would reduce or eliminate an accounting mismatch. AFS is the default category.	Debt instruments are measured at amortised cost or FVOCI based on their contractual terms and the business model in which they are held as set out in the accounting policies above. The concept of embedded derivatives does not apply to financial assets. Therefore, the fair value option only applies where it would reduce or eliminate an accounting mismatch. Fair value through profit or loss is the default category.  Equity securities are measured at fair value through profit or loss unless the option has been exercised to measure at FVOCI as set out in the accounting policies above.
Presentation	Upon disposal of AFS securities (debt instruments and equity securities) the cumulative gains or losses in other comprehensive income are recognised in profit or loss.	Upon disposal of debt instruments measured at FVOCI the cumulative gains or losses in other comprehensive income are recognised in profit or loss. Cumulative gains or losses in other comprehensive income are not recognised in profit or loss on the disposal of equity securities measured at FVOCI.

A reconciliation of presentational and measurement differences resulting from the adoption of IFRS 9 at 1 January 2018 is set out on pages 22 to 24.

In general:

- loans and advances to banks and to customers and non-trading reverse repurchase agreements that are classified as loans and receivables under IAS 39 are measured at amortised cost under IFRS 9;

- financial assets designated at Fair Value through Profit and Loss ('FVPL') remain at FVPL, because it is required under IFRS 9 or the designation will continue;
- debt securities classified as available for sale are measured at amortised cost or FVOCI, with a small minority at FVPL either because of their contractual cash flow characteristics or the business model within which they are held;
- debt securities classified as held to maturity are measured at amortised cost;
- Treasury and other eligible bills classified as available for sale are measured at amortised cost or FVOCI depending upon the business model in which they are held; and
- all equity securities remain measured at fair value. A significant majority have fair value movements shown in profit or loss, while a minority have fair value movements presented in other

comprehensive income. The equity securities for which fair value movements are shown in other comprehensive income are business facilitation and other similar investments where HSBC holds the investments other than to generate a capital return.

### Impairment

The recognition and measurement of impairment is intended to be more forward-looking than under IAS 39 and the resulting impairment charge may be more volatile. The adoption has resulted in an increase in the total level of impairment allowances as set out on page 24, since all financial assets will be assessed for at least 12-month ECL and the population of financial assets to which lifetime ECL applies is larger than the population for which there is objective evidence of impairment in accordance with IAS 39.

### Key similarities and differences between IAS 39 and IFRS 9

	IAS 39	IFRS 9
Scope	For amortised cost assets, impairment is recognised when there is objective evidence of impairment. Losses are measured by comparing the carrying amount with the discounted future cash flows. Losses which may arise from future events are not recognised.  For available-for-sale financial assets, impairment is recognised when there is objective evidence of a shortfall in the recovery of future cash flows. Impairment is measured as the decrease in fair value below the original cost at initial recognition.	The same recognition and measurement requirements apply to both amortised cost and FVOCI financial assets. Impairment is not recognised on equity securities which are measured at FVOCI. Impairment is recognised for all financial assets in scope at either 12-month ECL or lifetime ECL. All reasonable and supportable information, including information about past events, current conditions and reasonable and supportable forecasts of economic conditions at the reporting date is used in measuring ECL.
Application	Accounting policies generally make a distinction between individually significant loans and homogeneous groups of loans which are assessed collectively.	The distinction between individual and collective assessment is less relevant. In general, whether loans are managed through wholesale credit risk systems or retail credit risk systems is relevant because of differences in the types of information available and the way credit risk is managed.
Impaired/Stage 3	The criteria used to determine whether there is objective evidence of impairment are the same for individually significant loans assessed under IAS 39 and for IFRS 9.  The determination of the realisable value of security is based on the most recently updated market value at the time the impairment assessment is performed and is not adjusted for expected future changes in market prices.  Statistical methods are used to determine impairment losses on a collective basis for homogeneous groups of loans that are not considered individually significant using either roll rate methodologies or historical loss rate experience for loans. Under these methodologies, impairment allowances are recognised at a portfolio level. However, loans are classified as impaired for presentation purposes when they are more than 90 days past due or have been renegotiated for credit risk reasons. For retail loans, an exception is made for individual loans that are in arrears by more than 90 days but have been individually assessed to have no indications of impairment, and these are not classified as impaired.	The stage 3 population is consistent with impaired loans under IAS 39 which are considered individually significant.  For wholesale loans, individual discounted cash flow calculations continue to be performed. However, the net realisable value of security is adjusted for expected future changes in market and the losses reflecting cash flows under different scenarios are probability-weighted to determine the ECL rather than using the best estimate of cash flows.  For the retail population, stage 3 is determined by considering the relevant objective evidence, primarily whether contractual payments of either principal or interest are past due for more than 90 days, or a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition, or the loan is otherwise considered to be in default.  The impairment allowance is determined by the same calculation used for stage 2, with the probability of default set to 1. The result may, therefore, not be the same as that determined by the IAS 39 statistical methods and the population disclosed as stage 3 will not necessarily correspond with that disclosed as impaired in accordance with IAS 39.  The accounting policies setting out the criteria for loans to be transferred to stage 3 and for POCI financial assets are set out in policy (i) on page 17.
Stage 2	This is not an IAS 39 concept.	The accounting policies setting out the criteria for loans to be transferred to Stage 2 and the measurement of lifetime ECL are set out in policy (i) on page 17.
Stage 1	This is not an IAS 39 concept. However, incurred but not yet identified impairment is assessed loans for which no evidence of impairment has been specifically identified by estimating a collective allowance determined after taking into account factors including the estimated period between impairment occurring and the loss being identified. This is assessed empirically on a periodic basis and may vary over time. Similarly, for homogeneous groups of loans and advances which are assessed under IAS 39 on a collective basis, the inherent loss is determined using risk factors including the period of time between loss identification and write-off which is regularly benchmarked against actual outcomes.	Financial assets which are not considered to have significantly increased in credit risk have loss allowances measured at an amount equal to 12-month ECL. This 12-month time horizon is likely to be equal to or longer than the period estimated under IAS 39 (typically between 6 and 12 months). The measurement of 12-month ECL is set out in policy (i) on page 17.

## Reconciliation of consolidated balance sheet at 31 December 2017 and 1 January 2018

	Footnotes	IAS 39 measurement category	IFRS 9 measurement category	IAS 39 carrying amount at 31 Dec 2017 \$m	Other changes in classification \$m	IFRS 9 reclassification to			Carrying amount post reclassification \$m	IFRS 9 remeasurement including expected credit losses <sup>4</sup> \$m	IFRS 9 carrying amount at 1 Jan 2018 \$m
						Fair value through profit and loss \$m	Fair value through other comprehensive income \$m	Amortised cost \$m			
<b>Assets</b>											
Cash and balances at central banks		Amortised cost	Amortised cost	180,624	—	—	—	—	180,624	(3)	180,621
Items in the course of collection from other banks		Amortised cost	Amortised cost	6,628	—	—	—	—	6,628	—	6,628
Hong Kong Government certificates of indebtedness		Amortised cost	Amortised cost	34,186	—	—	—	—	34,186	—	34,186
Trading assets	1, 3	FVPL	FVPL	287,995	4,329	9	—	(37,924)	254,409	1	254,410
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	2,5,6,7	FVPL	FVPL	29,464	313	10,055	(3)	(115)	39,714	32	39,746
Derivatives		FVPL	FVPL	219,818	—	—	—	—	219,818	—	219,818
Loans and advances to banks	1, 2, 3	Amortised cost	Amortised cost	90,393	(7,099)	(712)	—	—	82,582	(23)	82,559
Loans and advances to customers	1, 2, 3	Amortised cost	Amortised cost	962,964	(7,458)	(3,903)	—	24	951,627	(1,890)	949,737
Reverse repurchase agreements – non-trading		Amortised cost	Amortised cost	201,553	—	—	—	—	201,553	—	201,553
Financial investments	5	FVOCI (Available for sale – debt instruments)	FVOCI	332,240	—	(3,131)	83	(7,026)	322,166	(3)	322,163
	6	FVOCI (Available for sale – equity instruments)	FVOCI	3,917	—	(2,104)	—	—	1,813	—	1,813
	5	Amortised cost	Amortised cost	52,919	—	—	(80)	7,141	59,980	(457)	59,523
Prepayments, accrued income and other assets	1, 7	Amortised cost	Amortised cost	67,191	9,915	(214)	—	37,900	114,792	(15)	114,777
Current tax assets		N/A	N/A	1,006	—	—	—	—	1,006	—	1,006
Interests in associates and joint ventures	8	N/A	N/A	22,744	—	—	—	—	22,744	(213)	22,531
Goodwill and intangible assets	9	N/A	N/A	23,453	—	—	—	—	23,453	(79)	23,374
Deferred tax assets		N/A	N/A	4,676	—	—	—	—	4,676	38	4,714
<b>Total assets</b>				<b>2,521,771</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,521,771</b>	<b>(2,612)</b>	<b>2,519,159</b>

For footnotes, see page 25.

## Reconciliation for consolidated balance sheet at 31 December 2017 and 1 January 2018 (continued)

		IAS 39 measurement category	IFRS 9 measurement category	IAS 39 carrying amount at 31 Dec 2017 \$m	Other changes in classification \$m	IFRS 9 reclassification to		Carrying amount post reclassification \$m	IFRS 9 remeasurement including expected credit losses <sup>4</sup> \$m	IFRS 9 carrying amount at 1 Jan 2018 \$m
						Fair value through profit and loss \$m	Fair value through other comprehensive income \$m			
	Footnotes									
<b>Liabilities</b>										
Hong Kong currency notes in circulation		Amortised cost	Amortised cost	34,186	—	—	—	34,186	—	34,186
Deposits by banks	1	Amortised cost	Amortised cost	69,922	(5,430)	—	—	64,492	—	64,492
Customer accounts	1	Amortised cost	Amortised cost	1,364,462	(4,235)	—	—	1,360,227	—	1,360,227
Repurchase agreements – non-trading		Amortised cost	Amortised cost	130,002	—	—	—	130,002	—	130,002
Items in the course of transmission to other banks		Amortised cost	Amortised cost	6,850	—	—	—	6,850	—	6,850
Trading liabilities	1, 11	FVPL	FVPL	184,361	(103,497)	—	—	80,864	—	80,864
Financial liabilities designated at fair value	9, 10, 11	FVPL	FVPL	94,429	59,267	—	—	(9,699)	9	144,006
Derivatives		FVPL	FVPL	216,821	—	—	—	216,821	—	216,821
Debt securities in issue	10	Amortised cost	Amortised cost	64,546	—	—	2,095	66,641	(105)	66,536
Accruals, deferred income and other liabilities	1, 10	Amortised cost	Amortised cost	45,907	53,895	—	—	99,926	—	99,926
Current tax liabilities		N/A	N/A	928	—	—	—	928	—	928
Liabilities under insurance contracts	9	N/A	N/A	85,667	—	—	—	85,667	(69)	85,598
Provisions		N/A	N/A	4,011	—	—	—	4,011	284	4,295
Deferred tax liabilities		N/A	N/A	1,982	—	—	—	1,982	(282)	1,700
Subordinated liabilities	10	Amortised cost	Amortised cost	19,826	—	—	—	7,480	(1,445)	25,861
<b>Total liabilities</b>				2,323,900	—	—	—	2,323,900	(1,608)	2,322,292

For footnotes, see page 25.

		IAS 39 carrying amount at 31 Dec 2017 \$m	IFRS 9 reclassification \$m	Carrying amount post reclassification \$m	IFRS 9 remeasurement including expected credit losses \$m	Carrying amount at 1 January 2018 \$m
	Footnote					
<b>Equity</b>						
Called up share capital		10,160	—	10,160	—	10,160
Share premium account		10,177	—	10,177	—	10,177
Other equity instruments		22,250	—	22,250	—	22,250
Other reserves	12	7,664	(960)	6,704	(61)	6,643
Retained earnings		139,999	960	140,959	(902)	140,057
<b>Total Shareholders Equity</b>		190,250	—	190,250	(963)	189,287
Non-controlling interests		7,621	—	7,621	(41)	7,580
<b>Total equity</b>		197,871	—	197,871	(1,004)	196,867

For footnotes, see page 25.

Reconciliation of impairment allowance under IAS 39 and provision under IAS 37 to expected credit losses under IFRS 9

IAS 39 measurement category	Reclassification to		Remeasurement			Total
	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Stage 3	Stage 1 & Stage 2	
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Financial assets at amortised cost</b>						
IAS 39 impairment allowance at 31 Dec 2017						<b>7,532</b>
Cash and balances at central banks	<b>Amortised cost (Loans and receivables)</b>	—	—	—	<b>3</b>	<b>3</b>
Items in the course of collection from other banks	<b>Amortised cost (Loans and receivables)</b>	—	—	—	—	—
Hong Kong Government certificates of indebtedness	<b>Amortised cost (Loans and receivables)</b>	—	—	—	—	—
Loans and advances to banks	<b>Amortised cost (Loans and receivables)</b>	—	—	<b>1</b>	<b>22</b>	<b>23</b>
Loans and advances to customers	<b>Amortised cost (Loans and receivables)</b>	(31)	—	<b>629</b>	<b>1,261</b>	<b>1,859</b>
Reverse repurchase agreements – non-trading	<b>Amortised cost (Loans and receivables)</b>	—	—	—	—	—
Financial investments	<b>Amortised cost (Held to maturity)</b>	—	<b>3</b>	—	<b>13</b>	<b>16</b>
Prepayments, accrued income and other assets	<b>Amortised cost (Loans and receivables)</b>	—	—	—	<b>47</b>	<b>47</b>
<b>Expected credit loss allowance at 1 Jan 2018</b>						<b>9,480</b>
<b>Loan commitments and financial guarantee contracts</b>						
IAS 37 provisions at 31 Dec 2017						<b>253</b>
Provisions (loan commitments and financial guarantees)	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>74</b>	<b>210</b>	<b>284</b>
<b>Expected credit loss provision at 1 Jan 2018</b>						<b>537</b>

The pre-tax net asset impact of additional impairment allowances on adoption of IFRS 9 is \$2,232m; \$1,948m in respect of financial assets at amortised cost and \$284m related to loan commitments and financial guarantee contracts. Total expected credit loss allowance at 1 January 2018 is \$9,480m in respect of financial assets at amortised cost and \$537m related to loan commitments and financial guarantee contracts.

## Footnotes to the Technical appendix

- <sup>1</sup> Cash collateral, margin and settlement accounts of \$37,900m have been reclassified from 'Trading assets' to 'Prepayments, accrued income and other assets' as a result of the assessment of business model in accordance with IFRS 9.  
Cash collateral, margin and settlement accounts previously presented as 'Loans and advances to banks' of \$5,939m and 'Loans and advances to customers' of \$3,976m have been represented in 'Prepayments, accrued income and other assets' to ensure consistent presentation of all such balances. Cash collateral, margin and settlement accounts previously presented as 'Trading liabilities' of \$44,230m, 'Deposits by banks' of \$5,430m and 'Customer accounts' of \$4,235m have been represented in 'Accruals, deferred income and other liabilities'. This change in presentation for financial liabilities is considered to provide more relevant information, given the change in presentation for the financial assets.
- <sup>2</sup> 'Loans and advances to customers' of \$3,903m and 'Loans and advances to banks' of \$712m did not meet the 'solely payments of principal and interest' ('SPPI') requirement for amortised cost classification under IFRS 9. As a result, these financial assets were reclassified to 'Financial assets designated and otherwise mandatorily measured at fair value through profit or loss'.
- <sup>3</sup> Stock borrowing assets of \$4,642m have been reclassified from 'Loans and advances to banks and customers' to 'Trading assets'. The change in measurement is a result of the determination of the global business model for this activity in accordance with IFRS 9 and will align the presentation throughout the Group.
- <sup>4</sup> IFRS 9 expected credit losses have decreased net assets by \$2,232m principally comprising of \$1,890m reduction in the carrying value of assets classified as 'Loans and advances to customers' and \$284m increase in 'Provisions' relating to expected credit losses on loan commitments and financial guarantee contracts.
- <sup>5</sup> Debt instruments of \$3,131m previously classified as available for sale under IAS 39 did not meet the SPPI requirement for FVOCI classification. As a result, these financial assets were classified as 'Financial assets designated and otherwise mandatorily measured at fair value through profit or loss' upon adoption of IFRS 9. Debt instruments of \$7,026m previously classified as available for sale under IAS 39, have been reclassified to amortised cost as a result of 'hold to collect' business model classification under IFRS 9. This resulted in a \$441m downward remeasurement of the financial assets now measured at amortised cost excluding expected credit losses.
- <sup>6</sup> \$2,104m of available for sale non-traded equity instruments have been reclassified as 'Financial assets designated and otherwise mandatorily measured at fair value through profit or loss' in accordance with IFRS 9. The Group has elected to apply the FVOCI option under IFRS 9 for the remaining \$1,813m.
- <sup>7</sup> \$214m of other financial assets measured at amortised cost under IAS 39 did not meet the SPPI requirement for amortised cost classification under IFRS 9. As a result, these financial assets were classified as 'Financial assets designated and otherwise mandatorily measured at fair value through profit or loss'.

- <sup>8</sup> 'Interests in associates and joint ventures' includes the consequential downward remeasurement of our interests in associates and joint ventures as a result of these entities applying IFRS 9 of \$213m. This estimate is subject to change.
- <sup>9</sup> Changes in the classification and measurement of financial assets held in our insurance business and the recognition of ECL under IFRS 9 has resulted in secondary impacts on the present value of in-force long-term insurance business ('PVIF') and liabilities to holders of insurance and investment contracts. The gross carrying value of PVIF reported in 'Goodwill and intangible assets' and liabilities reported in 'Liabilities under insurance contracts' has decreased by \$79m and \$69m respectively. Liabilities reported under 'Financial liabilities designated at fair value' have increased by \$9m.
- <sup>10</sup> As permitted by IFRS 9, fair value designations have been revoked for certain long-dated liabilities where the accounting mismatch will be better mitigated by undertaking fair value hedge accounting, resulting in reclassifications of \$7,110m from 'Financial liabilities designated at fair value' to 'Subordinated liabilities' measured at amortised cost and \$2,095m from 'Financial liabilities designated at fair value' to 'Debt securities in issue' measured at amortised cost. A further \$124m of associated accrued interest has been reclassified to 'Accruals, deferred income and other liabilities'. In addition, as required by IFRS 9, fair value designations have been revoked where accounting mismatches no longer exist, resulting in a further \$370m of 'Subordinated liabilities' being measured at amortised cost. Together, these changes result in the financial liabilities now being measured at amortised cost, decreasing 'Debt securities in issue' by \$105m and 'Subordinated Liabilities' by \$1,445m.
- <sup>11</sup> We have considered market practices for the presentation of \$59,267m of financial liabilities which contain both deposit and derivative components. We have concluded that a change in accounting policy and presentation from 'Trading liabilities' would be appropriate, since it would better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on our financial position and performance. As a result, rather than being classified as held for trading, we will designate these financial liabilities as at fair value through profit or loss since they are managed and their performance evaluated on a fair value basis.
- <sup>12</sup> While IFRS 9 ECL has no effect on the carrying value of FVOCI financial assets, which remain measured at fair value, the adoption of IFRS 9 results in a transfer from the FVOCI reserve (formerly AFS reserve) to retained earnings to reflect the cumulative impairment recognised in profit or loss in accordance with IFRS 9 (net of impairment losses previously recognised in profit or loss under IAS 39). The amount transferred from 'Other reserves' to 'Retained earnings' was \$61m. The resulting cumulative expected credit losses recognised in 'Retained earnings' on financial assets measured at FVOCI on adoption of IFRS 9 is \$184m. In addition, the cumulative AFS reserve relating to financial investments reclassified to 'Financial assets designated and otherwise mandatorily measured at fair value through profit or loss' in accordance with IFRS 9 has been transferred to retained earnings.

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## Cautionary statement regarding forward-looking statements

The *Report on Transition to IFRS 9 'Financial Instruments'* contains certain forward-looking statements with respect to HSBC's financial condition, results of operations and business.

Statements that are not historical facts, including statements about HSBC's beliefs and expectations, are forward-looking statements. Words such as 'expects', 'targets', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', variations of these words and similar expressions are intended to identify forward-looking statements. These statements are based on current plans, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made. HSBC makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements.

Written and/or oral forward-looking statements may also be made in the periodic reports to the US 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. These include, but are not limited to:

- Changes in general economic conditions in the markets in which we operate, such as continuing or deepening recessions and fluctuations in employment beyond those factored into consensus forecasts; changes in foreign exchange rates and interest rates; volatility in equity markets; lack of liquidity in wholesale funding markets; illiquidity and downward price pressure in national real estate markets; adverse changes in central banks' policies with respect to the provision of liquidity support to financial markets; heightened market concerns over sovereign creditworthiness in over-indebted countries; adverse changes in the funding status of public or private defined benefit pensions; and consumer perception as to the continuing availability of credit and price competition in the market segments we serve.

- Changes in government policy and regulation, including the monetary, interest rate and other policies of central banks and other regulatory authorities; initiatives to change the size, scope of activities and interconnectedness of financial institutions in connection with the implementation of stricter regulation of financial institutions in key markets worldwide; revised capital and liquidity benchmarks which could serve to deleverage bank balance sheets and lower returns available from the current business model and portfolio mix; imposition of levies or taxes designed to change business mix and risk appetite; the practices, pricing or responsibilities of financial institutions serving their consumer markets; expropriation, nationalisation, confiscation of assets and changes in legislation relating to foreign ownership; changes in bankruptcy legislation in the principal markets in which we operate and the consequences thereof; general changes in government policy that may significantly influence investor decisions; extraordinary government actions as a result of current market turmoil; other unfavourable political or diplomatic developments producing social instability or legal uncertainty which in turn may affect demand for our products and services; the costs, effects and outcomes of product regulatory reviews, actions or litigation, including any additional compliance requirements; and the effects of competition in the markets where we operate including increased competition from non-bank financial services companies, including securities firms.
- Factors specific to HSBC, including our success in adequately identifying the risks we face, such as the incidence of loan losses or delinquency, and managing those risks (through account management, hedging and other techniques). Effective risk management depends on, among other things, our ability through stress testing and other techniques to prepare for events that cannot be captured by the statistical models it uses; and our success in addressing operational, legal and regulatory, and litigation challenges; and other risks and uncertainties we identify in 'top and emerging risks' on pages 63 to 66 of the *Annual Report and Accounts 2017*.

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