28 March 2018

Standard Chartered PLC – Transition to IFRS 9

On 1 January 2018, the Group (Standard Chartered PLC and its subsidiaries) adopted International Financial Reporting Standard 9 *Financial Instruments* (IFRS 9). IFRS 9 replaces IAS 39 *Financial Instruments: Recognition and Measurement* and introduces new requirements for: the classification and measurement of financial instruments, the recognition and measurement of credit impairment provisions, and provides for a simplified approach to hedge accounting.

Summary impact on transition from IAS 39 to IFRS 9 as at 1 January 2018

- Total equity decreases by an estimated $1.1 billion at 1 January 2018, from $51.8 billion to $50.7 billion. Tangible net asset value per share reduced by 32.6 cents to 1,182.1 cents.

- In line with previous guidance, the estimated decrease in the Common Equity Tier 1 (CET1) capital ratio is around 15 basis points after considering the offset against existing regulatory expected losses. Under transitional rules[1], the day one impact on the CET1 ratio is negligible.

- $1.2 billion of the net impact to equity was due to the adoption of the expected credit loss (ECL) approach for impairment provisions, partly offset by the tax benefit from the IFRS 9 adjustments and re-measurement of assets reclassified to fair value.

- Loan loss provisions against loans to banks and customers (net of reclassifications of $0.2 billion) increased by $1.0 billion[2] from $5.7 billion to $6.7 billion.

- Limited impact from reclassification and remeasurement.

- IAS 39 hedge accounting is retained.

[1] See page 6 which sets out the requirements for transitional capital relief.

[2] Includes undrawn commitments. See page 7 which provides a reconciliation of IAS 39 loan loss provisions to those under IFRS 9.

Presentation of financial information at 1 January 2018 following the adoption of IFRS 9 *Financial Instruments*

This document explains the impact for the Group as at 1 January 2018 following the adoption of IFRS 9 and provides:

- Quantitative information to reconcile impairment provisions, key risk metrics and the classification and measurement of financial instruments under IAS 39 to IFRS 9;
- The effect of IFRS 9 on significant accounting policies, credit risk policies and practices, and related governance processes;
- Explanation of the inputs, assumptions and estimation techniques used in determining expected credit losses and the key judgements made in applying IFRS 9;
- Qualitative information regarding volatility and areas of measurement uncertainty; and
- Supplementary quantitative information on credit risk and the classification and measurement of financial instruments in IFRS 9 terms.

Basis of preparation

This document has been prepared in accordance with the requirements of IFRS 9. As permitted, the Group has elected to apply the following transition options:

- To continue to apply IAS 39 hedging requirements rather than those of IFRS 9. The Group will, however, adopt the revised disclosures set out in the amendments to IFRS 7, *Financial Instruments: Disclosures*, which include those relating to hedge accounting;
- To designate $38 billion of repurchase agreements, previously held at amortised cost, from 1 January 2018 as being measured at fair value through profit or loss (FVTPL);
- Not to restate comparative periods on the basis that it is not possible to do so without the use of hindsight.

In October 2017, the IASB published an amendment to IFRS 9, *Prepayment Features with Negative Compensation*, which is effective from 1 January 2019, with earlier application permitted. This has not yet been endorsed by the EU. The amendment changes the existing requirements to allow measurement at amortised cost (or fair value through other comprehensive income) even in the case of negative compensation payments. This is not expected to have a material impact on the Group.

The information in this document does not constitute statutory accounts within the meaning of section 434 of the Companies Act 2006. This document is unaudited.

Q1 2018 Interim Management Statement

Standard Chartered's Interim Management Statement for the three months ending 31 March 2018 will be announced on Wednesday, 2 May 2018 at 10:00am in the UK. The Group's results will be reported on the basis described above.

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Background

Classification and Measurement

IFRS 9 requires that the classification of financial asset debt instruments is determined based on the business models that the Group has in place for managing those assets as at 1 January 2018.

For those assets that are not held for trading or managed on a fair value basis, a further assessment has been undertaken of the contractual cash flows that were in place at the time of origination of the assets to determine if they are consistent with those of a basic lending arrangement. That is, whether they have cash flows that are solely payments of principal and interest (SPPI).

Where the cash flows are consistent with SPPI, assets are classified at amortised cost or at fair value through other comprehensive income (FVOCI).

Where assets do not have SPPI consistent cash flows, or where they are held for trading or managed on a fair value basis, they have been classified and measured at FVTPL.

Following the initial classification of financial assets, they can only be reclassified to another measurement category if there is a change in the business model.

Impairment

IFRS 9 introduces a new impairment model that requires the recognition of expected credit losses rather than incurred losses under IAS 39 on all financial debt instruments held at amortised cost, FVOCI, undrawn loan commitments and financial guarantees.

Financial instruments that are not already credit-impaired are originated into stage 1 and a 12 month expected credit loss provision is recognised. Instruments will remain in stage 1 until they are repaid, unless they experience significant credit deterioration (stage 2) or they become credit-impaired (stage 3).

Instruments will transfer to stage 2 and a lifetime expected credit loss provision recognised when there has been a significant change in the credit risk compared to what was expected at origination. The framework used to determine a significant increase in credit risk is set out on pages 13 to 14.

Instruments are classified as stage 3 when they become credit-impaired.

A summary of the key accounting policy differences between IFRS 9 and IAS 39 in respect of classification and measurement and impairment is set out in note 41 to the Group's 2017 Annual Report.

Contents

Forward-looking statements

This document may contain 'forward-looking statements' that are based on current expectations or beliefs, as well as assumptions about future events. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements often use words such as 'may', 'could', 'will', 'expect', 'intend', 'estimate', 'anticipate', 'believe', 'plan', 'seek', 'continue' or other words of similar meaning. By their very nature, such statements are subject to known and unknown risks and uncertainties and can be affected by other factors that could cause actual results, and the Group's plans and objectives, to differ materially from those expressed or implied in the forward-looking statements. Recipients should not place reliance on, and are cautioned about relying on, any forward-looking statements. There are several factors which could cause actual results to differ materially from those expressed or implied in forward-looking statements. The factors that could cause actual results to differ materially from those described in the forward-looking statements include (but are not limited to) changes in global, political, economic, business, competitive, market and regulatory forces or conditions, future exchange and interest rates, changes in tax rates, future business combinations or dispositions and other factors specific to the Group. Any forward-looking statement contained in this document is based on past or current trends and/or activities of the Group and should not be taken as a representation that such trends or activities will continue in the future.

No statement in this document is intended to be a profit forecast or to imply that the earnings of the Group for the current year or future years will necessarily match or exceed the historical or published earnings of the Group. Each forward-looking statement speaks only as of the date of the particular statement. Except as required by any applicable laws or regulations, the Group expressly disclaims any obligation to revise or update any forward-looking statement contained within this document, regardless of whether those statements are affected as a result of new information, future events or otherwise.

SECTION 1: SUMMARY IMPACT OF IFRS 9 ON SHAREHOLDERS’ EQUITY, THE BALANCE SHEET AND CET1 CAPITAL

Estimated impact of IFRS 9 on shareholders’ equity

We estimate that the changes in measurement arising on the initial adoption of IFRS 9 result in a decrease in shareholders’ equity of $1.1 billion (net of tax) at 1 January 2018. The Group continues to refine its expected credit loss models and embed its operational processes which may change the actual impact on adoption.

The estimated impact of the re-measurement and reclassifications and the changes to the recognition and measurement of credit impairment loss provisions, net of the related tax, is set out by category of reserve in the table below.

	Share capital and share premium account $million	Capital and merger reserves $million	Own credit adjust-ment reserve $million	Available -for-sale reserve $million	Fair value through OCI reserve $million	Cash flow hedge reserve $million	Trans-lation reserve $million	Retained earnings $million	Parent company share-holders' equity $million	Other equity instrum-ents $million	Non-controll-ing interests $million	Total $million
As at 31 December 2017	**7,097**	**17,129**	**54**	**83**	**-**	**(45)**	**(4,454)**	**26,641**	**46,505**	**4,961**	**341**	**51,807**
Net impact of:	-	-	-	(83)	(82)	-	-	200	**35**	-	-	**35**
IFRS 9 reclassifications[1]	-	-	-	(83)	(86)	-	-	169	**-**	-	-	**-**
IFRS 9 re-measurements[2]	-	-	-	-	4	-	-	31	**35**	-	-	**35**
Expected credit loss, net[3]	-	-	-	-	65	-	-	(1,296)	**(1,231)**	-	(8)	**(1,239)**
Tax impact[4]	-	-	-		(6)	-	-	182	**176**	-	-	**176**
Impact of IFRS 9 on share of joint ventures and associates, net of tax	-	-	-	-	(1)	-	-	(51)	**(52)**	-	-	**(52)**
Estimated IFRS 9 transition adjustments	-	-	-	(83)	(24)	-	-	(965)	**(1,072)**	-	(8)	**(1,080)**
As at 1 January 2018	**7,097**	**17,129**	**54**	**-**	**(24)**	**(45)**	**(4,454)**	**25,676**	**45,433**	**4,961**	**333**	**50,727**

[1] Available-for-sale category has been removed under IFRS 9. Unrealised gains and losses have been transferred to fair value through other comprehensive income (FVOCI) reserves, or retained earnings where the instruments are held as FVTPL. The Group has elected to hold $210 million of equity investments at FVOCI. These principally relate to investments held for strategic purposes, including investments in industry utilities. Fair value gains and losses arising on these investments are held within the FVOCI reserve, and are never recycled to the income statement. Only dividend income received is reported in the income statement. The FVOCI reserve includes a $187 million loss in respect of equity securities designated as FVOCI, partly offset by $18 million gain on debt securities designated as FVOCI. See page 5 and 20 for a more detailed analysis by balance sheet heading.

[2] The remeasurement impact of financial assets that are now measured at fair value under IFRS 9. See page 5 and 20 for a more detailed analysis by balance sheet heading.

[3] Impact from adopting expected credit losses. Gross impact is estimated at $1,304 million (comprising of $1,296 million in retained earnings and $8 million in non-controlling interests). As FVOCI debt instruments are held at fair value on the balance sheet, the expected credit loss charged to retained earnings is recognised as a credit to the FVOCI reserve. The net FVOCI reserve relating to FVOCI debt instruments will be recycled to the income statement on disposal of the instruments. See page 7 for further details on the ECL provisions.

[4] Tax of $176 million has been credited to reserves as a result of transition to IFRS 9. Of this, deferred tax of $142 million has been credited to retained earnings, and is provided on additional deductible temporary differences that have arisen from loss provisions due to initial adoption of the ECL approach.

Consolidated balance sheet

As at 1 January 2018 (incorporating IFRS 9 adjustments)

The table below sets out the estimated impact of adopting IFRS 9 on the Group's balance sheet.

	IAS 39 31 December 2017 $million	Classification & Measurement[1] $million	Expected Credit Losses[2] $million	Other impacts[3] $million	IFRS 9 1 January 2018 $million
Cash and balances at central banks	58,864	-	-	-	58,864
Financial assets held at fair value through profit or loss	27,564	47,076	-	-	74,640
Derivative financial instruments	47,031	-	-	-	47,031
Loans and advances to banks	57,494	(293)	(7)	-	57,194
Loans and advances to customers	248,707	(951)	(965)	-	246,791
Reverse repurchase agreements and other similar secured lending	54,275	(44,608)	-	-	9,667
Investment securities	117,025	(1,193)	(19)	-	115,813
Other assets	33,490	-	-	-	33,490
Current tax assets	491	-	-	1	492
Prepayments and accrued income	2,307	-	-	-	2,307
Interests in associates and joint ventures	2,307	-	-	(52)	2,255
Goodwill and intangible assets	5,013	-	-	-	5,013
Property, plant and equipment	7,211	-	-	-	7,211
Deferred tax assets	1,177	-	-	128	1,305
Assets classified as held for sale	545	-	-	-	545
Total assets	**663,501**	**31**	**(991)**	**77**	**662,618**
Deposits by banks	30,945	-	-	-	30,945
Customer accounts	370,509	-	-	-	370,509
Repurchase agreements and other similar secured borrowing	39,783	(38,144)	-	-	1,639
Financial liabilities held through profit or loss	16,633	38,140	-	-	54,773
Derivative financial instruments	48,101	-	-	-	48,101
Debt securities in issue	46,379	-	-	-	46,379
Other liabilities	35,257	-	-	-	35,257
Current tax liabilities	376	-	-	(10)	366
Accruals and deferred income	5,493	-	-	-	5,493
Subordinated liabilities and other borrowed funds	17,176	-	-	-	17,176
Deferred tax liabilities	404	-	-	(37)	367
Provisions for liabilities and charges	183	-	248	-	431
Retirement benefit obligations	455	-	-	-	455
Liabilities included in disposal groups held for sale	-	-	-	-	-
Total liabilities	**611,694**	**(4)**	**248**	**(47)**	**611,891**
Share capital and share premium account	7,097	-	-	-	7,097
Other reserves	12,767	(165)	65	(7)	12,660
Retained earnings	26,641	200	(1,296)	131	25,676
Total parent company shareholders' equity	**46,505**	**35**	**(1,231)**	**124**	**45,433**
Other equity instruments	4,961	-	-	-	4,961
Total equity excluding non-controlling interests	**51,466**	**35**	**(1,231)**	**124**	**50,394**
Non-controlling interests	341	-	(8)	-	333
Total equity	**51,807**	**35**	**(1,239)**	**124**	**50,727**
Total equity and liabilities	**663,501**	**31**	**(991)**	**77**	**662,618**

[1] Classification and measurement reclassifications primarily relate to repurchase agreements, which have been reclassified from amortised cost to fair value through profit and loss. Limited impact from re-measurement. See page 20 for further details.

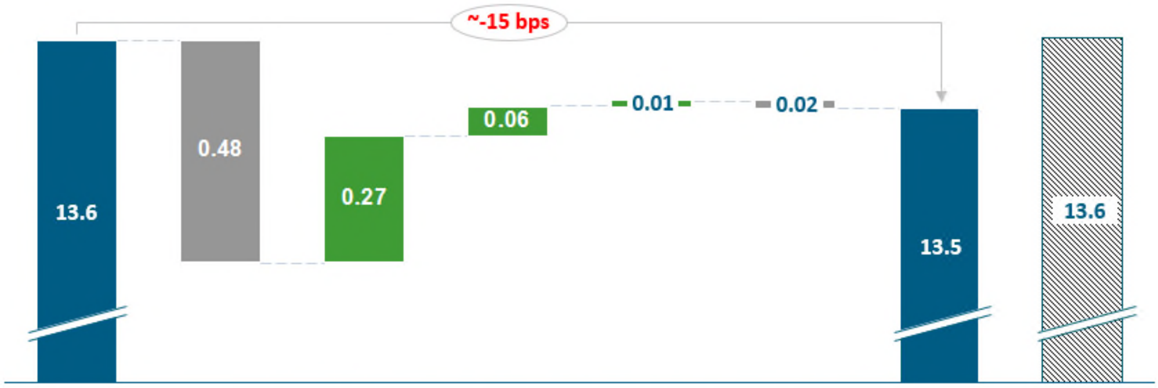
[2] Impact of additional expected loss provisions. See page 7 for further details.

[3] Includes the change in the Group's share of net assets from associates and joint ventures from adopting IFRS 9, and the tax impacts of the IFRS 9 adjustments.

Consolidated CET1 ratio

On adoption of IFRS 9, it is estimated that the Group’s CET1 capital base would be $362 million lower than under IAS 39, before any regulatory transitional relief, which equates to a reduction of around 15 basis points in the CET1 ratio from 13.6 per cent under IAS 39 to 13.5 per cent under IFRS 9. There is no impact on the Group’s leverage ratio, which remains at 6.0 per cent.

The following chart sets out the main reconciling items:



	Dec’17	Incremental Impairment	Excess EL shield	Tax credit	Classification & Measurement	RWA	Day 1 Fully-Loaded	Transitional
CET1 ($m)	38,162	(1,329)	760	176	31		37,800	38,202
RWA ($m)	279,748					318	280,066	279,921

‘Incremental impairment’ includes ECL attributable to joint ventures and associates. The ‘Excess EL shield’ of $760 million relates to the incremental IFRS 9 ECL recognised in respect of advanced Internal Ratings Based (IRB) portfolios. IRB excess EL of $340 million remains on these portfolios.

Impact of regulatory transitional relief

Transitional relief relates to the phasing in of the impact of the initial adoption of the ECL component of IFRS 9 into CET1, as permitted by Regulation (EU) 2017/2395 of the European Parliament and of the Council.

Under this approach, the balance of ECL provisions in excess of the regulatory defined EL and additional ECL on standardised portfolios, net of related tax, are phased into the CET1 capital base over five years.

The proportion phased in for the balance at each reporting period is: 2018, 5 per cent; 2019, 15 per cent; 2020, 30 per cent; 2021, 50 per cent; and 2022, 75 per cent. From 2023 onwards there is no transitional relief.

The application of the transitional relief results in a negligible effect on the CET1 ratio as the capital impact of ECL on the standardised portfolio, net of tax, has been largely offset. As there is no capital impact from additional provisions on advanced IRB portfolios, the related deferred tax asset continues to be recognised in full in CET1.

SECTION 2: IMPACT OF EXPECTED CREDIT LOSSES

Total impairment loss provisions increased by an estimated $1.0 billion from $5.9 billion to $6.9 billion under IFRS 9 compared to impairment provisions under IAS 39. As set out in the table below, this comprises:

- an estimated increase in expected credit loss provisions of $1.3 billion;
- a reduction from a reclassification of $231 million of IAS 39 individual impairment provisions to FVTPL on reclassification of the related instruments;
- and a reduction from a reclassification of $65 million of individual impairment provisions in respect of credit-related loan modifications which is now netted directly against the gross loan balance.

	Debt securities $million	FVOCI Debt securities $million	Loans to banks $million	Loans to customers $million	Provisions for liabilities and charges: Undrawn commitments $million	Provisions for liabilities and charges: Guarantees $million	Total $million
Total IAS 39 loss provisions	**114**	**-**	**5**	**5,702**[1]	**2**[1]	**77**	**5,900**
Reclassifications:							
Loss provisions reclassified to FVTPL	(109)	-	-	(122)	-	-	(231)
Modification losses netted against gross exposure	-	-	-	(65)	-	-	(65)
Adjusted IAS 39 loss provisions	**5**	**-**	**5**	**5,515**	**2**	**77**	**5,604**
Additional ECL provisions	19	65	7	965	226	22	1,304
Total IFRS 9 impairment provisions	**24**	**65**	**12**	**6,480**[2]	**228**[2]	**99**	**6,908**
Estimated net ECL movement	*(90)*	*65*	*7*	*778*	*226*	*22*	*1,008*

[1] Total IAS39 loss allowances applied to loans and advances to customers as reported in the next table ($5.7 billion)
[2] Total IFRS 9 expected credit losses applied to loans and advances to customers as reported in the next table ($6.7 billion).

The table below sets out a comparison of impairment loss provisions under IAS 39 to those under IFRS 9.

	1 January 2018							
	Loss provisions per IAS 39			Expected credit loss per IFRS 9				
Expected credit losses impact	Portfolio impairment provisions $million	Individual impairment provisions $million	Total $million	Stage 1 $million	Stage 2 $million	Stage 3 $million	Total $million	Increase/ (decrease) $million
Corporate & Institutional Banking	156	3,466	**3,622**	120	576	3,433	**4,129**	**507**
Retail Banking	208	275	**483**	357	220	391	**968**	**485**
Commercial Banking	99	1,431	**1,530**	39	99	1,369	**1,507**	**(23)**
Private Banking	2	67	**69**	8	1	91	**100**	**31**
Central & Other items	-	-	**-**	4	**-**	-	**4**	**4**
Total loans and advances to customers[1]	465	5,239	**5,704**	528	896	5,284	**6,708**	**1,004**
Loans and advances to banks	1	4	**5**	6	2	4	**12**	**7**
Financial guarantees	-	77	**77**	6	16	77	**99**	**22**
Debt securities and other eligible bills - amortised cost	-	114	**114**	3	16	5	**24**	**(90)**
Debt securities and other eligible bills – FVOCI	-	-	**-**	23	42	**-**	**65**	**65**
Total	**466**	**5,434**	**5,900**	**566**	**972**	**5,370**	**6,908**	**1,008**

[1] Includes undrawn commitments

Of the estimated $1.3 billion increase in ECL provisions, approximately $1.1 billion relates to stage 1 and 2 and $0.2 billion to stage 3. While approximately 8 per cent of the Group's gross loans and advances to customers, held at amortised cost, is classified as stage 2 (see page 16), the impact on ECL has been moderated by the relatively short tenor of the Corporate & Institutional Banking loan book.

The biggest contributors to the increase in impairment loss provisions under IFRS 9 are:

- Retail Banking up $485 million, primarily due to the requirement to hold a 12 month ECL provision and the impact of a longer expected life for credit cards; and
- Corporate & Institutional Banking, up $507 million primarily within the Lending and Corporate Finance portfolios, due to longer tenor balances relative to other businesses.

IFRS 9 also increases the scope of instruments captured by stage 1 and 2 loss provisions, extending this to cover undrawn commitments, financial guarantees and debt instruments classified as FVOCI. This has increased ECL by approximately $0.3 billion relative to IAS 39.

Stage 3 ECL provisions are lower compared to IAS 39 individual impairment provisions (IIP), mainly due to the reclassifications noted on page 7. Excluding these, stage 3 provisions increased by $0.2 billion reflecting:

- the inclusion of Retail Banking loans more than 90 days past due. These loans were classified as non-performing under IAS 39, with impairment captured through portfolio impairment provisions (PIP);
- the inclusion of the Retail Banking debt recovery portfolio, which was also captured through PIP;
- additional loss provisions for credit-impaired Corporate & Institutional Banking, Commercial Banking and Private Banking loans managed by Group Special Asset Management (GSAM) to align to a probability-weighted loan loss provisioning approach.

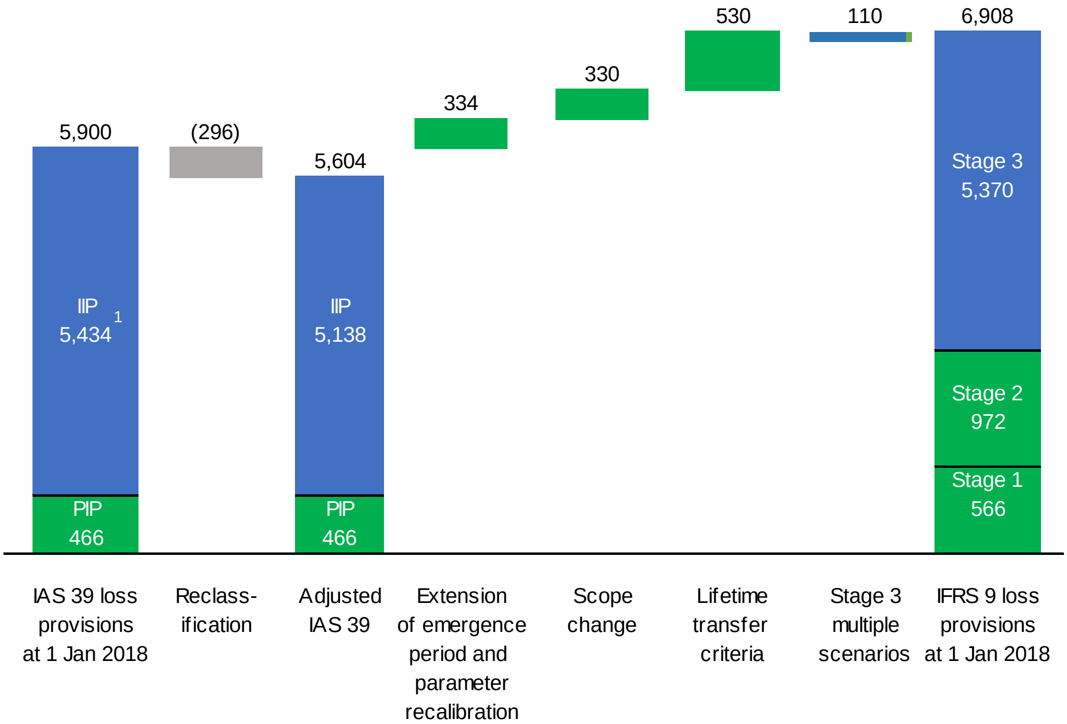
All credit-impaired forborne loans are included within stage 3 under IFRS 9. This includes $0.3 billion of Retail Banking forborne loans that were previously reported within the performing book at 31 December 2017.

Reconciliation of total IAS 39 loss provisions to IFRS 9 loss provisions

A reconciliation of total impairment loss provisions under IAS 39 to those under IFRS 9 loss is set out below, showing the key factors driving the increase in loss provisions.

The largest factor driving the increase relative to IAS 39 is the extension to cover 12 months of expected credit losses. The impact from multiple economic scenarios (to capture the non-linearity in ECL) on stage 1 and 2 expected credit loss provisions is approximately $42 million (see page 13).

Movement from IAS 39 to IFRS 9 loss provisions ($m)



1 Includes $77m of provisions reported under 'Provisions for liabilities and charges'

The table below sets out a summary of what each key driver relates to:

Components	Description
IAS 39 loss provisions (PIP and IIP)	IAS 39 portfolio impairment provisions (PIP) and individual impairment provisions (IIP) at 1 January 2018.
Reclassification	Represents transfers of IAS 39 IIP on assets reclassified to FVTPL and modification losses now reported as a reduction of principal.
Extension of emergence period and parameter recalibration	Increase from PIP emergence period to cover up to a 12-month period (stage 1). The removal of conservatism and other adjustments (see page 14).
Scope change	Extending the scope of financial assets to include undrawn lending commitments, debt securities and financial guarantees.
Stage 2 transfer criteria	Increase associated with accounts being classified as Stage 2 and the recognition of lifetime ECL.
Stage 3 multiple scenarios	Increase in stage 3 provisions compared to IIP under IAS 39 as a result of applying a probability weighted approach rather than reflecting the most likely outcome.
IFRS 9 loss provisions	Total IFRS 9 ECL provisions at 1 January 2018.

Impact on non-performing loan cover ratios

An important credit risk metric used by the Group is the non-performing loans (NPL) cover ratio. For reporting up to 31 December 2017 under IAS 39, this ratio represented the ratio of total individual and portfolio impairment loan loss provisions to the gross NPLs by client segment.

Following the adoption of IFRS 9, this ratio is expressed as the ratio of stage 3 provisions to stage 3 loans. The definition of gross NPLs has been aligned to the definition for stage 3 loans and the table below sets out a reconciliation of NPLs under IAS 39 to stage 3 loans under IFRS 9 by segment and the impact on the cover ratios.

Non-performing / stage 3 loans to customers and banks[1]	Corporate & Institutional Banking $million	Retail Banking $million	Commercial Banking $million	Private Banking $million	Total $million
Gross					
At 31 December 2017	5,957	489	2,026	207	8,679
Modification losses netted against gross exposure	(39)	-	(26)	-	(65)
Performing forborne (impaired)	-	329	-	-	329
Reclassified to FVTPL	(62)	-	(40)	-	(102)
At 1 January 2018 stage 3	**5,856**	**818**	**1,960**	**207**	**8,841**
Credit impairment provisions					
At 31 December 2017 (IAS 39 IIP)	3,468	215[2]	1,431	67	5,181
Modification losses netted against gross exposure	(39)	-	(26)	-	(65)
Performing forborne (impaired)	-	60	-	-	60
Reclassified to FVTPL	(81)	-	(40)	-	(121)
Additional ECL	1	116	6	-	123
GSAM multiple scenario provisions	88	-	(2)	24	110
At 1 January 2018 (Stage 3)	**3,437**	**391**[2]	**1,369**	**91**	**5,288**
IAS 39 PIP at 31 December 2017	157	208	99	2	466
Collateral at 31 December 2017	1,111	218	277	203	1,809
Non-performing / stage 3 cover ratios:					
At 31 December 2017 (IAS 39)	61%	87%	75%	33%	65%
At 31 December 2017 (IAS 39, excluding PIP)	58%	44%	71%	32%	60%
At 1 January 2018 (IFRS 9)	**59%**	**48%**	**70%**	**44%**	**60%**
At 31 December 2017 (IAS 39, including collateral)	77%	89%	84%	100%	81%
At 1 January 2018 (IFRS 9, including collateral)	**78%**	**74%**	**84%**	**100%**	**80%**
Of the above, included in the liquidation portfolio:					
Gross	1,945	-	125	156	2,226
Individual impairment provisions (IAS 39)	*1,388*	-	*123*	*62*	*1,573*
Additional credit impairment provisions (IFRS 9)	*29*	-		*24*	*53*
At 1 January 2018 (Stage 3)	1,417		123	86	1,626
Cover ratios:					
At 31 December 2017 (IAS 39)	71%	-	98%	40%	71%
At 1 January 2018 (IFRS 9)	**73%**	-	**98%**	**55%**	**73%**
At 31 December 2017 (IAS 39, including collateral)	84%	-	98%	100%	86%
At 1 January 2018 (IFRS 9, including collateral)	**85%**	-	**98%**	**100%**	**88%**

[1]Includes FVTPL impaired loans.

[2]Under IAS 39, Retail Banking non-performing loans excluded those impaired loans classified as performing.

- The Private Banking cover ratio is higher at 44 per cent as a result of aligning to a probability weighted provisioning approach under IFRS 9.

- The Retail Banking cover ratio including collateral is 74 per cent under IFRS 9 compared to 89 per cent under IAS 39 primarily due to the inclusion of $329 million of unsecured forborne loans previously reported as performing.

SECTION 3: ECL KEY ASSUMPTIONS AND JUDGEMENTS

Incorporation of forward looking information and the impact of non-linearity

The evolving economic environment is a key determinant of the ability of a bank's clients to meet their obligations as they fall due. It is a fundamental principle of IFRS 9 that the provisions banks hold against potential future credit risk losses should depend not just on the health of the economy today, but should also take account of changes to the economic environment in the future. For example, if a bank expected a sharp slowdown in the world economy was likely over the coming year, it should hold more provisions today to ensure it was able to absorb credit losses that would be likely to occur in the near future.

To capture the effect of changes to the economic environment in the future, the computation of probability of default (PD), loss given default (LGD) and so ECL incorporates forward-looking information; assumptions on the path of economic variables and asset prices that are likely to have an effect on the repayment ability of the Group's clients. For example, economic variables specific to individual countries are such as economic growth, interest rates, unemployment rates, property prices, and prices of assets that trade on global markets such as oil, industrial metals and other commodities. Less sophisticated approaches, such as loss rate models, do not directly incorporate forward looking information.

The starting point for the projections of economic variables and asset prices is based on management's view, which underlies the plan to deliver the Group's strategy and ensures it has sufficient capital over the medium term.

Management's view covers a core set of economic variables and asset prices required to set the strategic plan. To reach the full set of economic variables and asset prices required to compute ECL for all the Group's clients in all the Group's footprint markets, management's view is augmented with projections from the Group's in-house research team and outputs from a range of models that project specific economic variables and asset prices.

Forecast of key macroeconomic variables underlying the ECL calculation

The base forecast – management's view of the most likely outcome - is that the synchronised expansion of the global economy will continue over the coming years alongside a normalisation of monetary policy in the developed world and the successful rebalancing of the Chinese economy.

While the most likely outcome is the basis for the bank's strategic plan, one of the key requirements of IFRS 9 is that the assessment of provisions should be based on a range of potential outcomes for the future economic environment. For example, the global economy may grow more quickly or more slowly than the most likely outcome and this would be expected to have different implications for the provisions that the bank should hold today. As the bank's clients tend to be more affected when the economic environment weakens than when it strengthens, it is possible that the range of ECL outcomes resulting from a range of scenarios around the most likely scenario may be skewed to the downside. So, if the bank computes ECL uniquely on the basis of the most likely outcome, it might not end up with the appropriate level of provisions. This is the concept of non-linearity in ECL under IFRS 9.

To address the potential non-linearity in ECL, the Group simulates a set of scenarios around the base forecast and generates 50 scenarios upon which to compute ECL. These scenarios are generated by a Monte Carlo simulation, which considers the degree of uncertainty (or volatility) around economic outcomes, how these outcomes have generally tended to move together (or correlation), and how the range of reasonably possible outcomes would be defined.

While the 50 scenarios do not each have a specific narrative, they reflect a range of plausible hypothetical alternative outcomes for the global economy. Some are better than the base forecast and represent an unwinding of the current shocks and uncertainty leading to higher global economic activity and higher asset prices. Some are worse than the base forecast and represent an intensification of current shocks or introduction of new shocks that raise uncertainty leading to lower global economic activity and lower asset prices.

The table below sets out a representative summary of the economic variables and asset prices that the Group considers to be among the most important determinants of the Group's ECL. The key data provided is the average expected outturn for each economic variable and asset price in the base forecast over the next 5 years (2018 - 2022) in the most likely scenario and an indicator of the range of each economic variable and asset price over the same period across the multiple scenarios.

	Mainland China			**Hong Kong**			**Korea**			**Singapore**			**India**		
	Base forecast	**Low[2]**	**High[3]**	**Base forecast**	**Low[2]**	**High[3]**	**Base forecast**	**Low[2]**	**High[3]**	**Base forecast**	**Low[2]**	**High[3]**	**Base forecast**	**Low[2]**	**High[3]**
GDP growth (YoY%)	6.1	4.5	7.6	3.0	0.3	5.4	2.9	0.8	5.6	2.3	(2.0)	6.1	7.5	5.4	9.7
Unemployment (%)	4.0	3.8	4.2	3.6	2.4	4.8	3.3	2.5	4.6	2.8	2.2	3.5	N/A[1]	N/A[1]	N/A[1]
3 month interest rates (%)	4.2	2.9	5.6	1.7	1.0	3.7	2.3	1.4	4.3	1.7	1.2	3.9	6.2	5.3	9.0
House prices (YoY%)	5.4	3.5	8.0	2.0	(7.5)	12.3	3.5	1.4	6.0	3.8	(1.8)	9.2	8.5	1.3	15.5

	Crude Oil		
	Base forecast	**Low[2]**	**High[3]**
Brent, USD pb	61.0	35.0	92.0

[1]Not available.

[2] Represents the 10th percentile in the range used to determine non-linearity.

[3] Represents the 90th percentile in the range used to determine non-linearity.

The final ECL reported by the Group is a simple average of the 50 scenarios. The impact of non-linearity on ECL is set out in the table below:

	Including non-linearity	Excluding non-linearity	Difference
	$m	$m	%
Total ECL[1]	1,661	1,619	2.6%

[1] Total modelled ECL comprises stage 1 and stage 2 balances of $1,538 million and $123 million of modelled ECL on stage 3 loans

The average ECL under multiple scenarios is 2.6 per cent higher than the ECL computed using only the most likely scenario. Portfolios that are more sensitive to non-linearity include those with a longer tenor, such as Project and Shipping Finance, and credit card portfolios.

Credit-impaired assets managed by GSAM incorporate forward looking economic assumptions in respect of the recovery outcomes identified. These assumptions are not based on a Monte Carlo simulation but are informed by the base case.

Assessing significant increases in credit risk (SICR)

Significant deterioration is assessed by comparing the risk of default at the reporting date to the risk of default at origination. Whether a change in the risk of default is significant or not is assessed using quantitative and qualitative criteria. These quantitative significant deterioration thresholds have been separately defined for each business and where meaningful are consistently applied across business lines.

Assets are considered to have experienced significant credit deterioration if they have breached both relative and absolute thresholds for the change in the average annualised lifetime probability of default over the residual term of the exposure.

The absolute measure of increase in credit risk is used to capture instances where the PDs on exposures are relatively low at initial recognition as these may increase by several multiples without representing a significant increase in credit risk. Where PDs are relatively high at initial recognition, a relative measure is more appropriate in assessing whether there is a significant increase in credit risk, as the PDs increase more quickly.

For Corporate, Institutional and Commercial Banking clients, the relative threshold is a 100 per cent increase in PD and the absolute change in PD is between 50-100 basis points.

For Retail Banking clients, the relative threshold is a 100 per cent increase in PD and the absolute change in PD is between 100 - 350 basis points depending on the product. Certain counties have a higher absolute threshold reflecting the lower default rate within this portfolio compared to the Group's other personal loan portfolios.

Private Banking clients are assessed qualitatively, based on a delinquency measure relating collateral top-ups or sell downs.

Debt securities with an internal credit rating mapped to an investment grade equivalent are allocated to stage 1 and all other debt securities to stage 2.

Qualitative factors that indicate there has been a significant increase in credit risk include processes linked to current risk management, such as placing loans on Non-Purely Precautionary Early Alert, or through delinquency measures.

Further details on the framework that has been used to develop the quantitative thresholds and how the assessment of significant increase in credit risk has been applied by the Group’s businesses are set out on page 22, including when assets may be transferred back to stage 2 (from stage 3) and to stage 1 (see page 23).

Critical judgement and estimates and the impact of measurement uncertainty

Critical judgements in determining ECL are those that are embedded in the calibration of the ECL models, and include the definition of default, the levels at which the significant increase in credit risk (SICR) thresholds were established and the lifetime ascribed to revolving credit card and overdraft facilities (see page 21).

Measurement uncertainty reflects those assumptions that are incorporated into the estimation of ECL. The key elements of estimation uncertainty relate to the forward-looking assumptions within the central macro-economic scenario together with how the impact of non-linearity has been reflected using multiple economic scenarios

Following the initial transition to IFRS 9, changes in expected credit loss provisions will be reported in the income statement within the impairment caption. The amounts reported may experience more volatility from period to period than that previously experienced under IAS 39 due to factors such as:

- Transfers to/from stage 1 and 2;
- Changes in portfolio mix, both in terms of clients and tenor of instruments offered;
- Changes in forward-looking macroeconomic variables.

In respect of the SICR thresholds, based on the portfolios as at 1 January 2018, the percentage of assets identified as stage 2 as well as the value of ECL for stage 2 was relatively insensitive to a change in thresholds.

A forecast macroeconomic downturn will have several impacts on ECL, including:

- Increasing PD, driving higher stage 1 and 2 ECL and potentially leading to a transfer of assets from stage 1 to stage 2.
- Reducing collateral values will increase LGD.

This will particularly impact the ECL charge for long dated assets in stage 2. It is expected that the impact on ECL due to changing macro-economic environment will bring more volatility than the selection of the SICR thresholds.

Governance and application of expert credit judgement in respect of expected credit losses

The models used in determining expected credit losses are reviewed and approved by the Group Credit Model Assessment Committee (CMAC). CMAC has the responsibility to assess and approve the use of models and to review and approve all IFRS 9 interpretations related to models. CMAC also provides oversight on operational matters related to model development, performance monitoring and model validation activities including standards, regulatory and Group Internal Audit matters.

Prior to submission to CMAC for approval, the models have been validated by Group Model Validation (GMV), a function which is independent of the business and the model developers. GMV's analysis comprises review of model documentation, model design and methodology; data validation; review of model development and calibration process; out of sample performance testing; and assessment of compliance review against IFRS 9 rules and internal standards.

Key inputs into the calculation and resulting expected credit loss provisions are subject to review and approval by the IFRS 9 Impairment Committee which is appointed by the Group Risk Committee. The IFRS 9 Impairment Committee consists of senior representatives from Risk, Finance, Treasury and Group Economic Research. It meets twice every quarter, once before the models are run to approve key inputs into the calculation, and once after the models are run to approve the expected credit loss provisions and any judgmental overlay that may be necessary.

The IFRS 9 Impairment Committee:

- Oversees the appropriateness of all Business Model Assessment and SPPI tests;
- Reviews and approves ECL for financial assets classified as stages 1, 2 and 3 for each financial reporting period;
- Reviews and approves stage allocation rules and thresholds;
- Identifies material issues and approves material adjustment requests in relation to ECL for FVOCI and amortised cost financial assets; and
- Reviews, challenges and approves base macroeconomic forecasts (including the multiple scenario approach) that are utilised in the forward-looking ECL computation.

The IFRS 9 Impairment Committee is supported by an Expert Panel which reviews and challenges the full extended version of base case projections and multiple macroeconomic scenarios. The Expert Panel consists of members of Enterprise Risk Management (which includes the Scenario Design Team), Finance and Group Economic Research.

SECTION 4: KEY IFRS 9 CREDIT RISK TABLES

Analysis of financial instruments by stage

	At 1 January 2018											
	Stage 1			Stage 2			Credit-impaired financial assets (Stage 3)			Total		
	Gross carrying amount[1]	Total loss allowances	Net carrying amount	Gross carrying amount[1]	Total loss allowances	Net carrying amount	Gross carrying amount[1]	Total loss allowances	Net carrying amount	Gross carrying amount[1]	Total loss allowances	Net carrying amount
	$million	$million	$million	$million	$million	$million	$million	$million	$million	$million	$million	$million
Loans and advances to customers (excluding FVTPL)	227,336	(462)	**226,874**	21,734	(734)	**21,000**	8,769	(5,284)	**3,485**	257,839	(6,480)	**251,359**
Loans and advances to customers measured at FVTPL												**33,268**
Total loans and advances to customers	**227,336**	**(462)**	**226,874**	**21,734**	**(734)**	**21,000**	**8,769**	**(5,284)**	**3,485**	**257,839**	**(6,480)**	**284,627**
Loans and advances to banks (excluding FVTPL)	59,926	(6)	**59,920**	2,370	(2)	**2,368**	9	(4)	**5**	62,305	(12)	**62,293**
Loans and advances to banks measured at FVTPL												**19,022**
Total loans and advances to banks	**59,926**	**(6)**	**59,920**	**2,370**	**(2)**	**2,368**	**9**	**(4)**	**5**	**62,305**	**(12)**	**81,315**
Debt securities and other eligible bills - Amortised cost	6,204	(3)	**6,201**	995	(16)	**979**	13	(5)	**8**	7,212	(24)	**7,188**
Debt securities and other eligible bills – FVOCI[2]	101,104	(23)		7,307	(42)		-	-		108,411	(65)	
Total debt securities and other eligible bills	**107,308**	**(26)**		**8,302**	**(58)**		**13**	**(5)**		**115,623**	**(89)**	
Undrawn commitments[3]	146,485	(66)		15,762	(162)		-	-		162,247	(228)	
Financial guarantees[3]	24,391	(6)		4,795	(16)		199	(77)		29,385	(99)	
Total undrawn commitment and financial guarantees	**170,876**	**(72)**		**20,557**	**(178)**		**199**	**(77)**		**191,632**	**(327)**	
Total	**565,446**	**(566)**		**52,963**	**(972)**		**8,990**	**(5,370)**		**627,399**	**(6,908)**	

[1]Gross carrying amount for off balance sheet refers to notional values.

[2]These instruments are held at fair value on the balance sheet. The ECL provision in respect of debt securities measured at FVOCI is held within reserves.

[3]These are off balance sheet instruments. Only the ECL is recorded on balance sheet as a financial liability and therefore there is no “net carrying amount”.

Credit quality analysis: Drawn loans and advances to banks and customers

The following table sets out the how the credit quality description aligns to the Group's internal credit risk management metrics:

Credit quality description	Corporate & Institutional Banking and Commercial Banking			Private Banking	Retail Banking
	Credit Grade mapping	**S&P external ratings equivalent**	**Regulatory PD (%)**	**Internal ratings**	**Numbers of days past due**
Strong	Grades 1-5	AAA/AA+ to BB+/BBB-	0.000-0.425	Class I and Class IV	Current loans (no past dues nor impaired)
Satisfactory	Grades 6-8 Grades 9-11	BB+ to BB-/B+ B+/B to B-/CCC	0.426 – 2.350 2.351 – 15.750	Class II and Class III	Loans past due up to 29 days
Higher risk	Grade 12	B-/CCC	15.751-50.000	GSAM managed	Past due loans 30 days and over till 90 days

The following table sets out credit quality of amortised cost loans and advances to banks and customers by stage by client segment, together with the related expected credit loss provisions. The cover ratio represents the percentage of the gross loans covered by expected credit loss provisions.

Amortised cost	At 1 January 2018						
		Loans and advances to customers					
	Loans and advances to banks $million	Corporate & Institutional $million	Retail $million	Commercial $million	Private $million	Central and Other Items $million	Total $million
Loan exposures							
Performing							
Stage 1	59,926	82,426	99,971	23,130	12,481	9,328	227,336
- Strong	50,820	48,145	98,721	5,573	12,401	9,240	174,080
- Satisfactory	9,106	34,281	1,250	17,557	80	88	53,256
Stage 2	2,370	14,790	2,186	4,023	735	-	21,734
- Strong	1,940	4,893	1,432	394	730	-	7,449
- Satisfactory	382	8,822	347	3,295	-	-	12,464
- Higher risk	48	1,075	407	334	5	-	1,821
Of which (stage 2):							
Less than 30 days past due	246	493	347	153	-	-	993
More than 30 days past due	25	232	407	123	5	-	767
Non-performing							
Stage 3	9	5,788	818	1,956	207	-	8,769
Total loan exposures	**62,305**	**103,004**	**102,975**	**29,109**	**13,423**	**9,328**	**257,839**
Expected credit loss allowances							
Performing							
Stage 1	(6)	(79)	(345)	(26)	(8)	(4)	(462)
- Strong	(4)	(22)	(299)	(5)	(8)	(4)	(338)
- Satisfactory	(2)	(57)	(46)	(21)	-	-	(124)
Stage 2	(2)	(437)	(212)	(84)	(1)	-	(734)
- Strong	(2)	(21)	(126)	-	(1)	-	(148)
- Satisfactory	-	(220)	(25)	(61)	-	-	(306)
- Higher risk	-	(196)	(61)	(23)	-	-	(280)
Of which (stage 2):							
Less than 30 days past due	-	(65)	(24)	(28)	-	-	(117)
More than 30 days past due	-	(71)	(61)	(14)	-	-	(146)
Non-performing							
Stage 3	(4)	(3,433)	(391)	(1,369)	(91)	-	(5,284)
Total expected credit loss allowances	**(12)**	**(3,949)**	**(948)**	**(1,479)**	**(100)**	**(4)**	**(6,480)**
ECL coverage	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Stage 1	0.0%	0.1%	0.3%	0.1%	0.1%	0.0%	0.2%
- Strong	0.0%	0.0%	0.3%	0.1%	0.1%	0.0%	0.2%
- Satisfactory	0.0%	0.2%	3.7%	0.1%	-	-	0.2%
Stage 2	0.1%	3.0%	9.7%	2.1%	0.1%	0.0%	3.4%
- Strong	0.1%	0.4%	8.8%	0.0%	0.1%	-	2.0%
- Satisfactory	-	2.5%	7.2%	1.9%	-	-	2.5%
- Higher risk	-	18.2%	15.0%	6.9%	-	-	15.4%
Of which (stage 2):							
Less than 30 days past due	-	13.2%	6.9%	18.3%	-	-	11.8%
More than 30 days past due	-	30.6%	15.0%	11.4%	-	-	19.0%
Non-performing							
Stage 3	44.4%	59.3%	47.8%	70.0%	44.0%	0.0%	60.3%

Fair value through profit and loss							
Performing	19,022	32,209	539	457	-	-	33,205
- Strong	16,199	22,647	539	100	-	-	23,286
- Satisfactory	2,823	9,555	-	357	-	-	9,912
- Higher risk	-	7	-	-	-	-	7
Impaired	-	59	-	4	-	-	63
Total	**19,022**	**32,268**	**539**	**461**	**-**	**-**	**33,268**
Total loans and advances to banks and customers	**81,315**	**131,323**	**102,566**	**28,091**	**13,323**	**9,324**	**284,627**

SECTION 5: CLASSIFICATION AND MEASURMENT OF FINANCIAL INSTRUMENTS

Classification and measurement of financial assets

The estimated impact on retained earnings and reserves as a result of reclassification and re-measurement of financial assets and liabilities was a gain of $35 million.

A small number of contracts were not considered to have SPPI cash flows and have been measured at FVTPL. This was primarily due to the following reasons:

- The contracts contained prepayment penalties that were not considered to be reasonable compensation in the context of the requirements of IFRS 9;
- The assets were hybrid financial assets with an embedded derivative.

The amounts previously reported as part of the available-for-sale reserve have been reclassified either to the FVOCI reserve or to retained earnings.

Although $45 billion of reverse repurchase agreement assets and $38 billion of repurchase agreement liabilities are now carried at fair value, there is limited re-measurement impact as the instruments typically mature within six months. Given the short tenor of the instruments, this is not expected to generate significant volatility in the income statement.

The table below sets out a reconciliation of the changes in classification and measurement for financial assets from IAS 39 to IFRS 9. The table shows how the IAS 39 carrying amount has been allocated to the IFRS 9 measurement categories, together with the resulting re-measurement impact if the assets have moved to/from a fair value basis of measurement and additional expected credit loss provisions recognised.

Impact on classification and measurement of financial instruments

	IAS 39 Measurement Category[1]	IAS 39 Carrying amount 31 December 2017 $million	Reclassification under IFRS 9 $million	Re-measurement under IFRS 9 $million	Additional ECL under IFRS 9 $million	IFRS 9 Carrying amount at 1 Jan 2018 $million	IFRS 9 Measurement category[2]
Cash and balances at central banks	Loans and receivables	**58,864**	-	-	-	**58,864**	Amortised cost
Financial assets held at fair value through profit or loss:		**27,564**	47,047	29	-	**74,640**	
Loans and advances to banks	*FVTPL*	320	*293*	-	-	*613*	*FVTPL*
	DAFV	2,252	-	-	-	*2,252*	*DAFV*
Loans and advances to customers	*FVTPL*	1,689	*912*	*38*	-	*2,639*	*FVTPL*
	DAFV	1,229	*39*	-	-	*1,268*	*DAFV*
Reverse repurchase agreements and other similar secured lending	*FVTPL*	454	*44,608*	*(2)*	-	*45,060*	*FVTPL*
	DAFV	458	-	-	-	*458*	*DAFV*
Debt securities and other eligible bills	*FVTPL*	19,318	*511*	*(7)*	-	*19,822*	*FVTPL*
	DAFV	393	-	-	-	*393*	*DAFV*
Equity shares	*FVTPL*	718	*684*	-	-	*1,402*	*FVTPL*
	DAFV	733	-	-	-	*733*	*DAFV*
Derivative financial instruments		**47,031**	-	-	-	**47,031**	
	FVTPL	46,333	-	-	-	*46,333*	*FVTPL*
	Held for hedging	698	-	-	-	*698*	*Held for hedging*
Loans and advances to banks	Loans and receivables	**57,494**	(293)	-	(7)	**57,194**	Amortised cost
Loans and advances to customers	Loans and receivables	**248,707**	(951)	-	(965)	**246,791**	Amortised cost
Reverse repurchase agreements and other similar secured lending	Loans and receivables	**54,275**	(44,608)	-	-	**9,667**	Amortised cost
Investment securities:		**117,025**	(1,195)	2	(19)	**115,813**	
Debt securities and other eligible bills	*Loans and receivables*	2,630	*(487)*	-	*(19)*	*2,124*	*Amortised cost*
	Held-to-maturity	4,340	-	-	-	*4,340*	*Amortised cost*
	Available-for-sale	109,161	*(750)*	-	-	*108,411*	*FVOCI*
	Available-for-sale		*726*	*(2)*	-	*724*	*Amortised cost*
Equity shares	*Available-for-sale*	894	*(684)*	*4*	-	*214*	*FVOCI*
Assets held for sale	DAFV	**466**	-	-	-	**466**	DAFV
	Loans and receivables	**62**	-	-	-	**62**	Amortised cost
Other Financial assets	Loans and receivables	**29,922**	-	-	-	**29,922**	Amortised cost
Total financial assets		**641,410**	**-**	**31**	**(991)**	**640,450**	
Repurchase agreements and other similar secured borrowing	Loans and receivables	**39,783**	(38,144)	-	-	**1,639**	Amortised cost
			38,144	(4)	-	**38,140**	DAFV
Net impact of re-measurement			**-**	**35**			

[1]Net of impairment loss allowances

[2]For debt instruments classified and measured at FVOCI, expected credit impairment loss provisions are not deducted from the carrying amount and are not included in this table.

SECTION 6: SUPPLEMENTARY INFORMATION

Approach for determining expected credit losses

For material loan portfolios, the Group has adopted a sophisticated approach for determining expected credit losses that makes extensive use of credit modelling. Where available, the Group has leveraged existing advanced Internal Ratings Based (IRB) regulatory models used to determine regulatory expected loss.

For portfolios that follow a standardised regulatory approach, the Group has developed new models where these are sufficiently material.

For the sophisticated approach, the IFRS 9 credit models use three key inputs to derive the expected credit loss: probability of default (PD), loss given default (LGD) and exposure at default (EAD). These components are defined as follows:

Credit loss terminology

Component	Definition
PD	The probability at a point in time that a counterparty will default, calibrated over up to 12 months from the reporting date (stage 1) or over the lifetime of the product (stage 2) and incorporating the impact of forward looking economic assumptions that have an effect on credit risk, such as interest rates, unemployment rates and GDP forecasts. The PD is estimated at a point in time which means that it will fluctuate in line with the economic cycle. The term structure of the PD is based on statistical models, calibrated using historical data and adjusted to incorporate forward looking economic assumptions.
LGD	The loss that is expected to arise on default, incorporating the impact of forward looking economic assumptions where relevant, which represents the difference between the contractual cash flows due and those that the bank expects to receive. The Group estimates LGD based on the history of recovery rates and considers the recovery of any collateral that is integral to the financial asset, taking into account forward looking economic assumptions where relevant.
EAD	The expected balance sheet exposure at the time of default, taking into account the expected change in exposure over the lifetime of the exposure. This incorporates the impact of drawdowns of committed facilities, repayments of principal and interest, amortisation and prepayments, together with the impact of forward-looking economic assumptions where relevant.

To determine the expected credit loss, these components are multiplied together (PD for the reference period (up to 12 months or lifetime) x LGD at the beginning of the period x EAD at the beginning of the period) and discounted to the balance sheet date using the effective interest rate as the discount rate.

Key differences between regulatory and IFRS ECL models

Although the IFRS 9 models leverage the existing Basel advanced IRB risk components, several significant adjustments are required to ensure the resulting outcome is in line with the IFRS 9 requirements. These are summarised in the table below.

	Basel AIRB Expected Loss (EL)	IFRS 9 Expected Credit Loss (ECL)
Rating philosophy	Mix of point-in-time, through-the-cycle or hybrid	Point-in-time, forward looking
Parameters calibration	Often conservative, due to regulatory floors and downturn calibration	Best estimate, based on conditions known at the balance sheet date
- **PD**		Inclusion of forward looking information and removal of conservatism and bias
- **LGD**		Removal of regulatory floors, exclusion of non-direct costs
- **EAD**	Floored at outstanding amount	Recognises ability to have a reduction in exposure from the balance sheet date to the default date
Timeframe	12-month period	Up to 12 months and lifetime
Discounting applied	Discounting at the weighted average cost of capital to the time of default	Discounting at the effective interest rate (EIR) to the balance sheet reporting date

Global IFRS 9 ECL models have been developed for the Corporate & Institutional Banking and Commercial Banking businesses. Given the global nature of these portfolios these models are global in nature at the base level. However, for some of the most material countries, country-specific models have been developed for Commercial Banking clients.

The calibration of forward looking information is assessed at a country or region level to take into account local macroeconomic conditions.

Retail Banking ECL models are country and product specific given the local nature of the Retail Banking business.

For less material Retail Banking loan portfolios, the Group has adopted simplified approaches based on historical roll rates or loss rates.

- For medium-sized Retail Banking portfolios, a roll rate model is applied, which uses a matrix that gives average loan migration rate from delinquency states from period to period. A matrix multiplication is then performed to generate the final PDs by delinquency bucket over different time horizons.
- For smaller Retail Banking portfolios, loss rate models are applied. These use an adjusted gross charge-off rate, developed using monthly write off and recoveries over the preceding 12 months and total outstanding balances.

Application of lifetime

ECL is estimated based on the shorter of the expected life and the maximum contractual period for which the Group is exposed to credit risk. For Retail credit cards and Corporate overdraft facilities, the Group does not typically enforce the contractual period. As a result, for these instruments, the lifetime of the exposure is based on the period the Group is exposed to credit risk. This period has been determined by reference to the extent to which credit risk management actions curtail the period of exposure. For credit cards, this has resulted in an average life of between 3 and 10 years across our footprint markets.

Significant increase in credit risk

ECL for financial assets will transfer from a 12-month basis to a lifetime basis when there is a significant increase in credit risk (SICR) relative to that which was expected at the time of origination, or when the asset becomes credit impaired. On transfer to a lifetime basis, the ECL for those assets will reflect the impact of a default event expected to occur over the remaining lifetime of the instrument rather than just over the 12 months from the reporting date.

Quantitative criteria

Quantitative criteria include an assessment of whether there has been significant migration in the forward-looking probability of default (PD) since origination. A forward-looking PD is one that is adjusted for future economic conditions to the extent these are correlated to changes in credit risk.

The SICR thresholds have been calibrated based on the following principles:

- Stability – The thresholds are set to achieve a stable Stage 2 population at a portfolio level, trying to minimise the number of accounts moving back and forth between Stage 1 and Stage 2 in a short period of time.
- Accuracy – The thresholds are set such that there is a materially higher propensity for Stage 2 exposures to eventually default than is the case for Stage 1 exposures.
- Dependency from backstops – The thresholds are stringent enough such that a high proportion of accounts transfer to Stage 2 due to movements in forward-looking PD rather than relying on backward-looking backstops such as arrears
- Relationship with business and product risk profiles – The thresholds reflect the relative risk differences between different products, and are aligned to business processes.

Qualitative criteria

Qualitative factors that indicate there has been a significant increase in credit risk include processes linked to current risk management.

Backstop

Across all portfolios, accounts that are 30 or more days past due on contractual payments of principal and/or interest that have not been captured by the criteria above are considered to have experienced a significant increase in credit risk.

Expert credit judgement may be applied in assessing significant increase in credit risk to the extent that certain risks may not have been captured by the models or through the above criteria. Such instances are expected to be rare, for example due to events arising close to the reporting date.

Transfers between stages

Assets will transfer from stage 3 to stage 2 when the assets are no longer considered to be credit-impaired. Assets will not be considered credit-impaired only if the customer makes payments such that they are paid to current in line with the original contractual terms. In addition:

- Loans that were subject to forbearance measures must remain current for 12 months before they can be transferred to stage 2;
- Retail loans that were not subject to forbearance measures must remain current for 180 days before they can be transferred to stage 2 or stage 1.

Assets may transfer to stage 1 if they are no longer considered to have experienced a significant increase in credit risk. This will be immediate when the original PD based transfer criteria are no longer met (and as long as none of the other transfer criteria apply). Where assets were transferred using other measures, the assets will only transfer back to stage 1 when the condition that caused the significant increase in credit risk no longer applies (and as long as none of the other transfer criteria apply).

Key Accounting Policies as revised under IFRS 9

Classification and measurement of financial assets and liabilities

The Group classifies its financial assets into the following measurement categories: amortised cost; fair value through other comprehensive income; and fair value through profit or loss. Financial liabilities are classified as either amortised cost, or held at fair value through profit or loss. Management determines the classification of its financial assets and liabilities at initial recognition of the instrument or, where applicable, at the time of reclassification.

Financial assets held at amortised cost and fair value through other comprehensive income

Debt instruments held at amortised cost or held at fair value through comprehensive income (FVOCI) have contractual terms that give rise to cash flows that are solely payments of principal and interest (SPPI characteristics). Principal is the fair value of the financial asset at initial recognition but this may change over the life of the instrument as amounts are repaid. Interest consists of consideration for the time value of money, for the credit risk associated with the principal amount outstanding during a particular period and for other basic lending risks and costs, as well as a profit margin.

In assessing whether the contractual cash flows have SPPI characteristics, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making the assessment, the Group considers:

- contingent events that would change the amount and timing of cash flows;
- leverage features;
- prepayment and extension terms;
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse asset arrangements); and
- features that modify consideration of the time value of money – e.g. periodical reset of interest rates.

Whether financial assets are held at amortised cost or at FVOCI depend on the objectives of the business models under which the assets are held. A business model refers to how the Group manages financial assets to generate cash flows.

The Group makes an assessment of the objective of a business model in which an asset is held at the individual product business line, and where applicable within business lines depending on the way the business is managed and information is provided to management. Factors considered include:

- how the performance of the product business line is evaluated and reported to the Group's management;
- how managers of the business model are compensated, including whether management is compensated based on the fair value of assets or the contractual cash flows collected;
- the risks that affect the performance of the business model and how those risks are managed;
- the frequency, volume and timing of sales in prior periods, the reasons for such sales and expectations about future sales activity.

Financial assets which have SPPI characteristics and that are held within a business model whose objective is to hold financial assets to collect contractual cash flows ("hold to collect") are recorded at amortised cost. Conversely, financial assets which have SPPI characteristics but are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets ("Hold to collect and sell") are classified as held at FVOCI.

Both hold to collect business and a hold to collect and sell business model involve holding financial assets to collect the contractual cash flows. However, the business models are distinct by reference to the frequency and significance that asset sales play in meeting the objective under which a particular group of financial assets is managed. Hold to collect business models are characterised by asset sales that are incidental to meeting the objectives under which a group of assets is managed. Sales of assets under a hold to collect business model can be made to manage increases in the credit risk of financial assets but sales for other reasons should be both infrequent and insignificant.

Cash flows from the sale of financial assets under a hold to collect and sell business model in contrast are integral to achieving the objectives under which a particular group of financial assets are managed. This may be the case where frequent sales of financial assets are required to manage the Group's daily liquidity requirements or to meet regulatory requirements to demonstrate liquidity of financial instruments. Sales of assets under hold to collect and sell business models are therefore both more frequent and more significant in value than those under the hold to collect model.

Equity instruments designated as held at FVOCI

Non-trading equity instruments acquired for strategic purposes rather than capital gain may be irrevocably designated at initial recognition at FVOCI on an instrument by instrument basis. Gains and losses arising from changes in the fair value of these instruments, including foreign exchange gains and losses, are recognised directly in equity and are never reclassified to profit or loss even on derecognition.

Financial assets and liabilities held at fair value through profit or loss

Financial assets which are not held at amortised cost or that are not held at fair value through other comprehensive income are held at fair value through profit or loss. Financial assets and liabilities held at fair value through profit or loss are either mandatorily classified fair value through profit or loss or irrevocably designated at fair value through profit or loss at initial recognition.

Mandatorily classified at fair value through profit or loss

Financial assets and liabilities which are mandatorily held at fair value through profit or loss include:

- financial assets and liabilities held for trading, which are those acquired principally for the purpose of selling in the short term;
- hybrid financial assets that contain one or more embedded derivatives;
- financial assets that would otherwise be measured at amortised cost or FVOCI but which do not have SPPI characteristics;
- equity instruments that have not been designated as held at FVOCI; and
- financial liabilities that constitute contingent consideration in a business combination.

Designated at fair value through profit or loss

Financial assets and liabilities may be designated at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities on a different basis ('accounting mismatch').

Interest rate swaps have been acquired with the intention of significantly reducing interest rate risk on certain loans and advances and debt securities with fixed rates of interest. To significantly reduce the accounting mismatch between assets and liabilities and measurement bases, these loans and advances and debt securities have been designated at fair value through profit or loss.

Similarly, to reduce accounting mismatches, the Group has designated certain financial liabilities at fair value through profit or loss where the liabilities either:

- have fixed rates of interest and interest rate swaps or other interest rate derivatives have been entered with the intention of significantly reducing interest rate risk; or
- are exposed to foreign currency risk and derivatives have been acquired with the intention of significantly reducing exposure to market changes; or
- have been acquired to fund trading asset portfolios or assets.

Financial liabilities may also be designated at fair value through profit or loss where they are managed on a fair value basis or have a bifurcately embedded derivative where the Group is not able to separately value the embedded derivative component.

Financial liabilities held at amortised cost

Financial liabilities that are not financial guarantees or loan commitments and that are not classified as financial liabilities held at fair value through profit or loss are classified as financial liabilities held at amortised cost.

Preference shares which carry a mandatory coupon that represents a market rate of interest at the issue date, or which are redeemable on a specific date or at the option of the shareholder are classified as financial liabilities and are presented in other borrowed funds. The dividends on these preference shares are recognised in the income statement as interest expense on an amortised cost basis using the effective interest method.

Financial guarantee contracts and loan commitments

The Group issues financial guarantee contracts and loan commitments in return for fees. Under a financial guarantee contract, the Group undertakes to meet a customer's obligations under the terms of a debt instrument if the customer fails to do so. Loan commitments are firm commitments to provide credit under pre-specified terms and conditions. Financial guarantee contracts and loan commitments issued at below market interest rates are initially recognised as liabilities at fair value and subsequently at the higher of the expected credit loss provision, and the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of IFRS 15 Revenue from Contracts with Customers.

Fair value of financial assets and liabilities

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal market for the asset or liability, or in the absence of a principal market, the most advantageous market to which the Group has access at that date. The fair value of a liability includes the risk that the bank will not be able to honour its obligations.

The fair value of financial instruments is generally measured on the basis of the individual financial instrument. However, when a group of financial assets and financial liabilities is managed on the basis of its net exposure to either market risk or credit risk, the fair value of the group of financial instruments is measured on a net basis.

The fair values of quoted financial assets and liabilities in active markets are based on current prices. A market is regarded as active if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. If the market for a financial instrument, and for unlisted securities, is not active, the Group establishes fair value by using valuation techniques.

Initial recognition

Purchases and sales of financial assets and liabilities held at fair value through profit or loss, and debt securities classified as financial assets held at fair value through other comprehensive income are initially recognised on the trade-date (the date on which the Group commits to purchase or sell the asset). Loans and advances and other financial assets held at amortised cost are recognised on settlement date (the date on which cash is advanced to the borrowers).

All financial instruments are initially recognised at fair value, which is normally the transaction price, plus directly attributable transaction costs for financial assets which are not subsequently measured at fair value through profit or loss.

In certain circumstances, the initial fair value may be based on a valuation technique which may lead to the recognition of profits or losses at the time of initial recognition. However, these profits or losses can only be recognised when the valuation technique used is based solely on observable market data. In those cases where the initially recognised fair value is based on a valuation model that uses unobservable inputs, the difference between the transaction price and the valuation model is not recognised immediately in the income statement but is amortised or released to the income statement as the inputs become observable, or the transaction matures or is terminated.

Subsequent measurement

Financial assets and financial liabilities held at amortised cost

Financial assets and financial liabilities held at amortised cost are subsequently carried at amortised cost using the effective interest method (see Interest income and expense). Foreign exchange gains and losses are recognised in the income statement.

Where a financial instrument carried at amortised cost is the hedged item in a qualifying fair value hedge relationship, its carrying value is adjusted by the fair value gain or loss attributable to the hedged risk.

Financial assets held at FVOCI

Debt instruments held at FVOCI are subsequently carried at fair value, with all unrealised gains and losses arising from changes in fair value (including any related foreign exchange gains or losses) recognised in other comprehensive income and accumulated in a separate component of equity. Foreign exchange gains and losses on the amortised cost are recognised in income. Changes in expected credit losses are recognised in the profit or loss and are accumulated in a separate component of equity. On derecognition, the cumulative fair value gains or losses, net of the cumulative expected credit loss reserve, are transferred to the profit or loss.

Equity investments designated at FVOCI are subsequently carried at fair value with all unrealised gains and losses arising from changes in fair value (including any related foreign exchange gains or losses) recognised in other comprehensive income and accumulated in a separate component of equity. On derecognition, the cumulative reserve is transferred to retained earnings and is not recycled to profit or loss.

Financial assets and liabilities held at fair value through profit or loss

Financial assets and liabilities mandatorily held at fair value through profit or loss and financial assets designated at fair value through profit or loss are subsequently carried at fair value, with gains and losses arising from changes in fair value recorded in the net trading income line in the profit or loss unless the instrument is part of a cash flow hedging relationship. Contractual interest income on financial assets held at fair value through profit or loss is recognised as interest income in a separate line in the profit or loss.

Financial liabilities designated at fair value through profit or loss

Financial liabilities designated fair value through profit or loss are held at fair value, with changes in fair value recognised in the net trading income line in the profit or loss, other than that attributable to changes in credit risk. Fair value changes attributable to credit risk and recognised in other comprehensive income and recorded in a separate category of reserves unless this is expected to create or enlarge an accounting mismatch, in which case the entire change in fair value of the financial liability designated fair value through profit or loss is recognised in profit or loss.

Modified financial instruments

Financial assets and financial liabilities whose original contractual terms have been modified, including those loans subject to forbearance strategies, are considered to be modified instruments. Modifications may include changes to the tenor, cash flows and or interest rates amongst other factors.

Where derecognition of financial assets is appropriate (see Derecognition), the newly recognised residual loans are assessed to determine whether the assets should be classified as purchased or originated credit impaired assets (POCI).

Where derecognition is not appropriate, the gross carrying amount of the applicable instruments are recalculated as the present value of the renegotiated or modified contractual cash flows discounted at the original effective interest rate (or credit adjusted effective interest rate for POCI financial assets). The difference between the recalculated values and the pre-modified gross carrying values of the instruments are recorded as a modification gain or loss in the profit or loss.

Gains and losses arising from modifications for credit reasons are recorded as part of 'Impairment' (see Impairment policy). Modification gains and losses arising for non-credit reasons are recognised either as part of "Impairment" or within income depending on whether there has been a change in the credit risk on the financial asset subsequent to the modification. Modification gains and losses arising on financial liabilities are recognised within income.

The movements in the applicable expected credit loss loan positions are disclosed in further detail on page 7.

Reclassifications

Financial liabilities are not reclassified subsequent to initial recognition.

Reclassifications of financial assets are made when, and only when, the business model for those assets changes. Such changes are expected to be infrequent and arise as a result of significant external or internal changes such as the termination of a line of business or the purchase of a subsidiary whose business model is to realise the value of pre-existing held for trading financial assets through a hold to collect model.

Financial assets are reclassified at their fair value on the date of reclassification and previously recognised gains and losses are not restated. Moreover, reclassifications of financial assets between financial assets held at amortised cost and financial assets held at fair value through other comprehensive income do not affect effective interest rate or expected credit loss computations.

Reclassified from amortised cost

Where financial assets held at amortised cost are reclassified to financial assets held at fair value through profit or loss, the difference between the fair value of the assets at the date of reclassification and the previously recognised amortised cost is recognised in profit or loss.

For financial assets held at amortised cost that are reclassified to fair value through other comprehensive income, the difference between the fair value of the assets at the date of reclassification and the previously recognised gross carrying value is recognised in other comprehensive income. Additionally, the related cumulative expected credit loss amounts relating to the reclassified financial assets are reclassified from loan loss provisions to a separate reserve in other comprehensive income at the date of reclassification.

Reclassified from fair value through other comprehensive income

Where financial assets held at fair value through other comprehensive income are reclassified to financial assets held at fair value through profit or loss, the cumulative gain or loss previously recognised in other comprehensive income is transferred to the profit or loss.

For financial assets held at fair value through other comprehensive income that are reclassified to financial assets held at amortised cost, the cumulative gain or loss previously recognised in other comprehensive income is adjusted against the fair value of the financial asset such that the financial asset is recorded at a value as if it had always held at amortised cost. In addition, the related cumulative expected credit losses held within other comprehensive income are reversed against the gross carrying value of the reclassified assets at the date of reclassification.

Reclassified from fair value through profit or loss

Where financial assets held at fair value through profit or loss are reclassified to financial assets held at fair value through other comprehensive income or financial assets held at amortised cost, the fair value at the date of reclassification is used to determine the effective interest rate on the financial asset going forward. In addition, the date of reclassification is used as the date of initial recognition for the calculation of expected credit losses. Where financial assets held at fair value through profit or loss are reclassified to financial assets held at amortised cost, the fair value at the date of reclassification becomes the gross carrying value of the financial asset.

Derecognition of financial instruments

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or where the Group has transferred substantially all risks and rewards of ownership. If substantially all the risks and rewards have been neither retained nor transferred and the Group has retained control, the assets continue to be recognised to the extent of the Group's continuing involvement.

Where financial assets have been modified, the modified terms are assessed on a qualitative and quantitative basis to determine whether a fundamental change in the nature of the instrument has occurred, such as whether the derecognition of the pre-existing instrument and the recognition of a new instrument is appropriate.

On derecognition of a financial asset, the difference between the carrying amount of the asset (or the carrying amount allocated to the portion of the asset derecognised) and the sum of the consideration received (including any new asset obtained less any new liability assumed) and any cumulative gain or loss that had been recognised in other comprehensive income is recognised in profit or loss except for equity instruments elected FVOCI (see above) and cumulative fair value adjustments attributable to the credit risk of a liability that are held in other comprehensive income.

Financial liabilities are derecognised when they are extinguished. A financial liability is extinguished when the obligation is discharged, cancelled or expires and this is evaluated both qualitatively and quantitatively. However, where a financial liability has been modified, it is derecognised if the difference between the modified cash flows and the original cash flows is more than 10 per cent.

If the Group purchases its own debt, it is derecognised and the difference between the carrying amount of the liability and the consideration paid is included in 'Other income' except for the cumulative fair value adjustments attributable to the credit risk of a liability that are held in other comprehensive income which are never recycled to the profit or loss.

Impairment of financial assets

Expected credit losses (ECL) are determined for all financial debt instruments that are classified at amortised cost or fair value through other comprehensive income, undrawn commitments and financial guarantees.

An expected credit loss represents the present value of expected cash shortfalls over the residual term of a financial asset, undrawn commitment or financial guarantee.

A cash shortfall is the difference between the cash flows that are due in accordance with the contractual terms of the instrument and the cash flows that the Group expects to receive over the contractual life of the instrument.

Measurement

Expected credit losses are computed as unbiased, probability weighted amounts which are determined by evaluating a range of reasonably possible outcomes, the time value of money, and considering all reasonable and supportable information including that which is forward-looking.

For material portfolios, the estimate of expected cash shortfalls is determined by multiplying the probability of default (PD) with the loss given default (LGD) with the expected exposure at the time of default (EAD). There may be multiple default events over the lifetime of an instrument. See page 21 for further details on the components of PD, LGD and EAD. For less material Retail loan portfolios, the Group has adopted simplified approaches based on historical roll rates or loss rates.

Forward looking economic assumptions are incorporated into the PD, LGD and EAD where relevant and where they influence credit risk, such as GDP growth rates, interest rates, house price indices and commodity prices amongst others. These assumptions are incorporated using the Group's most likely forecast for a range of macroeconomic assumptions. These forecasts are determined using all reasonable and supportable information, which includes both internally developed forecasts and those available externally, and are consistent with those used for budgeting, forecasting and capital planning.

To account for the potential non-linearity in credit losses, multiple forward-looking scenarios are incorporated into the range of reasonably possible outcomes for all material portfolios. For example, where there is a greater risk of downside credit losses than upside gains, multiple forward-looking economic scenarios are incorporated into the range of reasonably possible outcomes, both in respect of determining the PD (and where relevant, the LGD and EAD) and in determining the overall expected credit loss amounts. These scenarios are determined using a Monte Carlo approach centered around the Group's most likely forecast of macroeconomic assumptions.

The period over which cash shortfalls are determined is generally limited to the maximum contractual period for which the Group is exposed to credit risk. However, for certain revolving credit facilities, which include credit cards or overdrafts, the Group's exposure to credit risk is not limited to the contractual period. For these instruments, the Group estimates an appropriate life based on the period that the Group is exposed to credit risk, which includes the effect of credit risk management actions such as the withdrawal of undrawn facilities.

For credit-impaired financial instruments, the estimate of cash shortfalls may require the use of expert credit judgement. As a practical expedient, the Group may also measure credit impairment on the basis of an instrument's fair value using an observable market price.

The estimate of expected cash shortfalls on a collateralised financial instrument reflects the amount and timing of cash flows that are expected from foreclosure on the collateral less the costs of obtaining and selling the collateral, regardless of whether foreclosure is deemed probable.

Cash flows from unfunded credit enhancements held are included within the measurement of expected credit losses if they are part of, or integral to, the contractual terms of the instrument (this includes financial guarantees, unfunded risk participations and other non-derivative credit insurance). Although non-integral credit enhancements do not impact the measurement of expected credit losses, a reimbursement asset is recognised to the extent of the expected credit losses recorded.

Cash shortfalls are discounted using the effective interest rate (or credit-adjusted effective interest rate for POCI instruments) on the financial instrument as calculated at initial recognition or if the instrument has a variable interest rate, the current effective interest rate determined under the contract.

Instruments	**Location of expected credit loss provisions**
Financial assets held at amortised cost	Loss provisions: netted against gross carrying value[1]
Financial assets held FVOCI - Debt instruments	Other comprehensive income (FVOCI ECL Reserve) [2]
Loan commitments	Provisions for liabilities and charges[3]
Financial guarantees	Provisions for liabilities and charges[3]

[1] Purchased or originated credit impaired assets do not attract an ECL provision on initial recognition. An ECL provision will be recognised only if there is an increase in expected credit losses from that considered at initial recognition.

[2] Debt and Treasury securities classified as FVOCI are held at fair value on the face of the balance sheet. The ECL attributed to these instruments is held as a separate reserve within OCI and is recycled to the profit and loss account along with any fair value measurement gains or losses held within FVOCI when the applicable instruments are derecognised.

[3] ECL on Loan commitments and Financial guarantees is recognised as a liability provision. Where a financial instrument includes both a loan (i.e. financial asset component) and an undrawn commitment (i.e. loan commitment component), and it is not possible to separately identify the ECL on these components, ECL amounts on the loan commitment are recognised together with ECL amounts on the financial asset. To the extent the combined ECL exceeds the gross carrying amount of the financial asset, the ECL is recognised as a liability provision.

Recognition

12 months expected credit losses (Stage 1)

Expected credit losses are recognised at the time of initial recognition of a financial instrument and represent the lifetime cash shortfalls arising from possible default events up to 12 months into the future from the balance sheet date. Expected credit losses continue to be determined on this basis until there is either a significant increase in the credit risk of an instrument or the instrument becomes credit-impaired. If an instrument is no longer considered to exhibit a significant increase in credit risk, expected credit losses will revert to being determined on a 12-month basis.

Significant increase in credit risk (Stage 2)

If a financial asset experiences a significant increase in credit risk (SICR) since initial recognition, an expected credit loss provision is recognised for default events that may occur over the lifetime of the asset.

Significant increase in credit risk is assessed by comparing the risk of default of an exposure at the reporting date to the risk of default at origination (after taking into account the passage of time). Significant does not mean statistically significant nor is it assessed in the context of changes in ECL. Whether a change in the risk of default is significant or not is assessed using a number of quantitative and qualitative factors, the weight of which depends on the type of product and counterparty. Financial assets that are 30 or more days past due and not credit-impaired will always be considered to have experienced a significant increase in credit risk. For less material portfolios where a loss rate or roll rate approach is applied to compute ECL significant increase in credit risk is primarily based on 30 days past due.

Quantitative factors include an assessment of whether there has been significant increase in the forward-looking probability of default (PD) since origination. A forward-looking PD is one that is adjusted for future economic conditions to the extent these are correlated to changes in credit risk. We compare the residual lifetime PD at the balance sheet date to the residual lifetime PD that was expected at the time of origination for the same point in the term structure and determine whether both the absolute and relative change between the two exceeds predetermined thresholds. To the extent that the differences between the measures of default outlined exceed the defined thresholds, the instrument is considered to have experienced a significant increase in credit risk.

Qualitative factors assessed include those linked to current credit risk management processes, such as lending placed on non-purely precautionary early alert (and subject to closer monitoring).

A non-purely precautionary early alert account is one which exhibits risk or potential weaknesses of a material nature requiring closer monitoring, supervision, or attention by management. Weaknesses in such a borrower's account, if left uncorrected, could result in deterioration of repayment prospects and the likelihood of being downgraded. Indicators could include a rapid erosion of position within the industry, concerns over management's ability to manage operations, weak/deteriorating operating results, liquidity strain and overdue balances amongst other factors.

Credit impaired (or defaulted) exposures (Stage 3)

Financial assets that are credit impaired (or in default) represent those that are at least 90 days past due in respect of principal and/or interest. Financial assets are also considered to be credit impaired where the obligors are unlikely to pay on the occurrence of one or more observable events that have a detrimental impact on the estimated future cash flows of the financial asset. It may not be possible to identify a single discrete event but instead the combined effect of several events may cause financial assets to become credit impaired. Evidence that a financial asset is credit impaired includes observable data about the following events:

- Significant financial difficulty of the issuer or borrower;
- Breach of contract such as default or a past due event;
- For economic or contractual reasons relating to the borrower's financial difficulty, the lenders of the borrower have granted the borrower concession/s that lenders would not otherwise consider. This would include forbearance actions (see page 31 for further details);
- Pending or actual bankruptcy or other financial reorganisation to avoid or delay discharge of the borrower's obligation/s;
- The disappearance of an active market for the applicable financial asset due to financial difficulties of the borrower;
- Purchase or origination of a financial asset at a deep discount that reflects incurred credit losses.

Irrevocable lending commitments to a credit impaired obligor that have not yet been drawn down are also included within the stage 3 credit impairment provision to the extent that the commitment cannot be withdrawn.

Loss provisions against credit impaired financial assets are determined based on an assessment of the recoverable cash flows under a range of scenarios, including the realisation of any collateral held where appropriate. The loss provisions held represent the difference between the present value of the cash flows expected to be recovered, discounted at the instrument's original effective interest rate, and the gross carrying value of the instrument prior to any credit impairment. (The Groups definition of default is aligned with the regulatory definition of default as set out in European Capital Requirements Regulation (CRR178) and related guidelines).

Modified financial instruments

Where the original contractual terms of a financial asset have been modified for credit reasons and the instrument has not been derecognised, the resulting modification loss is recognised within 'Impairment' in the income statement within a corresponding decrease in the gross carrying value of the asset. If the modification involved a concession that the bank would not otherwise consider, the instrument is considered to be credit impaired and is considered forborne.

ECL for modified financial assets that have not been derecognised and are not considered to be credit-impaired will be recognised on a 12-month basis, or a lifetime basis, if there is a significant increase in credit risk. These assets are assessed to determine whether there has been a significant increase in credit risk subsequent to the modification. Although loans may be modified for non-credit reasons, a significant increase in credit risk may occur.

In addition to the recognition of modification gains and losses, the revised carrying value of modified financial assets will impact the calculation of expected credit losses, with any increase or decrease in ECL recognised within impairment.

Forborne loans

Forborne loans are those loans that have been modified in response to a customer's financial difficulties.

Forbearance strategies assist clients who are temporarily in financial distress and are unable to meet their original contractual repayment terms. Forbearance can be initiated by the client, the Group or a third party including government-sponsored programmes or a conglomerate of credit institutions. Forbearance may include debt restructuring such as new repayment schedules, payment deferrals, tenor extensions, interest only payments, lower interest rates, forgiveness of principal, interest or fees, or relaxation of loan covenants.

Forborne loans that have been modified (and not derecognised) on terms that are not consistent with those readily available in the market and/or where we have granted a concession compared to the original terms of the loans are considered credit impaired if there is a detrimental impact on cash flows. The modification loss (see Classification and measurement – Modifications) is recognised in the profit or loss within 'Impairment' and the gross carrying value of the loan reduced by the same amount. The modified loan is disclosed as 'Loans subject to forbearance – credit impaired'.

Loans that have been subject to a forbearance modification, but which are not considered credit impaired (not classified as CG 13 or 14), are disclosed as ''Forborne – not credit impaired'. This may include amendments to covenants within the contractual terms.

Write-offs of credit impaired instruments & reversal of impairment

To the extent a financial debt instrument is considered irrecoverable, the applicable portion of the gross carrying value is written off against the related loan provision. Such loans are written off after all the necessary procedures have been completed, it is decided that there is no realistic probability of recovery and the amount of the loss has been determined. Subsequent recoveries of amounts previously written off decrease the amount of the provision for loan impairment in the income statement. If, in a subsequent period, the amount of the credit impairment loss decreases and the decrease can be related objectively to an event occurring after the credit impairment was recognised (such as an improvement in the debtor's credit rating), the previously recognised credit impairment loss is reversed by adjusting the provision account. The amount of the reversal is recognised in the income statement.

Loss provisions on Purchased or Originated Credit Impaired Instruments (POCI)

The Group measures ECL on a lifetime basis for POCI instruments throughout the life of the instrument. However, ECL is not recognised in a separate loss provision on initial recognition for POCI instruments as the lifetime ECL is inherent within the gross carrying amount of the instruments. The Group recognises the change in lifetime expected credit losses arising subsequent to initial recognition in the income statement and the cumulative change as a loss provision. Where lifetime expected credit losses on POCI instruments are less than those at initial recognition, then the favourable differences are recognised as impairment gains in the income statement (and vice versa where the expected credit losses are greater).

Improvement in credit risk/Curing

A period may elapse from the point at which instruments enter lifetime expected credit losses (stage 2 or stage 3) and are reclassified back to 12 month expected credit losses (stage 1).

For financial assets that are credit-impaired (stage 3), a transfer to stage 2 or stage 1 is only permitted where the instrument is no longer considered to be credit-impaired. An instrument will no longer be considered credit-impaired when there is no shortfall of cash flows compared to the original contractual terms.

For financial assets within stage 2, these can only be transferred to stage 1 when they are no longer considered to have experienced a significant increase in credit risk.

Where significant increase in credit risk was determined using quantitative measures, the instruments will automatically transfer back to stage 1 when the original PD based transfer criteria are no longer met. Where instruments were transferred to Stage 2 due to an assessment of qualitative factors, the issues that led to the reclassification must be cured before the instruments can be reclassified to Stage 1. This includes instances where management actions led to instruments being classified as Stage 2, requiring that action to be resolved before loans are reclassified to Stage 1.

Significant accounting estimates and judgements

The Bank's ECL calculations are outputs of complex models with a number of underlying assumptions. The significant judgements and estimates in determining ECL include:

- The Group's criteria for assessing if there has been a significant increase in credit risk;
- Development of ECL models, including the choice of inputs relating to macroeconomic variables.

The calculation of credit-impairment provisions also involves expert credit judgement to be applied by the credit risk management team based upon counterparty information they receive from various sources including relationship managers and on external market information.

Expert Credit Judgement

For Corporate & Institutional, Commercial and Private Banking, borrowers are graded by credit risk management on a credit grading (CG) scale from CG1 to CG14. Once a borrower starts to exhibit credit deterioration, it will move along the credit grading scale in the performing book and when it is classified as Credit Grade (12) the credit assessment and oversight of the loan will normally be performed by Group Special Assets Management (GSAM). Borrowers graded CG12 exhibit well defined weaknesses in areas such as management and/or performance but there is no current expectation of a loss of principal or interest. Where the impairment assessment indicates that there will be a loss of principal on a loan, the borrower is graded a CG14 while borrowers of other credit impaired loans are graded CG13. (Instruments graded CG13 or CG14 are regarded as Non-Performing Loans, i.e. Stage 3 or credit impaired exposures).

For individually significant financial assets within Stage 3, Group Special Asset Management (GSAM) will consider all judgements that have an impact on the expected future cash flows of the asset. These include: the business prospects, industry and geo-political climate of the customer, quality of realisable value of collateral, the Group's legal position relative to other claimants and any renegotiation/forbearance options. The difference between the loan carrying amount and the discounted expected future cash flows will result in the stage 3 credit impairment amount. The future cash flow calculation involves significant judgements and estimates. As new information becomes available and further negotiations/ forbearance measures are taken the estimates of the future cash flows will be revised, and will have an impact on the future cash flow analysis.

For financial assets which are not individually significant, such as the Retail portfolio or small business loans, which comprise a large number of homogenous loans that share similar characteristics, statistical estimates and techniques are used, as well as credit scoring analysis.

Retail banking clients are considered credit impaired where they are more 90 Days past due. Retail products are also considered credit impaired if the borrower files for bankruptcy or other forbearance program, the borrower is deceased or the business is closed in the case of a small business, or if the borrower surrenders the collateral, or there is an identified fraud on the account. Additionally, if the account is unsecured and the borrower has other credit accounts with the Group that are considered credit impaired, the account may be also be credit impaired.

Techniques used to compute impairment amounts use models which analyse historical repayment and default rates over a time horizon. Where various models are used, judgement is required to analyse the available information provided and select the appropriate model or combination of models to use.

Expert credit judgement is also applied to determine whether any post-model adjustments are required for credit risk elements which are not captured by the models.

Interest income and expense

Interest income for financial assets held at either fair value through other comprehensive income or amortised cost, and interest expense on all financial liabilities held at amortised cost is recognised in profit or loss using the effective interest method.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the expected life of the instrument. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to the gross carrying amount of a financial asset or the amortised cost of a financial liability. When calculating the effective interest rate for financial instruments other than credit impaired assets, the Group estimates cash flows considering all contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider expected credit losses. The calculation of effective interest rate includes all fees paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability and all other premiums or discounts.

Interest income for financial assets that are either held at fair value through other comprehensive income or amortised cost that are either purchased or originated credit impaired financial assets (POCI) or assets that have become credit impaired subsequent to initial recognition (Stage3) and have had amounts written off, is recognised using the credit adjusted effective interest rate. This rate is calculated in the same manner as the effective interest rate except that expected credit losses are included in the expected cash flows. Interest income is therefore recognised on the amortised cost of the financial asset including expected credit losses. Should the credit risk on a Stage 3 financial asset improve such that the financial asset is no longer considered credit impaired, interest income recognition reverts to a computation based on the rehabilitated gross carrying value of the financial asset. In contrast, the credit adjusted effective interest rate on POCI financial assets is calculated at initial recognition of the financial asset and does not revert to a gross basis even if the credit risk of the asset improves. (All deterioration or improvement of the credit risk of POCI instruments is recorded in impairment).

Dividends on equity instruments are recognised in the profit or loss within other income when the Group's right to receive payment is established. Foreign exchange gains and losses on monetary items are recognised in net trading income.

SECTION 7: GLOSSARY

Days past due	One or more days that interest and/or principal payments are overdue based on the contractual terms.
Cover ratio	The ratio of impairment provisions for each stage to the gross loan exposure for each stage. For stage 3, the cover ratio is also presented as the ratio of impairment provisions plus the realisable value of collateral to the gross loan exposure.
Default	Financial assets in default represent those that are at least 90 days past due in respect of principal or interest and/or where the assets are otherwise considered to be unlikely to pay, including those that are credit-impaired.
Early Alert, Purely and Non Purely Precautionary	A borrower's account which exhibits risks or potential weaknesses of a material nature requiring closer monitoring, supervision, or attention by management. Weaknesses in such a borrower's account, if left uncorrected, could result in deterioration of repayment prospects and the likelihood of being downgraded CG12 or worse. When an account is on Early Alert, it is classified as either Purely Precautionary or Non-Purely Precautionary. A Purely Precautionary account is one that exhibits early alert characteristics but these do not present any imminent credit concern. If the symptoms present an imminent credit concern, an account will be considered for classification as Non-Purely Precautionary.
Loan exposure	Loans and advances to customers reported on the balance sheet held at amortised cost or FVOCI, non-cancellable credit commitments and cancellable credit commitments for credit cards and overdraft facilities.
Loss rate	Uses an adjusted gross charge-off rate, developed using monthly write off and recoveries over the preceding 12 months and total outstanding balances.
Non-linearity	Non-linearity of ECL occurs when the average of ECL for a portfolio is higher than the base case (median) due to the fact that bad economic environment could have a larger impact on ECL calculation than good economic environment.
Probability weighted	Obtained by considering the values the metric can assume weighted by the probability of each value occurring.
Roll rate	Uses a matrix that gives average loan migration rate from delinquency states from period to period. A matrix multiplication is then performed to generate the final PDs by delinquency bucket over different time horizons.
Significant increase in credit risk	Assessed by comparing the risk of default of an exposure at the reporting date to the risk of default at origination (after considering the passage of time).
Stage 1	Assets have not experienced a significant increase in credit risk since origination and impairment recognised on the basis of 12 months expected credit losses.
Stage 2	Assets have experienced a significant increase in credit risk since origination and impairment is recognised on the basis of lifetime expected credit losses.
Stage 3	Assets that are in default and considered credit-impaired (non-performing loans).
Unbiased	Not overly optimistic or pessimistic, represents information that is not slanted, weighted, emphasised, deemphasised or otherwise manipulated to increase the probability that the financial information will be received favourably or unfavourably by users.
Unlikely to pay	Indications of unlikeliness to pay shall include placing the credit obligation on non-accrued status; the recognition of a specific credit adjustment resulting from a significant perceived decline in credit quality subsequent to the Group taking on the exposure;; selling the credit obligation at a material credit related economic loss; the Group consenting to a distressed restructuring of the credit obligation where this is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or, where relevant fees; filing for the obligor's bankruptcy or a similar order in respect of an obligor's credit obligation to the Group; the obligor has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of a credit obligation to the Group.