

# Barclays Bank UK PLC Pillar 3 Report

31 December 2019

## Barclays Bank UK PLC Pillar 3 report

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A glossary of terms and remuneration disclosures can be found at: [home.barclays.com/annualreport](http://home.barclays.com/annualreport)

# Introduction

## Notes on Basis of Preparation

Pillar 3 disclosures complement those disclosed in the Barclays Bank UK PLC 2019 Annual Report and provide additional information about Barclays Bank UK Group's risk profile, including its regulatory capital, risk weighted assets (RWAs), liquidity, leverage exposures as well as information about Barclays Bank UK Group's approach to managing risk.

The information disclosed in this report is prepared in accordance with the Capital Requirements Regulation and Capital Requirements Directive (CRR and CRD, also known as the 'CRD IV legislative package'). On 27 June 2019, CRR II came into force amending CRR. As an amending regulation, the existing provisions of CRR apply unless they are amended by CRR II. Certain provisions took immediate effect and these primarily relate to MREL. Amendments include changes to qualifying criteria for CET1, AT1 and Tier 2 instruments, the inclusion of additional holdings eligible for deduction, an amendment to the treatment of deferred tax assets and the introduction of requirements for MREL. Grandfathering and transitional provisions relating to MREL have also been introduced. Other CRR II amendments are expected to take effect from 28 June 2021. Certain aspects of CRR II are dependent on final technical standards to be issued by the European Banking Authority (EBA) and adopted by the European Commission as well as UK implementation of the rules. The Pillar 3 disclosures have also been prepared in accordance with the EBA "Guidelines on materiality, proprietary and confidentiality and on disclosure frequency under Articles 432(1), 432(2) and 433 of CRR" and EBA "Guidelines on disclosure requirements under Part Eight of Regulation (EU) No 575/2013", as amended by Regulation (EU) 2019/876, in effect at the reporting date.

### Policy, validation and sign off

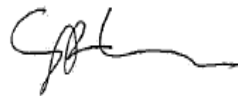
Throughout the year ended 31 December 2019, and to date, Barclays Bank UK Group has operated a framework of disclosure controls and procedures to ensure the completeness and accuracy of the external financial and Pillar 3 disclosures. Specific governance committees are responsible for examining the Barclays Bank UK Group's reports and disclosures so that they have been subject to adequate verification and comply with applicable standards and legislation. These Committees report their conclusions to the Board Audit Committee (BAC).

This governance process is in place to provide both management and the Board with sufficient opportunity to debate and challenge the Barclays Bank UK Group's disclosures before they are made public.

*"We confirm that Barclays Bank UK PLC's Pillar 3 disclosures, to the best of our knowledge, comply with Part Eight of the CRR and have been prepared in compliance with Barclays' internal control framework."*



Fiona Larnach  
Chief Risk Officer, Barclays Bank UK PLC



James Mack  
Chief Financial Officer, Barclays Bank UK PLC

# Introduction

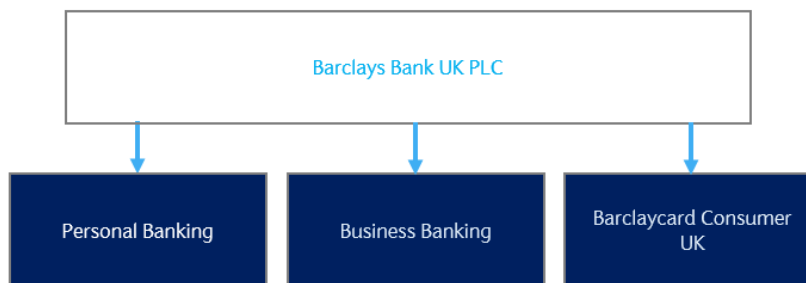
## Notes on Basis of Preparation

### Overview

Barclays Bank UK PLC is the wholly-owned ring-fenced bank of Barclays PLC and consists of Personal Banking, Business Banking and Barclaycard Consumer UK businesses.

The consolidation of Barclays Bank UK PLC and its subsidiaries is referred to as the Barclays Bank UK Group. The consolidation of Barclays Bank UK PLC's parent entity, Barclays PLC and its subsidiaries, is referred to as the Barclays Group.

### Our structure



### Impact of structural reform

Throughout 2018, Barclays Bank UK PLC was regulated by the Prudential Regulation Authority (PRA) on an individual basis only. From 1 January 2019, as part of structural reform, Barclays Bank UK Group became regulated by the PRA as a ring-fenced bank. This results in additional entities being included to reflect the new regulatory scope of consolidation and therefore the disclosures provided in this document are for Barclays Bank UK Group. Due to this change in scope, comparatives are not disclosed as the Barclays Bank UK Group Pillar 3 disclosures are published for the first time as at 31 December 2019.

Table 3 outlines the Barclays Bank UK Group's entities where there is a difference in the scope of regulatory consolidation with the IFRS scope of consolidation.

Disclosures for Barclays Bank UK PLC on an individual basis are not disclosed in this document as the entity is materially aligned to Barclays Bank UK Group.

# Risk and capital position review

## Linkage between financial statement and regulatory risk

**Table 1: LI1– Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories**

This table shows an outline of the differences in the basis of consolidation for accounting and regulatory purposes. It provides an allocation of the balance sheet line items reported under the scope of regulatory consolidation between the different regulatory risk frameworks. Information regarding the market risk valuation methodologies, independent price verifications process and procedures for valuation adjustments or reserves can be found in the Management of Market risk section from page 86.

	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework <sup>a</sup>	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital <sup>b</sup>
As at 31 December 2019	£m	£m	£m	£m	£m	£m	£m
<b>Assets</b>							
Cash and balances at central banks	24,305	24,233	24,233	-	-	-	-
Cash collateral and settlement balances	4,331	4,331	3,183	1,056	-	-	92
Loans and advances at amortised cost	197,569	197,636	196,125	-	1,511	-	-
Reverse repurchase agreements and other similar secured lending	1,761	1,761	-	1,761	-	-	-
Trading portfolio assets	860	860	-	-	-	860	-
Financial assets at fair value through the income statement	3,571	3,571	3,571	-	-	-	-
Derivative financial instruments	192	192	-	192	-	-	-
Financial investments	-	-	-	-	-	-	-
Financial assets at fair value through other comprehensive income	19,322	19,322	19,322	-	-	-	-
Investments in subsidiaries, associates and joint ventures	-	129	-	-	-	-	129
Goodwill and intangible assets	3,530	3,530	-	-	-	-	3,530
Property, plant and equipment	893	893	893	-	-	-	-
Current tax assets	-	-	-	-	-	-	-
Deferred tax assets	810	810	810	-	-	-	-
Retirement benefit assets	-	-	-	-	-	-	-
Other assets	1,254	1,232	1,232	-	-	-	-
Assets included in disposal groups classified as held for sale	-	-	-	-	-	-	-
<b>Total assets</b>	<b>258,398</b>	<b>258,500</b>	<b>249,369</b>	<b>3,009</b>	<b>1,511</b>	<b>860</b>	<b>3,751</b>
<b>Liabilities</b>							
Deposits at amortised cost	205,696	205,629	-	-	-	-	205,629
Cash collateral and settlement balances	214	214	-	33	-	-	181
Repurchase agreements and other similar secured borrowing	13,420	13,420	-	2,212	-	-	11,208
Debt securities in issue	8,271	8,271	-	-	-	-	8,271
Subordinated liabilities	7,688	7,688	-	-	-	-	7,688
Trading portfolio liabilities	1,704	1,704	-	-	-	1,704	-
Financial liabilities designated at fair value	-	-	-	-	-	-	-
Derivative financial instruments	740	740	-	740	-	-	-
Current tax liabilities	458	452	-	-	-	-	452
Deferred tax liabilities	-	-	-	-	-	-	-
Retirement benefit liabilities	-	-	-	-	-	-	-
Other liabilities	2,034	2,107	-	-	-	-	2,107
Provisions	1,660	1,654	-	-	-	-	1,654
Liabilities included in disposal groups classified as held for sale	-	-	-	-	-	-	-
<b>Total liabilities</b>	<b>241,885</b>	<b>241,879</b>	<b>-</b>	<b>2,985</b>	<b>-</b>	<b>1,704</b>	<b>237,190</b>

Notes:

The following points should be considered in conjunction with table LI1:

- The column "subject to securitisation framework" includes non-trading book positions only. Trading book securitisation positions are included in the "subject to the market risk framework" column.
- For liabilities, balances shown in column "Not subject to capital requirements or subject to deduction from capital" are residual balances so that "Carrying values under scope of regulatory consolidation" equals to the sum of those in the columns relating to the regulatory framework.

# Risk and capital position review

## Linkage between financial statement and regulatory risk

Table 2: LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements

This table provides a reconciliation between assets carrying values under the regulatory scope of consolidation as per Table 1 and the exposures used for regulatory purposes, split as per regulatory risk framework.

Off-balance-sheet amounts: Under the credit risk framework, these balances principally consist of undrawn credit facilities after the application of credit conversion factors (CCF). Under the counterparty credit risk framework, the off balance sheet items consist of the exposure due to collateral given in SFTs.

Difference due to netting rules: This reflects the effects of master netting agreements in addition to the netting permitted under International Accounting Standards (IAS) framework.

Differences due to consideration of provisions: The assets carrying values is net of impairment. The regulatory exposure calculated under AIRB approach adds back the impairment.

Differences between input balance and modelled regulatory output: The assets carrying values as defined per IFRS differ from the values used for regulatory reporting purposes, which reflect regulatory add-on such as those applied for the FCCM calculation.

	Total <sup>a</sup>	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework
	£m	£m	£m	£m
<b>As at 31st December 2019</b>				
<b>Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)</b>	253,889	249,369	3,009	1,511
Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)	(2,985)	-	(2,985)	-
Total net amount under the regulatory scope of consolidation	250,904	249,369	24	1,511
Off-balance-sheet amounts <sup>b</sup>	97,011	48,091	2,811	-
Differences in valuations	(21)	(21)	-	-
Differences due to different netting rules	(353)	-	(353)	-
Differences due to consideration of provisions	2,471	2,471	-	-
Differences due to prudential filters	-	-	-	-
Differences between input balance and modelled regulatory output	12,883	12,883	-	-
Regulatory exclusion –CCP trades for a client where Barclays acts as clearing member on behalf of a counterparty	-	-	-	-
Credit Enhancement Exposure for Sponsor trades	-	-	-	-
Exposures of Synthetic Securitisation trades	-	-	-	-
Other	612	612	-	-
<b>Exposure amounts considered for regulatory purposes</b>	<b>363,507</b>	<b>313,405</b>	<b>2,482</b>	<b>1,511</b>

Notes:

The following points should be considered in conjunction with table LI2:

- The total column cannot be directly reconciled back to the carrying values under scope of consolidation shown in table 1 - LI1, as it excludes balances "subject to the market risk framework" and items "not subject to capital requirements or subject to deduction from capital".
- In line item "Off-balance sheet amounts", the amounts shown in the Total column, which relates to exposures pre-CCF, do not equal the sum of the amounts shown in the remaining columns, as these are post-CCF.

Table 3: LI3 Outline of the differences in the scopes of consolidation (entity by entity)

Name of the entity	Method of accounting consolidation	Method of regulatory consolidation			Description of the entity
		Full consolidation	Proportional consolidation	Neither consolidated nor deducted <sup>a</sup>	
Barclays Insurance Services Company Limited	Fully consolidated			Y	Activities auxiliary to financial services and insurance activities
Vaultex UK Limited	Proportionally consolidated			Y	Activities auxiliary to financial services and insurance activities

Note:

- Column "neither consolidated nor deducted": Exposure to and / or equity investment in these entities are risk weighted or deducted from capital subject to thresholds.

# Risk and capital position review

## Analysis of treasury and capital risk

### IFRS 9 transitional capital arrangements

On 1 January 2018, IFRS9 transitional capital arrangements were implemented by Regulation (EU) 2017/2395. Barclays elected to apply the transitional arrangements at both consolidated and individual entity levels and will disclose both transitional and fully loaded CET1 ratios until the end of the transitional period. The transitional benefit is phased out over a 5 year period with 95% applicable for 2018; 85% for 2019; 70% for 2020; 50% for 2021; 25% for 2022 and with no transitional benefit from 2023.

The transitional arrangements, implemented under a modified static approach, allow for transitional relief on the “day 1” impact on adoption of IFRS 9 (static element) and for the increase between “day 1” and the reporting date (modified element), subject to eligibility. For the static element, stage 1, stage 2 and stage 3 provisions are eligible for transition, whereas for the modified element, stage 3 provisions are excluded.

Separate calculations are performed for standardised and advanced IRB portfolios, reflecting the different ways these frameworks take account of provisions. Under the standardised approach, increases in provisions for both the static and modified elements are eligible for transition. Under the advanced approach, for both the static and modified elements, provisions are only eligible for transitional relief to the extent that they exceed regulatory expected loss.

Any increases in impairment allowances as a result of IFRS 9, net of tax, decreases shareholders' equity through retained earnings. This is somewhat mitigated by the transitional relief applied on eligible impairment.

For regulatory Internal Ratings Based (IRB) exposures, the calculation of capital takes account of the expected loss via a comparison with the impairment allowances. Where regulatory expected losses exceed impairment allowances, the shortfall is deducted from CET1 capital. Where the impairment allowance is higher than expected loss, the excess is added back to tier 2 capital and capped at an amount of 0.6% of IRB RWAs.

The DTAs created from the increase of impairment are also accounted for in the CET1 ratio. When DTAs arising from temporary differences are above the 10% CET1 capital threshold, any excess above the threshold is deducted and those below the threshold are risk weighted at 250% up to the point they reach threshold.

Standardised RWAs decrease due to the increase in impairment being offset against the Standardised Credit Risk exposures.

# Risk and capital position review

## Analysis of treasury and capital risk

Table 4: Key Metrics (KM1/IFRS9-FL)

Barclays Bank UK Group's capital, RWAs and leverage is calculated applying transitional relief for IFRS9, no other transitional provisions in CRR as amended by CRR II applicable as at the reporting date are applicable. The table below therefore represents both transitional and fully loaded capital metrics which is equal to transitional capital and capital as if IFRS9 or analogous ECLs transitional arrangements had not been applied.

KM1 Ref	IFRS9-FL Ref		As at 31 December 2019 £m	As at 30 June 2019 £m
<b>Available capital (amounts)</b>				
1	1	Common Equity Tier 1 (CET1) <sup>a</sup>	10,128	11,001
1a	2	Fully loaded Expected Credit Loss (ECL) accounting model <sup>b</sup>	9,938	10,780
2	3	Tier 1 <sup>a</sup>	12,688	13,764
2a	4	Fully loaded ECL accounting model Tier 1 <sup>b</sup>	12,498	13,543
3	5	Total capital <sup>a</sup>	16,012	17,345
3a	6	Fully loaded ECL accounting model total capital <sup>b</sup>	15,990	17,334
<b>Risk-weighted assets (amounts)</b>				
4	7	Total risk-weighted assets (RWA) <sup>a</sup>	75,010	76,182
4a	8	Fully loaded ECL accounting model total risk-weighted assets (RWA) <sup>b</sup>	75,124	76,303
<b>Risk-based capital ratios as a percentage of RWA</b>				
5	9	Common Equity Tier 1 ratio (%)	13.5%	14.4%
5a	10	Fully loaded ECL accounting model Common Equity Tier 1 (%)	13.2%	14.1%
6	11	Tier 1 ratio (%)	16.9%	18.1%
6a	12	Fully loaded ECL accounting model Tier 1 ratio (%)	16.6%	17.7%
7	13	Total capital ratio (%)	21.3%	22.8%
7a	14	Fully loaded ECL accounting model total capital ratio (%)	21.3%	22.7%
<b>Additional CET1 buffer requirements as a percentage of RWA</b>				
8		Capital conservation buffer requirement (%)	2.5%	2.5%
9		Countercyclical buffer requirement (%)	1.0%	1.0%
		Systemic risk buffer (SRB) requirements (%)	1.0%	0.0%
11		Total of bank CET1 specific buffer requirements (%) (row 8 + 9 + SRB)	4.5%	3.5%
12		CET1 available after meeting the bank's minimum capital requirements (%)	9.0%	9.9%
<b>CRR leverage ratio<sup>a,c</sup></b>				
13	15	Total CRR leverage ratio exposure measure	264,085	265,462
14	16	Transitional CRR leverage ratio (%)	4.8%	5.2%
	17	Leverage ratio as if IFRS 9 or analogous ECLs transitional arrangement had not been applied	4.7%	5.1%
<b>Average UK leverage ratio (Transitional)<sup>a,d,e</sup></b>				
13a		Total average UK leverage ratio exposure measure	240,057	233,823
14a		Transitional average UK leverage ratio (%)	5.2%	5.7%
<b>UK leverage ratio (Transitional)<sup>a,c,d</sup></b>				
13b		Total UK leverage ratio exposure measure	236,026	228,787
14b		Transitional UK leverage ratio (%)	5.4%	6.0%
<b>Liquidity Coverage Ratio</b>				
15		Total HQLA	41,293	47,001
16		Total net cash outflows	28,741	29,375
17		LCR ratio (%)	144%	160%

Notes:

- a Transitional capital, RWAs and leverage ratios are calculated applying the IFRS 9 transitional arrangements of the CRR as amended by CRR II applicable as at the reporting date.
- b Fully loaded capital and RWAs are calculated without applying the IFRS 9 transitional arrangements of the CRR as amended by CRR II applicable as at the reporting date.
- c The difference between CRR leverage ratio and UK leverage ratio is due to the exclusion of qualifying central bank claims from the UK leverage exposure.
- d Fully loaded average UK leverage ratio was 5.2%, with £240bn of leverage exposure. Fully loaded UK leverage ratio was 5.3%, with £236bn of leverage exposure. Fully loaded UK leverage ratios are calculated without applying the IFRS 9 transitional arrangements of the CRR as amended by CRR II applicable as at the reporting date.
- e Average UK leverage ratio uses capital based on the last day of each month in the quarter and an exposure measure for each day in the quarter.



# Risk and capital position review

## Analysis of treasury and capital risk

Table 5: CC1 – Composition of regulatory capital

This table shows the components of regulatory capital presented on both a transitional and fully loaded basis as at 31 December 2019.

		As at 31 December 2019 Transitional position £m	As at 31 December 2019 Fully loaded position £m
<b>Common Equity Tier 1 capital: instruments and reserves</b>			
1	Directly issued qualifying common share (and equivalent for non-joint stock companies) capital plus related stock surplus	5	5
2	Retained earnings	13,765	13,765
3	Accumulated other comprehensive income (and other reserves)	183	183
	Adjustment to retained earnings for foreseeable dividends	(231)	(231)
	Scope of consolidation adjustment	108	108
6	<b>Common Equity Tier 1 capital before regulatory adjustments</b>	<b>13,830</b>	<b>13,830</b>
<b>Common Equity Tier 1 capital: regulatory adjustments</b>			
7	Prudent valuation adjustments	(138)	(138)
8	Goodwill (net of related tax liability)	(3,627)	(3,627)
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	(4)	(4)
11	Cash flow hedge reserve	(123)	(123)
	Adjustment under IFRS 9 transitional arrangements <sup>a</sup>	190	-
28	<b>Total regulatory adjustments to Common Equity Tier 1</b>	<b>(3,702)</b>	<b>(3,892)</b>
29	<b>Common Equity Tier 1 (CET1) capital</b>	<b>10,128</b>	<b>9,938</b>
<b>Additional Tier 1 capital: instruments</b>			
30	Directly issued qualifying additional Tier 1 instruments plus related stock surplus	2,560	2,560
31	<i>Of which: classified as equity under applicable accounting standards</i>	2,560	2,560
36	<b>Additional Tier 1 capital before regulatory adjustments</b>	<b>2,560</b>	<b>2,560</b>
44	<b>Additional Tier 1 (AT1) capital</b>	<b>2,560</b>	<b>2,560</b>
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>12,688</b>	<b>12,498</b>
<b>Tier 2 capital: instruments and provisions</b>			
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	3,280	3,280
50	Provisions	44	212
51	<b>Tier 2 capital before regulatory adjustments</b>	<b>3,324</b>	<b>3,492</b>
58	<b>Tier 2 Capital (T2)</b>	<b>3,324</b>	<b>3,492</b>
59	<b>Total regulatory capital (TC = T1 + T2)</b>	<b>16,012</b>	<b>15,990</b>
60	<b>Total risk-weighted assets</b>	<b>75,010</b>	<b>75,124</b>
<b>Capital ratios and buffers</b>			
61	Common Equity Tier 1 (as a percentage of risk-weighted assets)	13.5%	13.2%
62	Tier 1 (as a percentage of risk-weighted assets)	16.9%	16.6%
63	Total capital (as a percentage of risk-weighted assets)	21.3%	21.3%
64	Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer requirements plus higher loss absorbency requirement plus systemic risk buffer, expressed as a percentage of risk-weighted assets)	4.5%	4.5%
65	<i>of which: capital conservation buffer requirement</i>	2.5%	2.5%
66	<i>of which: countercyclical buffer requirement</i>	1.0%	1.0%
	<i>of which: systemic risk buffer requirement</i>	1.0%	1.0%
68	Common Equity Tier 1 (as a percentage of risk-weighted assets) available after meeting the bank's minimum capital requirements	9.0%	8.7%
<b>Amounts below the thresholds for deduction (before risk weighting)</b>			
73	Significant investments in the common stock of financial entities	20	20
75	Deferred tax assets arising from temporary differences (net of related tax liability)	790	855
<b>Applicable caps on the inclusion of provisions in Tier 2</b>			
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	71	71
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	44	212
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	344	345

Notes:

† The references (a) – (i) identify balance sheet components in Table 6: CC2 – Reconciliation of regulatory capital to balance sheet which are used in the calculation of regulatory capital.

a Of which static nil, modified £190m. For more information, see page 7.

# Risk and capital position review

## Analysis of treasury and capital risk

Table 6: CC2 – Reconciliation of regulatory capital to balance sheet

This table shows the reconciliation between Barclays Bank UK Group's balance sheet for statutory and regulatory purposes. Please note that the amount shown under the regulatory scope of consolidation is not a risk weighted asset measure; it is based on an accounting measure and cannot be directly reconciled to other tables in this report.

As at 31 December 2019	Ref <sup>f</sup>	Accounting balance sheet per published financial statements £m	Deconsolidation of insurance/other entities £m	Balance sheet per regulatory scope of consolidation £m
<b>Assets</b>				
Cash and balances at central banks		24,305	(72)	24,233
Cash collateral and settlement balances		4,331	-	4,331
Loans and advances at amortised cost		197,569	67	197,636
Reverse repurchase agreements and other similar secured lending		1,761	-	1,761
Trading portfolio assets		860	-	860
Financial assets at fair value through the income statement		3,571	-	3,571
Derivative financial instruments		192	-	192
Financial assets at fair value through other comprehensive income		19,322	-	19,322
Investments in subsidiaries, associates and joint ventures	d	-	129	129
Goodwill and intangible assets		3,530	-	3,530
Of which: goodwill	e	3,526	-	3,526
Of which: other intangibles (excluding MSRs)	f	4	-	4
Property, plant and equipment		893	-	893
Deferred tax assets		810	-	810
Other assets		1,254	(22)	1,232
<b>Total assets</b>		<b>258,398</b>	<b>102</b>	<b>258,500</b>
<b>Liabilities</b>				
Deposits at amortised cost		205,696	(67)	205,629
Cash collateral and settlement balances		214	-	214
Repurchase agreements and other similar secured borrowing		13,420	-	13,420
Debt securities in issue		8,271	-	8,271
Subordinated liabilities	i	7,688	-	7,688
Trading portfolio liabilities		1,704	-	1,704
Financial liabilities designated at fair value		-	-	-
Derivative financial instruments		740	-	740
Current tax liabilities		458	(6)	452
Other liabilities		2,034	73	2,107
Provisions		1,660	(6)	1,654
<b>Total liabilities</b>		<b>241,885</b>	<b>(6)</b>	<b>241,879</b>
<b>Equity</b>				
Called up share capital and share premium		5	-	5
Of which: amount eligible for CET1	a	5	-	5
Other equity instruments	h	2,560	-	2,560
Other reserves	c,g	183	102	285
Retained earnings	b	13,765	6	13,771
<b>Total equity</b>		<b>16,513</b>	<b>108</b>	<b>16,621</b>
<b>Total liabilities and equity</b>		<b>258,398</b>	<b>102</b>	<b>258,500</b>

<sup>f</sup> The references (a) – (i) identify balance sheet components that are used in the calculation of regulatory capital in Table 5: CC1 – Composition of regulatory capital on page 9.

# Risk and capital position review

## Analysis of treasury and capital risk

Table 7: Risk weighted assets by risk type

This table shows risk weighted assets by risk type.

Risk weighted assets (RWAs) by risk type and approach										
	Credit risk		Counterparty credit risk				Market risk		Operational risk	Total RWAs
	Std	A-IRB	Std	A-IRB	Settlement risk	CVA	Std	IMA		
As at 31 December 2019	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
<b>Risk weighted assets</b>	<b>5,216</b>	<b>57,374</b>	<b>475</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>178</b>	<b>-</b>	<b>11,617</b>	<b>75,010</b>

### Credit risk portfolios subject to

#### Standardised Approach

- Minor UK Cards portfolio
- Further Education and Local Authority portfolios
- High quality liquidity pool assets
- Minor unsecured loan portfolios (closed books in run off)
- UK Wealth Portfolio

#### Advanced Internal Ratings Based (AIRB) approach

- UK managed retail and wholesale portfolios
- UK cards

# Risk and capital position review

## Analysis of treasury and capital risk

Table 8: OV1 - Overview of risk weighted assets by risk type and capital requirements

The table shows RWAs, split by risk type and approach. For credit risk, RWAs are shown by credit exposure class.

Please see additional disclosures for each risk type in the Analysis of Credit Risk (page 19), Counterparty Credit Risk (page 44), Market Risk (page 50), Securitisation Exposures (page 51) and Operational Risk sections (page 55).

As at 31 December 2019		RWA	Minimum Capital Requirements
		£m	£m
1	Credit risk (excluding counterparty credit risk) (CCR)	60,490	4,839
2	Of which standardised approach	5,166	413
3	Of which the foundation IRB (FIRB) approach	-	-
4	Of which the advanced IRB (AIRB) approach	55,324	4,426
5	Of which Equity IRB under the Simple risk-weight or the internal models approach	-	-
6	CCR	625	50
7	Of which mark to market	55	4
8	Of which original exposure	-	-
9	Of which standardised approach	-	-
9a	Of which financial collateral comprehensive method	224	18
10	Of which internal model method	-	-
11	Of which risk exposure amount for contributions to the default fund of a CCP	196	16
12	Of which CVA	150	12
13	Settlement risk	-	-
14	Securitisation exposures in banking book (after cap)	135	11
14a	Of which capital deduction approach (CAPD)	-	-
14b	Of which look through approach (KIRB)	-	-
15	Of which IRB approach	119	10
16	Of which IRB supervisory formula approach (SFA)	-	-
17	Of which internal assessment approach (IAA)	-	-
18	Of which standardised approach	16	1
19	Market risk	178	14
20	Of which the standardised approach	178	14
21	Of which IMA	-	-
22	Large exposures	-	-
23	Operational risk	11,617	929
24	Of which basic indicator approach	-	-
25	Of which standardised approach	11,617	929
26	Of which advanced measurement approach	-	-
27	Amounts below the thresholds for deduction (subject to 250% risk weight)	1,965	157
28	Floor Adjustments	-	-
29	<b>Total</b>	<b>75,010</b>	<b>6,000</b>

# Risk and capital position review

## Analysis of treasury and capital risk

Table 9: CR8 - RWA flow statement of credit risk exposures under the AIRB approach

	RWA amount £bn	Capital requirements £bn
<b>1 As at 1 January 2019</b>	<b>59.7</b>	<b>4.8</b>
2 Asset size	3.3	0.3
3 Asset quality	(2.0)	(0.2)
4 Model updates	(0.5)	-
5 Methodology and policy	(2.5)	(0.2)
6 Acquisitions and disposals	(0.6)	(0.1)
7 Foreign exchange movements	-	-
8 Other	-	-
<b>9 As at 31 December 2019</b>	<b>57.4</b>	<b>4.6</b>

### Basis of preparation for movements in risk weighted assets

Seven categories of drivers have been identified and are described below. Not all the drivers are applicable, however all categories have been listed below for completeness.

#### Asset / book size

##### Credit risk and counterparty risk (inc CVA)

This represents RWA movements driven by changes in the size and composition of underlying positions, measured using EAD values for existing portfolios over the period. This includes, but is not exclusive to:

- new business and maturing loans
- changes in product mix and exposure growth for existing portfolios
- book size reductions owing to risk mitigation and write-offs

#### Asset / book quality

##### Credit risk and counterparty risk (inc CVA)

This represents RWA movements driven by changes in the underlying credit quality and recoverability of portfolios and reflected through model calibrations or realignments where applicable. This includes, but is not exclusive to:

- PD migration and LGD changes driven by economic conditions
- ratings migration for standardised exposures

#### Model updates

##### Credit risk and counterparty risk (inc CVA)

This is the movement in RWAs as a result of both internal and external model updates. This includes, but is not exclusive to:

- updates to existing model inputs driven by both internal and external review
- model enhancements to improve models performance

#### Methodology and policy

##### Credit risk and counterparty risk (inc CVA)

This is the movement in RWAs as a result of both internal and external methodology, policy and regulatory changes. This includes, but is not exclusive to:

- updates to RWA calculation methodology, communicated by the regulator
- the implementation of credit risk mitigation to a wider scope of portfolios

#### Acquisitions and disposals

This is the movement in RWAs as a result of the disposal or acquisition of business operations impacting the size of banking and trading portfolios.

#### Foreign exchange movements

This is the movement in RWAs as a result of changes in the exchange rate between the functional currency of the Barclays business area or portfolio and our presentational currency for consolidated reporting.

#### Other

This is the movement in RWAs driven by items that cannot be reasonably assigned to the other driver categories.

# Risk and capital position review

## Analysis of treasury and capital risk

### Leverage ratio and exposures

The following leverage tables show the components of the leverage ratio using the CRR definition for the leverage exposure and the Tier 1 capital on a transitional basis as at 31 December 2019.<sup>a</sup>

Barclays Bank UK Group manages the risk associated with leverage exposures through the Barclays Bank UK Group's capital risk management process. Leverage ratio forecasts are regularly monitored against early warning indicators and internal limits which trigger actions to mitigate risk. Barclays Bank UK Group leverage ratio is also subject to regular external and internal stress testing as applicable as part of Barclays Group.

**Table 10: Summary reconciliation of accounting assets and leverage ratio exposures**

This table is a summary of the total leverage exposure and comprises of total IFRS assets used for statutory purposes, regulatory consolidation and other leverage adjustments.

		As at 31 December 2019
		£m
1	Total assets as per published financial statements	258,398
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	102
4	Adjustments for derivative financial instruments	220
5	Adjustments for securities financing transactions (SFTs)	30
6	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	9,037
7	Other adjustments (asset amounts deducted in determining tier 1 capital)	(3,702)
<b>8</b>	<b>Total leverage ratio exposure</b>	<b>264,085</b>

Note:

<sup>a</sup> Capital and leverage measures are calculated applying the IFRS9 transitional arrangements of the CRR as amended by CRR II applicable as at the reporting date.

# Risk and capital position review

## Analysis of treasury and capital risk

Table 11: Leverage ratio common disclosure

This table shows the leverage ratio calculation and includes additional breakdowns for the leverage exposure measure.

		As at 31 December 2019 £m
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	256,546
2	Asset amounts deducted in determining tier 1 capital	(3,702)
3	<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>252,844</b>
<b>Derivative exposures</b>		
4	Replacement cost associated with <i>all</i> derivatives transactions (ie net of eligible cash variation margin)	123
5	Add-on amounts for PFE associated with <i>all</i> derivatives transactions (mark-to-market method)	725
7	Deductions of receivables assets for cash variation margin provided in derivatives transactions	(435)
8	Exempted CCP leg of client-cleared trade exposures	-
9	Adjusted effective notional amount of written credit derivatives	-
10	Adjusted effective notional offsets and add-on deductions for written credit derivatives	-
11	<b>Total derivative exposures</b>	<b>413</b>
<b>Securities financing transaction exposures</b>		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	2,516
13	Netted amounts of cash payables and cash receivables of gross SFT assets	(755)
14	Counterparty credit risk exposure for SFT assets	30
16	<b>Total securities financing transaction exposures</b>	<b>1,791</b>
<b>Other off-balance sheet exposures</b>		
17	Off-balance sheet exposures at gross notional amount	65,377
18	Adjustments for conversion to credit equivalent amounts	(56,340)
19	<b>Other off-balance sheet exposures</b>	<b>9,037</b>
<b>Capital and total exposures</b>		
20	Tier 1 capital	12,688
21	<b>Total leverage ratio exposures</b>	<b>264,085</b>
<b>Leverage ratio</b>		
22	<b>Leverage ratio</b>	<b>4.8%</b>

### Choice on transitional arrangements and amount of derecognised fiduciary items

EU-23	Choice on transitional arrangements for the definition of the capital measure	Transitional
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Table 12: Split-up of on balance sheet exposures (excluding derivatives, SFTs, and exempted exposures)

The table shows a breakdown of the on-balance sheet exposures excluding derivatives, SFTs and exempted exposures, by regulatory asset class.

		As at 31 December 2019 £m
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	255,694
EU-2	Trading book exposures	865
EU-3	Banking book exposures, of which:	254,829
EU-4	Covered bonds	1,766
EU-5	Exposures treated as sovereigns	45,703
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	7,717
EU-7	Institutions	1,619
EU-8	Secured by mortgages of immovable properties	142,738
EU-9	Retail exposures	25,763
EU-10	Corporate	18,079
EU-11	Exposures in default	2,752
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	8,692

# Risk and capital position review

## Analysis of treasury and capital risk

### Liquidity Coverage Ratio

Table 13: LIQ1 - Liquidity Coverage ratio

This table shows the level and components of the Liquidity Coverage Ratio. This disclosure has been prepared in accordance with the requirements set out in the 'Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 of Regulation (EU) No 575/2013' as specified in Annexure II which complements Article 435(1)(f) of Regulation (EU) No 575/2013.

Liquidity coverage ratio (period end)	Total period end value	
	As at 31	
	December 2019	As at 30 June 2019
	£m	£m
Liquidity buffer	41,293	47,001
Total net cash outflows	28,741	29,375
Liquidity coverage ratio (%) (period end)	144%	160%

### LIQ1 - Liquidity coverage ratio (average)

	Total unweighted value (average)		Total weighted value (average)	
	As at 31 December 2019		As at 31 December 2019	
	As at 30 June 2019	As at 30 June 2019	As at 30 June 2019	As at 30 June 2019
	£m	£m	£m	£m
Number of data points used in calculation of averages <sup>a</sup>	12	12	12	12
<b>High-quality liquid assets</b>				
1 Total high-quality liquid assets (HQLA)			43,775	44,124
<b>Cash outflows</b>				
2 Retail deposits and deposits from small business customers, of which:	168,723	166,449	12,702	12,457
3 Stable deposits	110,598	110,132	5,530	5,507
4 Less stable deposits	58,117	56,309	7,164	6,942
5 Unsecured wholesale funding, of which:	21,739	21,052	9,626	9,858
6 Operational deposits (all counterparties) and deposits in networks of cooperative banks	2,352	1,665	571	403
7 Non-operational deposits (all counterparties)	18,942	18,971	8,610	9,039
8 Unsecured debt	445	416	445	416
9 Secured wholesale funding			-	84
10 Additional requirements, of which:	19,148	19,338	5,205	5,000
11 Outflows related to derivative exposures and other collateral requirements	4,022	3,940	4,022	3,940
12 Outflows related to loss of funding on debt products	147	-	147	-
13 Credit and liquidity facilities	14,979	15,398	1,036	1,060
14 Other contractual funding obligations	171	63	63	63
15 Other contingent funding obligations	51,532	53,729	2,542	2,089
16 Total cash outflows			30,138	29,551
<b>Cash inflows</b>				
17 Secured lending (e.g. reverse repos)	1,534	407	1	-
18 Inflows from fully performing exposures	1,660	1,725	834	877
19 Other cash inflows <sup>b</sup>	2,687	2,716	560	564
20 Total cash inflows	5,881	4,848	1,395	1,441
Fully exempt inflows	-	-	-	-
Inflows subject to 90% cap	-	-	-	-
Inflows subject to 75% cap	5,881	4,848	1,395	1,441
21 Liquidity buffer			43,775	44,124
22 Total net cash outflows			28,743	28,110
23 Liquidity coverage ratio (%) (average)			152%	157%

Notes:

<sup>a</sup> Trailing average of 12 month-end observations to the reporting date.

<sup>b</sup> Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies.



# Risk and capital position review

## Analysis of treasury and capital risk

### Analysis of net interest income and equity sensitivity

Equity sensitivity measures the overall impact of a +/- 25bps movement in interest rates on retained earnings, fair value through other comprehensive income (FVOCI), and cash flow hedge reserves. For non-NII items a DV01 metric is used which is an indicator of the yield curve shift in value for a 1 basis point.

Net interest income sensitivity is calculated for non-trading financial assets and liabilities, including the effect of any hedging. The sensitivity has been measured using the Annual Earnings at Risk (AEaR) metric. Note that this metric assumes an instantaneous parallel change to forward interest rate curves. The model does not apply floors to shocked market rates, but does recognise contractual product specific interest rate floors where relevant. The main model assumptions are: (i) one-year ahead time horizon; (ii) balance sheet is held constant; (iii) balances are adjusted for assumed behavioural profiles (i.e. considers that customers may prepay the mortgages before the contractual maturity); and (iv) behavioural assumptions are kept unchanged in all rate scenarios.

Table 14: Analysis of equity sensitivity

Analysis of equity sensitivity	31 December 2019	
	+25 basis points £m	-25 basis points £m
<b>Barclays Bank UK Group and PLC</b>		
Net interest income	16	(57)
Taxation effects on the above	(4)	15
<b>Effect on profit for the year</b>	<b>12</b>	<b>(42)</b>
Fair value through other comprehensive income reserve	(27)	27
Cash flow hedge reserve	(177)	177
Taxation effects on the above	51	(51)
<b>Effect on equity</b>	<b>(141)</b>	<b>111</b>
<b>Barclays Bank UK Group</b>		
As percentage of net profit after tax	7.7%	(26.9%)
As percentage of equity	(0.9%)	0.7%
<b>Barclays Bank UK PLC</b>		
As percentage of net profit after tax	5.8%	(20.2%)
As percentage of equity	(0.8%)	0.7%

Net interest income asymmetry arises due to the current low interest rate levels as some customer products have embedded floors. Movements in the FVOCI reserve impact CET1 capital, however the movement in the cash flow hedge reserve does not affect CET1 capital.

### Volatility of the FVOCI portfolio in the liquidity pool

Changes in value of FVOCI exposures flow directly through equity via the FVOCI reserve. The volatility of the value of the FVOCI investments in the liquidity pool is captured and managed through a value measure rather than an earning measure, i.e. non-traded market risk VaR.

Although the underlying methodology to calculate the non-traded VaR is identical to the one used in traded management VaR, the two measures are not directly comparable. The non-traded VaR represents the volatility to capital driven by the FVOCI exposures. These exposures are in the banking book and do not meet the criteria for trading book treatment.

### Analysis of volatility of the FVOCI portfolio in the liquidity pool

As at 31 December 2019	2019		
	Average £m	High £m	Low £m
Non-traded market value at risk (daily, 95%)	4	7	2

# Risk and capital position review

## Analysis of treasury and capital risk

Table 15: PV1 - Prudent valuation adjustment

This table below provides a granular breakdown of the Prudent Valuation Adjustment (PVA). PVA is a Common Equity Tier 1 capital deduction.

EU CRR Articles 34 & 105 define regulatory principles that are applied to all fair valued assets and liabilities in order to determine a prudent valuation. The Prudent Valuation Adjustment (PVA) is the difference between the financial statement fair valuation and the prudent valuation.

	Equity £m	Interest rates £m	FX £m	Credit <sup>a</sup> £m	Commodities £m	Total <sup>a</sup> £m	Of which in the trading book £m	Of which in the banking book <sup>c</sup> £m
<b>As at 31 December 2019</b>								
1 Closeout uncertainty, of which:	-	5	-	4	-	9	5	4
2 Mid-market value <sup>b</sup>	-	4	-	4	-	8	4	4
3 Closeout cost <sup>b</sup>	-	1	-	-	-	1	1	-
4 Concentration	-	-	-	-	-	-	-	-
5 Early termination	-	-	-	-	-	-	-	-
6 Model risk	-	-	-	-	-	-	-	-
7 Operational risk	-	1	-	12	-	13	1	12
8 Investing and funding costs <sup>b</sup>	-	-	-	116	-	116	-	116
9 Unearned credit spreads	-	-	-	-	-	-	-	-
10 Future administrative costs	-	-	-	-	-	-	-	-
11 Other	-	-	-	-	-	-	-	-
12 <b>Total adjustment</b>	-	<b>6</b>	-	<b>132</b>	-	<b>138</b>	<b>6</b>	<b>132</b>

Notes:

a The most significant contributor to Barclays Bank UK Group's PVA is the ESHLA portfolio. ESHLA is a portfolio of longer dated non-asset backed loans made to Education, Social Housing and Local Authority (ESHLA) counterparties. The ESHLA PVA numbers are classified as banking book.

b A diversification reduction factor of 50% is applied to uncertainty after all regulatory exclusions and offsets, where permitted by CRR.

# Risk and capital position review

## Analysis of credit risk

### Analysis of capital requirements and exposures for credit risk

**Table 16: Credit risk exposures – Note on post- credit risk mitigation (CRM) EAD, RWA and minimum capital requirements**

This table summarises credit risk information presented in the rest of this report and shows EAD post-CRM, RWA and minimum capital requirements. In accordance with regulatory requirements, credit mitigation is either reflected in regulatory measures for exposure at default (EAD), or in the risk inputs: probability of default (PD) and loss given default (LGD). For the majority of Barclays Bank UK Group's exposures, in particular mortgages and those under the AIRB treatment, the impact of CRM is primarily reflected in the PD or LGD rather than EAD measures.

RWA and post-CRM exposures are analysed in the table below. Information on the impact of CRM on EAD is set out on page 25-26.

Credit exposure class	EAD post-CRM <sup>a</sup>	RWA	Minimum Capital Requirements
As at 31 December 2019	£m	£m	£m
<b>Standardised approach</b>			
Central governments or central banks	70,832	-	-
Regional governments or local authorities	7,804	1,404	112
Public sector entities	2,737	142	11
Multilateral development banks	1,924	-	-
International organisations	350	-	-
Institutions	1,249	275	22
Corporates	1,260	392	31
Retail	1,126	844	68
Secured by mortgages	2,940	1,125	90
Exposures in default	170	186	15
Items associated with high risk	8	11	1
Covered bonds	1,766	184	15
Securitisation positions	159	16	1
Collective investment undertakings	-	-	-
Equity positions	20	49	4
Other items	2,022	588	47
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>94,367</b>	<b>5,216</b>	<b>417</b>
<b>Advanced IRB approach</b>			
Central governments or central banks	-	-	-
Institutions	34	33	3
Corporates	17,783	8,827	706
Retail			
- Small and medium-sized enterprises (SMEs)	8,876	3,863	309
- Secured by real estate collateral	148,025	19,866	1,589
- Qualifying revolving retail	36,297	16,315	1,305
- Other retail	6,076	5,472	438
Equity	-	-	-
Securitisation positions	1,352	119	10
Non-credit obligation assets	1,730	2,879	230
<b>Total advanced IRB credit risk exposure</b>	<b>220,173</b>	<b>57,374</b>	<b>4,590</b>
<b>Total credit exposure</b>	<b>314,540</b>	<b>62,590</b>	<b>5,007</b>

Note:

<sup>a</sup> Collateral and guarantees for advanced IRB are not included within EAD as the impact of these measures are reflected in LGD calculations.

# Risk and capital position review

## Analysis of credit risk

**Table 17: CRB-B Total and average net amount of exposures**

This table provides the total and the average amount of net exposures over the period by exposure class.

The “Net value of exposures” column represents gross exposures pre-CRM and CCF.

As at 31 December 2019		Net value of exposures £m	Average net exposures <sup>a</sup> £m
1	Central governments or central banks	-	4
2	Institutions	34	5,748
3	Corporates	18,456	18,837
4	Of Which: Specialised Lending	1,072	1,051
5	Of Which: SMEs	8,291	8,672
6	Retail	227,311	225,010
7	Secured by real estate property	150,872	147,282
8	SME	-	-
9	Non-SMEs	150,872	147,282
10	Qualifying Revolving	63,003	64,104
11	Other Retail	13,436	13,624
12	SME	7,358	7,414
13	Non-SMEs	6,078	6,210
14	Equity	-	-
<b>15</b>	<b>Total IRB Approach</b>	<b>245,801</b>	<b>249,599</b>
16	Central governments or central banks	63,701	69,689
17	Regional governments or local authorities	7,805	2,223
18	Public sector entities	2,740	1,972
19	Multilateral development banks	1,924	1,779
20	International organisations	350	274
21	Institutions	1,686	1,895
22	Corporates	2,380	2,285
23	Of Which: SMEs	164	220
24	Retail	4,818	5,593
25	Of Which: SMEs	26	57
26	Secured by mortgages on immovable property	2,941	2,873
27	Of Which: SMEs	99	98
28	Exposures in default	176	209
29	Items associated with particularly high risk	8	8
30	Covered bonds	1,766	1,265
31	Claims on institutions and corporates with a short-term credit assessment	-	-
32	Collective investments undertakings	-	-
33	Equity exposures	20	20
34	Other exposures	2,022	1,805
<b>35</b>	<b>Total standardised approach</b>	<b>92,337</b>	<b>91,890</b>
<b>36</b>	<b>Total</b>	<b>338,138</b>	<b>341,489</b>

Note:

<sup>a</sup> Average net exposure values are calculated based on the last four quarters.

# Risk and capital position review

## Analysis of credit risk

Table 18: CRB-C Geographic analysis of credit exposure

This table shows exposure at default pre-CCF and pre-CRM, broken down by credit exposure class and geographic location of the counterparty.

	UK	Europe	Germany	Americas	United	Asia	Japan	Africa and	Total
As at 31 December 2019	£m	£m	£m	£m	States	£m	£m	Middle East	£m
					£m			£m	
Central governments or central banks	-	-	-	-	-	-	-	-	-
Institutions	34	-	-	-	-	-	-	-	34
Corporates	18,447	-	-	9	-	-	-	-	18,456
Retail	227,311	-	-	-	-	-	-	-	227,311
Equity	-	-	-	-	-	-	-	-	-
<b>Total IRB approach</b>	<b>245,792</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>245,801</b>
Central governments or central banks	50,002	3,928	2,628	5,315	5,244	4,456	4,456	-	63,701
Regional governments or local authorities	7,012	389	389	404	-	-	-	-	7,805
Public sector entities	494	2,167	1,688	79	-	-	-	-	2,740
Multilateral development banks	65	1,039	-	621	621	177	-	22	1,924
International organisations	-	350	-	-	-	-	-	-	350
Institutions	168	707	71	728	9	83	8	-	1,686
Corporates	2,001	279	1	91	1	3	-	6	2,380
Retail	4,793	9	1	12	9	1	-	3	4,818
Secured by mortgages on immovable property	2,807	20	-	65	6	17	1	32	2,941
Exposures in default	145	5	1	20	-	1	-	5	176
Items associated with particularly high risk	8	-	-	-	-	-	-	-	8
Covered bonds	682	1,084	71	-	-	-	-	-	1,766
Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-
Collective investment undertakings	-	-	-	-	-	-	-	-	-
Equity positions	20	-	-	-	-	-	-	-	20
Other items	2,022	-	-	-	-	-	-	-	2,022
<b>Total Standardised approach</b>	<b>70,219</b>	<b>9,977</b>	<b>4,850</b>	<b>7,335</b>	<b>5,890</b>	<b>4,738</b>	<b>4,465</b>	<b>68</b>	<b>92,337</b>
<b>Total</b>	<b>316,011</b>	<b>9,977</b>	<b>4,850</b>	<b>7,344</b>	<b>5,890</b>	<b>4,738</b>	<b>4,465</b>	<b>68</b>	<b>338,138</b>

# Risk and capital position review

## Analysis of credit risk

Table 19: CRB -D - Concentration of exposures by industry

This table shows exposure at default pre-CCF and pre-CRM, broken down by credit exposure class and the industrial sector associated with the counterparty.

	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply	Construction	Wholesale and retail trade	Transport and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence, compulsory social security	Education	Human health services and social work activities	Arts, entertainment and recreation	Other services	Total
As at 31 December 2019	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
1 Central Governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 Institutions	-	-	-	2	-	-	-	1	-	-	-	-	1	-	5	22	-	3	34
3 Corporates	3,129	4	182	26	25	51	373	67	257	51	13,145	160	72	-	153	489	85	187	18,456
6 Retail	1,639	35	356	3	17	465	1,078	163	500	140	1,355	367	274	-	126	409	155	220,229	227,311
5 Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>15 Total IRB Approach</b>	<b>4,768</b>	<b>39</b>	<b>538</b>	<b>31</b>	<b>42</b>	<b>516</b>	<b>1,451</b>	<b>231</b>	<b>757</b>	<b>191</b>	<b>14,500</b>	<b>527</b>	<b>347</b>	<b>-</b>	<b>284</b>	<b>920</b>	<b>240</b>	<b>220,419</b>	<b>245,801</b>
16 Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	13,418	-	-	-	50,283	63,701
17 Regional governments or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	7,805	-	-	-	-	7,805
18 Public sector entities	-	-	-	-	-	-	124	-	-	-	79	-	-	342	403	9	-	1,783	2,740
19 Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,924	1,924
20 International organisations	-	-	-	-	-	-	-	-	-	-	-	210	-	-	-	-	-	140	350
21 Institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,686	1,686
22 Corporates	12	-	5	3	-	108	10	-	-	-	38	3	1	-	3	1	2	2,194	2,380
24 Retail	-	-	-	-	-	1	2	-	-	-	6	1	1	-	1	1	4	4,801	4,818
26 Secured by mortgages on immovable property	22	-	2	-	-	-	28	-	2	-	106	-	1	-	5	5	-	2,770	2,941
28 Exposures in default	-	-	1	-	-	-	-	-	-	5	5	-	-	-	16	-	-	149	176
29 Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8
30 Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,766	1,766
31 Claims on institutions and corporate with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 Collective investments undertakings(CIU)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33 Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20
34 Other exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,022	2,022
<b>35 Total Standardised approach</b>	<b>34</b>	<b>-</b>	<b>8</b>	<b>3</b>	<b>-</b>	<b>109</b>	<b>40</b>	<b>124</b>	<b>2</b>	<b>5</b>	<b>234</b>	<b>4</b>	<b>213</b>	<b>21,565</b>	<b>428</b>	<b>16</b>	<b>6</b>	<b>69,546</b>	<b>92,337</b>
<b>36 Total</b>	<b>4,802</b>	<b>39</b>	<b>546</b>	<b>34</b>	<b>42</b>	<b>625</b>	<b>1,491</b>	<b>355</b>	<b>759</b>	<b>196</b>	<b>14,734</b>	<b>531</b>	<b>560</b>	<b>21,565</b>	<b>712</b>	<b>936</b>	<b>246</b>	<b>289,965</b>	<b>338,138</b>

# Risk and capital position review

## Analysis of credit risk

Table 20: CRB-E - Residual maturity analysis credit exposures

This table shows exposure at default pre-CCF and pre-CRM, broken down by credit exposure class and residual maturity. Residual maturity is the remaining number of years before an obligation becomes due according to the existing terms of the agreement.

		Net Exposure Value					Total £m
		On Demand £m	<= 1 year £m	> 1 year <= 5 years £m	> 5 years £m	No stated maturity £m	
<b>As at 31 December 2019</b>							
1	Central Governments or central banks	-	-	-	-	-	-
2	Institutions	6	2	9	17	-	34
3	Corporates	1,032	1,032	3,967	12,425	-	18,456
4	Retail	65,659	1,876	15,160	144,616	-	227,311
5	Equity	-	-	-	-	-	-
6	<b>Total IRB Approach</b>	<b>66,697</b>	<b>2,910</b>	<b>19,136</b>	<b>157,058</b>	<b>-</b>	<b>245,801</b>
7	Central governments or central banks	27,119	15,772	18,515	2,295	-	63,701
8	Regional governments or local authorities	-	87	464	7,254	-	7,805
9	Public sector entities	-	206	1,446	1,088	-	2,740
10	Multilateral development banks	-	76	1,487	361	-	1,924
11	International organisations	-	65	109	176	-	350
12	Institutions	1	382	1,114	189	-	1,686
13	Corporates	24	1,285	325	746	-	2,380
14	Retail	4,593	96	17	112	-	4,818
15	Secured by mortgages on immovable property	-	271	573	2,097	-	2,941
16	Exposures in default	45	5	19	107	-	176
17	Items associated with particularly high risk	-	-	-	-	8	8
18	Covered bonds	-	146	998	622	-	1,766
19	Claims on institutions and corporate with a short-term credit assessment	-	-	-	-	-	-
20	Collective investments undertakings	-	-	-	-	-	-
21	Equity exposures	-	-	-	-	20	20
22	Other exposures	-	-	-	-	2,022	2,022
23	<b>Total standardised approach</b>	<b>31,782</b>	<b>18,391</b>	<b>25,067</b>	<b>15,047</b>	<b>2,050</b>	<b>92,337</b>
24	<b>Total</b>	<b>98,479</b>	<b>21,301</b>	<b>44,203</b>	<b>172,105</b>	<b>2,050</b>	<b>338,138</b>

# Risk and capital position review

## Analysis of credit risk

### Credit risk mitigation

Barclays Bank UK Group employs a range of techniques and strategies to actively mitigate credit risks. Within the regulatory framework this is commonly referred to as credit risk mitigation (CRM) with further details on pages 83-84 of this document. In the case of collateral, the recognition of the mitigant is reflected through regulatory calculations in several different ways, depending on the nature of the collateral and the regulatory approach applied to the exposure.

Financial collateral includes, but is not exclusive of: cash, debt securities, equities and gold, that can be used to directly reduce credit exposures subject to the Standardised approach. The impact of financial collateral CRM can be observed on pages 19-20 as a component of the difference between EAD pre-CRM and EAD-post CRM.

**Table 21: Exposures covered by guarantees and credit derivatives**

This table shows the proportion of credit risk exposures, covered by funded credit protection and unfunded credit protection in the form of guarantees or credit derivatives.

Under the Standardised approach, the risk weight of the underlying exposure covered is substituted by that of the credit protection provider – generally a central government or institution. Any uncovered exposure is risk weighted using the normal framework. For the STD approach, the table below has been populated post-substitution effect.

Under the Advanced approach, the table is designed to show exposures for which the credit protection impact is not reflected though the loss given default (LGD), for example where it is applied directly to the EAD metric. As Barclays recognises AIRB eligible collateral by reducing the modelled downturn loss given default (LGD) metric, the AIRB values in the table below are “nil”.

### Credit exposure class

Credit exposure class	Exposures covered by unfunded credit protection		Exposures covered by funded credit protection	
	Standardised £m	Advanced IRB £m	Advanced IRB £m	Advanced IRB £m
<b>As at 31 December 2019</b>				
Central governments or central banks	-	-	-	-
Institutions	335	-	-	-
Corporates	-	-	-	-
Retail	-	-	-	-
Exposures in default	-	-	-	-
Items associated with high risk	-	-	-	-
Securitisation positions	-	-	-	-
Non-credit obligation assets	-	-	-	-
<b>Total</b>	<b>335</b>	<b>-</b>	<b>-</b>	<b>-</b>



# Risk and capital position review

## Analysis of credit risk

Table 22: CR3 – CRM techniques

This table shows the use of CRM techniques broken down by loans and debt securities. This table includes unsecured and secured exposures including collateral, financial guarantees and credit derivatives for both Standardised and IRB approach.

As at 31 December 2019		Exposures unsecured – Carrying amount £m	Exposures secured – Carrying amount £m	Exposures secured by collateral £m	Exposures secured by financial guarantees £m	Exposures secured by credit derivatives £m
1	Total loans	67,138	158,730	158,730	-	-
2	Total debt securities	21,983	335	-	335	-
3	<b>Total exposures</b>	<b>89,121</b>	<b>159,065</b>	<b>158,730</b>	<b>335</b>	<b>-</b>
4	Of which defaulted	874	2,113	2,113	-	-

Table 23: CR4 Standardised – Credit Risk exposure and CRM effect

This table shows the impact of CRM and credit conversion factors (CCF) on exposure values, broken down by regulatory exposure class. This table includes exposures subject to the Standardised approach only. For detailed breakdown by exposure classes please see Tables 16, 27, & 28.

The term 'before CCF and CRM' means the original gross exposures before the application of credit conversion factor and before the application of risk mitigation techniques.

As at 31 December 2019	Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
	On-balance sheet amount £m	Off-balance sheet amount £m	On-balance sheet amount £m	Off-balance sheet amount £m	RWA £m	RWA density %
	1	40,606	23,095	40,942	29,890	-
2	7,804	-	7,804	-	1,404	18%
3	2,735	5	2,735	2	142	5%
4	1,924	-	1,924	-	-	0%
5	350	-	350	-	-	0%
6	1,592	94	1,234	15	275	22%
7	1,537	843	1,201	59	392	31%
8	1,127	3,691	1,125	1	844	75%
9	2,939	2	2,939	1	1,125	38%
10	176	-	170	-	186	109%
11	8	-	8	-	11	150%
12	1,766	-	1,766	-	184	10%
13	-	-	-	-	-	0%
14	-	-	-	-	-	0%
15	20	-	20	-	49	250%
16	2,022	-	2,022	-	588	29%
17	<b>Total</b>	<b>64,606</b>	<b>27,730</b>	<b>64,240</b>	<b>29,968</b>	<b>6%</b>

# Risk and capital position review

## Analysis of credit risk

Table 24: CR7– Effect on RWA of credit derivatives used as CRM techniques (IRB)

This table shows the effect of credit derivatives on the IRB credit risk approach.

As at 31 December 2019		Pre-credit derivatives RWAs	Actual RWAs
		£m	£m
1	<b>Exposures under Foundation IRB</b>	-	-
2	Central governments and central banks	-	-
3	Institutions	-	-
4	Corporates - SME	-	-
5	Corporates - Specialised Lending	-	-
6	Corporates - Other	-	-
7	<b>Exposures under Advanced IRB</b>	57,255	57,255
8	Central governments and central banks	-	-
9	Institutions	33	33
10	Corporates - SME	4,659	4,659
11	Corporates - Specialised Lending	702	702
12	Corporates - Other	3,466	3,466
13	Retail - Secured by real estate SME	-	-
14	Retail - Secured by real estate non-SME	19,866	19,866
15	Retail - Qualifying revolving	16,315	16,315
16	Retail - Other SME	3,863	3,863
17	Retail - Other non-SME	5,472	5,472
18	Equity IRB	-	-
19	Other non credit-obligation assets	2,879	2,879
20	<b>Total</b>	<b>57,255</b>	<b>57,255</b>

# Risk and capital position review

## Analysis of credit risk

### Credit quality analysis of Standardised exposures

#### Credit rating agencies

Under the Standardised approach, ratings assigned by External Credit Assessment Institutions (ECAIs) are used in the calculation of RWAs.

Ratings from an ECAI may be used where the ECAI is a rating agency that:

- Has been recognised as an ECAI by the European Banking Authority (EBA); and
- Has been nominated for use by Barclays Bank UK Group

Barclays uses ratings assigned by the following agencies for credit risk calculations:

- Standard & Poor's
- Moody's
- Fitch

These ratings are used in the calculation of risk weights for the central governments and central banks, institutions, corporate and securitisation exposure classes.<sup>a</sup>

#### Rated and unrated counterparties

The following section summarises the rules governing standardised calculations.

Each exposure must be assigned to one of six credit quality steps if a rating is available, as defined in the table below.<sup>b</sup> After being assigned to a specific quality step, exposure class and maturity are then used to determine the risk weight percentage. Exposures cannot be assigned a risk weight lower than that of the sovereign risk of the country in which the counterparty is located. The following table is a simplified version of the risk weight allocation process.

**Table 25: Relationship of long-term external credit ratings to credit quality steps under the Standardised approach**

Credit Quality Step	Standard and Poor's	Moody's	Fitch
Credit Quality Step 1	AAA to AA-	Aaa to Aa3	AAA to AA-
Credit Quality Step 2	A+ to A-	A1 to A3	A+ to A-
Credit Quality Step 3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-
Credit Quality Step 4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-
Credit Quality Step 5	B+ to B-	B1 to B3	B+ to B-
Credit Quality Step 6	CCC+ and below	Caa1 and below	CCC+ and below

**Table 26: Credit quality steps and risk weights under the standardised approach**

Credit Quality Step	Institution (includes banks)				Central governments or central banks
	Corporates	Sovereign method	Credit assessment method		
		Credit assessment method	Maturity > 3 months	Maturity 3 months or less	
Credit Quality Step 1	20%	20%	20%	20%	0%
Credit Quality Step 2	50%	50%	50%	20%	20%
Credit Quality Step 3	100%	100%	50%	20%	50%
Credit Quality Step 4	100%	100%	100%	50%	100%
Credit Quality Step 5	150%	100%	100%	50%	100%
Credit Quality Step 6	150%	150%	150%	150%	150%

Exposures to international organisations are generally assigned a 0% risk weight.

If considered fully and completely secured by residential property, measured on the basis of the Loan-To-Value ratio, a retail exposure is assigned a risk weight of 35%. If only partially secured, a more complex framework is applied. Other retail exposures are generally assigned a risk weight of 75%.

The unsecured portion of a past due exposure is assigned a risk weight of either 150% or 100%, depending on the specific credit risk adjustments recognised.

High risk items are assigned a risk weight of 150%.

Other items are generally assigned a risk weight of 100%, unless they relate to cash in hand (0%) or items in the course of collection (20%).

#### Notes:

<sup>a</sup> DBRS and Kroll Bond Rating Agency are used to calculate risk weights for securitisation exposures only. Please see page 90 for further details.

<sup>b</sup> The mapping of external ratings to credit quality steps applicable as at year-end 2019 are found in Commission Implementing Regulation (EU) 2016/1799 as amended and Commission Implementing Regulation (EU) 2016/1801 (with the latter applicable for securitisation exposures).

# Risk and capital position review

## Analysis of credit risk

Table 27: CR5-A Analysis of exposures by asset classes and risk weight pre-CCF and CRM under the standardised approach

This table shows exposure at default pre-CRM, broken down by Credit Exposure Class and risk weight. This table includes exposures subject to the Standardised approach only.

EAD by asset classes and risk weights pre CCF and CRM																				
		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Deducted	Total	of which:	
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	Unrated
As at 31 December 2019																				
1	Central governments or central banks	63,701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63,701	-
2	Regional governments or local authorities	794	-	-	-	7,010	-	-	-	-	-	-	-	-	-	-	-	-	7,804	7,010
3	Public sector entities	2,028	-	-	-	712	-	-	-	-	-	-	-	-	-	-	-	-	2,740	573
4	Multilateral development banks	1,924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,924	-
5	International Organisations	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-
6	Institutions	1	-	-	-	1,599	-	86	-	-	-	-	-	-	-	-	-	-	1,686	125
7	Corporates	825	-	-	-	343	-	-	-	-	1,212	-	-	-	-	-	-	-	2,380	1,042
8	Retail	-	-	-	-	-	-	-	-	4,818	-	-	-	-	-	-	-	-	4,818	4,818
9	Secured by mortgages on immovable property	-	-	-	-	-	2,773	-	-	11	157	-	-	-	-	-	-	-	2,941	2,941
10	Exposures in default	-	-	-	-	-	-	-	-	-	138	38	-	-	-	-	-	-	176	176
11	Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	8	8
12	Covered Bonds	-	-	-	1,736	14	-	16	-	-	-	-	-	-	-	-	-	-	1,766	-
13	Claims on institutions and corporate with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Claims in the form of CIU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Equity exposures	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	20	20
16	Other items	819	-	-	-	769	-	-	-	-	434	-	-	-	-	-	-	-	2,022	2,022
17	<b>Total</b>	<b>70,442</b>	<b>-</b>	<b>-</b>	<b>1,736</b>	<b>10,447</b>	<b>2,773</b>	<b>102</b>	<b>-</b>	<b>4,829</b>	<b>1,941</b>	<b>46</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>92,336</b>	<b>18,735</b>

# Risk and capital position review

## Analysis of credit risk

Table 28: CR5-B Analysis of exposures by asset classes and risk weight post-CCF and CRM under the standardised approach

The difference between exposure at default pre-CRM set out in Table 27 and exposure at default post-CRM below is the impact of financial collateral and CCF as described in Table 23.

	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Total	of which: Unrated
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
<b>As at 31 December 2019</b>																
1 Central governments or central banks	70,832	-	-	-	-	-	-	-	-	-	-	-	-	-	70,832	-
2 Regional governments or local authorities	794	-	-	-	7,010	-	-	-	-	-	-	-	-	-	7,804	7,011
3 Public sector entities	2,028	-	-	-	709	-	-	-	-	-	-	-	-	-	2,737	570
4 Multilateral development banks	1,924	-	-	-	-	-	-	-	-	-	-	-	-	-	1,924	-
5 International Organisations	350	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-
6 Institutions	1	-	-	-	1,162	-	86	-	-	-	-	-	-	-	1,249	63
7 Corporates	592	-	-	-	343	-	-	-	-	325	-	-	-	-	1,260	779
8 Retail	-	-	-	-	-	-	-	-	1,126	-	-	-	-	-	1,126	1,126
9 Secured by mortgages on immovable property	-	-	-	-	-	2,773	-	-	10	157	-	-	-	-	2,940	2,940
10 Exposures in default	-	-	-	-	-	-	-	-	-	138	32	-	-	-	170	170
11 Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	8	-	-	-	8	8
12 Covered Bonds	-	-	-	1,736	14	-	16	-	-	-	-	-	-	-	1,766	-
13 Claims on institutions and corporate with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Claims in the form of CIU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Equity exposures	-	-	-	-	-	-	-	-	-	-	-	20	-	-	20	20
16 Other items	819	-	-	-	769	-	-	-	-	434	-	-	-	-	2,022	2,022
<b>17 Total</b>	<b>77,340</b>	<b>-</b>	<b>-</b>	<b>1,736</b>	<b>10,007</b>	<b>2,773</b>	<b>102</b>	<b>-</b>	<b>1,136</b>	<b>1,054</b>	<b>40</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>94,208</b>	<b>14,709</b>

# Risk and capital position review

## Analysis of credit risk

### Credit quality analysis of IRB exposures

The following section provides breakdowns of inputs into risk weighted asset calculations. Risk weights and risk factors may be volatile in granular breakdowns of wholesale exposures, especially in categories that are more sparsely populated. This is often due to the addition or removal of a relatively large exposure to or from narrow categories when its risk factors are different to the category average. This happens in the normal course of business, for instance, following new lending, repayments, or syndications. See page 73 for a discussion of IRB models.

**Table 29: Internal default grade probabilities and mapping to external ratings**

The table below illustrates the approximate relationship between external rating agency grades and Barclays' internal PD bands for wholesale exposures. The EBA and internal Default Grade (DG) bands are based on TTC PD. Note that this relationship is dynamic, and therefore, varies over time, region and industry.

EBA PD Range	Internal	Default Probability			Moody's	Standard and Poor's
		>Min	Mid	<=Max		
0.00 to < 0.15	1	0.00%	0.01%	0.02%	Aaa, Aa1, Aa2	AAA, AA+, AA
	2	0.02%	0.03%	0.03%	Aa3	AA-
	3	0.03%	0.04%	0.05%	A1	AA-
	4	0.05%	0.08%	0.10%	A2, A3	A+, A, A-
	5	0.10%	0.13%	0.15%	Baa1	BBB+
0.15 to < 0.25	6	0.15%	0.18%	0.20%	Baa2	BBB
	7	0.20%	0.23%	0.25%	Baa2	BBB
0.25 to < 0.50	8	0.25%	0.28%	0.30%	Baa3	BBB-
	9	0.30%	0.35%	0.40%	Baa3	BBB-
	10	0.40%	0.45%	0.50%	Ba1	BB+
0.50 to < 0.75	11	0.50%	0.55%	0.60%	Ba1	BB
	12	0.60%	-	-	Ba2	BB
0.75 to < 2.50	12	-	0.90%	1.20%	Ba2	BB-
	13	1.20%	1.38%	1.55%	Ba3	BB-
	14	1.55%	1.85%	2.15%	Ba3	B+
	15	2.15%	-	-	B1	B+
2.50 to < 10.00	15	-	2.60%	3.05%	B1	B+
	16	3.05%	3.75%	4.45%	B2	B
	17	4.45%	5.40%	6.35%	B3, Caa1	B
	18	6.35%	7.50%	8.65%	Caa1	B-
	19	8.65%	10.00%	-	Caa2	CCC+
10.00 to < 100.00	19	-	-	11.35%	Caa2	CCC+
	20	11.35%	15.00%	18.65%	Caa2	CCC
	21	18.65%	30.00%	99.99%	Caa3, Ca, C	CCC-, CC+, ,CC, C
100.00 (Default)				D	D	

# Risk and capital position review

## Analysis of credit risk

### IRB obligor grade disclosure

The following tables show credit risk exposure at default post-CRM for the advanced IRB approach and foundation IRB approach for portfolios within the banking book. Separate tables are provided for the following credit exposure classes: institutions (Table 30), corporates (Table 31), corporates subject to slotting (Table 33), Retail SME (Table 34), secured retail (Table 35), revolving retail (Table 36) and other retail (Table 37).

Barclays Bank UK Group's Model Risk Management group reviews and approves the application of post model adjustments to models that do not fully reflect the risk of the underlying exposures.

Table 30: CR6 Credit risk exposures by exposure class and PD range for institutions

	Original on-balance sheet gross exposure £m	Off-balance sheet exposures pre CCF £m	Average CCF %	EAD post CRM and post CCF £m	Average PD %	Number of obligors	Average LGD %	Average Maturity Years	RWA £m	RWA Density %	EL £m	Value Adjustment and Provisions £m
<b>As at 31 December 2019</b>												
0.00 to < 0.15	2	1	80.7%	3	0.0%	203	29.2%	1	0	9.8%	0	
0.15 to < 0.25	1	-	-	1	0.2%	16	33.2%	8	0	37.8%	0	
0.25 to < 0.50	7	-	-	8	0.4%	38	36.6%	9	5	63.4%	0	
0.50 to < 0.75	2	-	-	2	0.7%	7	34.8%	8	2	72.4%	0	
0.75 to < 2.50	6	1	100.0%	7	1.6%	18	30.2%	6	5	74.4%	0	
2.50 to < 10.00	5	1	100.0%	5	5.1%	36	40.7%	7	8	148.0%	0	
10.00 to < 100.00	5	-	-	5	26.4%	6	32.8%	5	9	178.7%	1	
100.00 (Default)	3	-	-	3	100.0%	4	12.7%	4	4	117.4%	0	
<b>Total</b>	<b>31</b>	<b>3</b>	<b>93.6%</b>	<b>34</b>	<b>14.1%</b>	<b>328</b>	<b>32.4%</b>	<b>6</b>	<b>33</b>	<b>96.4%</b>	<b>1</b>	<b>(0)</b>

Table 31: CR6 Credit risk exposures by exposure class and PD range for corporates

	Original on-balance sheet gross exposure £m	Off-balance sheet exposures pre CCF £m	Average CCF %	EAD post CRM and post CCF £m	Average PD %	Number of obligors	Average LGD %	Average Maturity Years	RWA £m	RWA Density %	EL £m	Value Adjustment and Provisions £m
<b>As at 31 December 2019</b>												
0.00 to < 0.15	10,473	730	61.8%	10,953	0.0%	2,895	11.3%	21	3,552	32.4%	1	
0.15 to < 0.25	361	63	42.2%	388	0.2%	1,501	25.4%	7	122	31.6%	0	
0.25 to < 0.50	748	141	42.2%	808	0.4%	2,870	26.4%	7	343	42.4%	1	
0.50 to < 0.75	518	67	31.0%	539	0.6%	1,099	24.4%	7	215	39.8%	1	
0.75 to < 2.50	1,583	183	32.1%	1,642	1.4%	2,277	24.0%	6	975	59.4%	6	
2.50 to < 10.00	1,251	85	31.6%	1,278	4.9%	1,695	26.2%	6	1,190	93.1%	17	
10.00 to < 100.00	522	25	32.3%	530	22.9%	808	30.0%	5	728	137.4%	36	
100.00 (Default)	606	28	1.8%	607	100.0%	350	13.0%	5	1,000	164.8%	19	
<b>Total</b>	<b>16,062</b>	<b>1,322</b>	<b>49.3%</b>	<b>16,745</b>	<b>4.9%</b>	<b>13,495</b>	<b>15.8%</b>	<b>16</b>	<b>8,125</b>	<b>48.5%</b>	<b>81</b>	<b>(150)</b>

# Risk and capital position review

## Analysis of credit risk

Table 32: CR6 Credit risk exposures by exposure class and PD range for corporate of which: SMEs

	Original on-balance sheet gross exposure £m	Off-balance sheet exposures pre CCF £m	Average CCF %	EAD post CRM and post CCF £m	Average PD %	Number of obligors	Average LGD %	Average Maturity Years	RWA £m	RWA Density %	EL £m	Value Adjustment and Provisions £m
<b>As at 31 December 2019</b>												
0.00 to < 0.15	1,997	267	61.5%	2,167	0.1%	2,035	12.5%	13	295	13.6%	0	
0.15 to < 0.25	356	63	37.8%	380	0.2%	1,227	25.2%	7	101	26.6%	0	
0.25 to < 0.50	744	141	39.7%	801	0.4%	2,544	26.3%	7	307	38.3%	1	
0.50 to < 0.75	516	67	28.5%	535	0.6%	944	24.2%	7	212	39.5%	1	
0.75 to < 2.50	1,561	181	29.3%	1,614	1.4%	2,022	24.0%	6	956	59.2%	6	
2.50 to < 10.00	1,202	81	27.8%	1,225	4.9%	1,483	26.3%	6	1,143	93.5%	16	
10.00 to < 100.00	498	16	30.2%	502	23.2%	691	30.0%	5	684	136.1%	35	
100.00 (Default)	573	28	1.5%	573	100.0%	290	13.0%	5	961	167.5%	18	
<b>Total</b>	<b>7,447</b>	<b>844</b>	<b>40.7%</b>	<b>7,797</b>	<b>10.0%</b>	<b>11,236</b>	<b>21.1%</b>	<b>8</b>	<b>4,659</b>	<b>59.8%</b>	<b>77</b>	<b>(137)</b>

Table 33: CR10 Corporate exposures subject to the slotting approach

Slotting, also known as specialised lending, is an approach that is applied to financing of individual projects where the repayment is highly dependent on the performance of the underlying pool or collateral. It uses a standard set of rules for the calculation of RWAs, based upon an assessment of factors such as the financial strength of the counterparty. The requirements for the application of the Slotting approach are detailed in CRR article 153.

Regulatory categories	Remaining maturity	On-balance sheet amount £m	Off-balance sheet amount £m	Risk weight %	Exposure amount £m	RWA £m	Expected losses £m	
<b>As at 31 December 2019</b>								
Category 1	Strong	Less than 2.5 years	148	20	50%	154	74	-
		Equal to or more than 2.5 years	312	-	70%	312	214	1
Category 2	Good	Less than 2.5 years	138	23	70%	141	89	1
		Equal to or more than 2.5 years	271	-	90%	271	223	2
Category 3	Satisfactory	Less than 2.5 years	10	-	115%	11	11	0
		Equal to or more than 2.5 years	46	-	115%	46	50	1
Category 4	Weak	Less than 2.5 years	3	-	250%	3	5	0
		Equal to or more than 2.5 years	16	-	250%	16	36	1
Category 5	Default	Less than 2.5 years	42	1	-	42	-	21
		Equal to or more than 2.5 years	42	-	-	42	-	21
<b>Total</b>		Less than 2.5 years	<b>341</b>	<b>44</b>		<b>351</b>	<b>179</b>	<b>22</b>
		Equal to or more than 2.5 years	<b>687</b>	<b>-</b>		<b>687</b>	<b>523</b>	<b>26</b>



# Risk and capital position review

## Analysis of credit risk

Table 34: CR6 Credit risk exposures by exposure class and PD range for retail SME

	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF <sup>a</sup>	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	RWA	RWA Density	EL	Value Adjustment and Provisions
	£m	£m	%	£m	%		%	£m	%	£m	£m
<b>As at 31 December 2019</b>											
0.00 to < 0.15	126	14	4870.1%	786	0.1%	361,269	49.7%	75	9.5%	0	
0.15 to < 0.25	121	36	698.4%	372	0.2%	123,914	49.8%	67	18.0%	0	
0.25 to < 0.50	421	152	266.8%	825	0.4%	208,141	46.6%	202	24.5%	1	
0.50 to < 0.75	440	168	146.4%	685	0.6%	117,387	40.2%	186	27.2%	2	
0.75 to < 2.50	1,827	639	116.6%	2,575	1.5%	305,081	36.8%	923	35.9%	14	
2.50 to < 10.00	1,631	412	131.1%	2,170	4.8%	243,883	38.9%	1,039	47.8%	42	
10.00 to < 100.00	552	61	277.4%	723	23.0%	106,612	42.5%	534	73.9%	69	
100.00 (Default)	719	39	54.8%	740	100.0%	29,154	21.2%	837	113.0%	90	
<b>Total</b>	<b>5,837</b>	<b>1,521</b>	<b>199.8%</b>	<b>8,876</b>	<b>11.9%</b>	<b>1,495,441</b>	<b>39.3%</b>	<b>3,863</b>	<b>43.5%</b>	<b>218</b>	<b>(93)</b>

Note:

a Average CCF % reflects where the modelled EAD is higher than the original on and off balance sheet exposures pre CCF.

Table 35: CR6 Credit risk exposures by exposure class and PD range for secured retail

	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	RWA	RWA Density	EL	Value Adjustment and Provisions
	£m	£m	%	£m	%		%	£m	%	£m	£m
<b>As at 31 December 2019</b>											
0.00 to < 0.15	21,448	1,950	98.3%	22,989	0.1%	78,123	10.0%	446	1.9%	2	
0.15 to < 0.25	10,931	1,499	95.2%	11,830	0.2%	87,788	10.8%	548	4.6%	3	
0.25 to < 0.50	35,345	2,559	97.7%	37,014	0.4%	236,565	9.9%	2,626	7.1%	15	
0.50 to < 0.75	29,883	2,191	98.1%	31,480	0.6%	205,191	10.7%	3,302	10.5%	22	
0.75 to < 2.50	28,383	1,330	99.2%	29,488	1.2%	194,736	12.8%	6,091	20.7%	52	
2.50 to < 10.00	9,343	213	100.0%	9,575	4.7%	53,078	15.8%	3,698	38.6%	49	
10.00 to < 100.00	4,495	261	44.1%	4,612	28.3%	29,035	10.4%	2,304	50.0%	121	
100.00 (Default)	1,037	4	99.6%	1,037	100.0%	8,017	9.2%	851	82.0%	41	
<b>Total</b>	<b>140,865</b>	<b>10,007</b>	<b>96.8%</b>	<b>148,025</b>	<b>2.4%</b>	<b>892,533</b>	<b>11.1%</b>	<b>19,866</b>	<b>13.4%</b>	<b>305</b>	<b>(70)</b>

# Risk and capital position review

## Analysis of credit risk

Table 36: CR6 Credit risk exposures by exposure class and PD range for revolving retail

	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	RWA	RWA Density	EL	Value Adjustment and Provisions
	£m	£m	%	£m	%		%	£m	%	£m	£m
<b>As at 31 December 2019</b>											
0.00 to < 0.15	600	15,713	48.5%	8,437	0.1%	9,185,200	73.5%	293	3.5%	4	
0.15 to < 0.25	677	6,964	16.8%	3,350	0.2%	2,489,477	76.1%	284	8.5%	5	
0.25 to < 0.50	1,581	9,033	13.4%	5,083	0.4%	3,414,233	76.2%	704	13.9%	14	
0.50 to < 0.75	1,218	4,399	8.4%	2,709	0.6%	1,240,363	76.3%	575	21.2%	13	
0.75 to < 2.50	4,524	8,081	5.2%	7,486	1.4%	2,501,751	75.8%	2,971	39.7%	81	
2.50 to < 10.00	4,911	2,544	3.5%	6,549	5.0%	1,780,293	74.4%	6,078	92.8%	241	
10.00 to < 100.00	1,533	177	14.2%	1,792	21.9%	483,391	73.8%	3,293	183.8%	291	
100.00 (Default)	891	157	3.2%	891	100.0%	362,313	80.6%	2,117	237.5%	556	
<b>Total</b>	<b>15,935</b>	<b>47,068</b>	<b>23.5%</b>	<b>36,297</b>	<b>4.9%</b>	<b>21,457,021</b>	<b>75.2%</b>	<b>16,315</b>	<b>45.0%</b>	<b>1,205</b>	<b>(1,804)</b>

Table 37: CR6 Credit risk exposures by exposure class and PD range for other retail exposures

	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	RWA	RWA Density	EL	Value Adjustment and Provisions
	£m	£m	%	£m	%		%	£m	%	£m	£m
<b>As at 31 December 2019</b>											
0.00 to < 0.15	252	2	99.4%	252	0.1%	58,296	72.8%	48	19.1%	0	
0.15 to < 0.25	381	-	100.0%	381	0.2%	56,815	74.5%	122	32.1%	1	
0.25 to < 0.50	776	-	100.0%	776	0.4%	100,161	75.5%	372	47.9%	2	
0.50 to < 0.75	610	-	100.0%	610	0.6%	72,884	76.1%	397	65.0%	3	
0.75 to < 2.50	1,866	-	100.0%	1,866	1.4%	214,014	76.7%	1,711	91.8%	20	
2.50 to < 10.00	1,345	-	-	1,345	4.7%	157,253	77.2%	1,609	119.6%	49	
10.00 to < 100.00	550	-	-	550	25.4%	69,154	77.3%	894	162.5%	108	
100.00 (Default)	296	-	-	296	100.0%	44,854	79.9%	319	107.9%	217	
<b>Total</b>	<b>6,076</b>	<b>2</b>	<b>100.0%</b>	<b>6,076</b>	<b>8.8%</b>	<b>773,431</b>	<b>76.5%</b>	<b>5,472</b>	<b>90.1%</b>	<b>400</b>	<b>(351)</b>

# Risk and capital position review

## Analysis of credit risk

Table 38: CR1-A – Credit quality of exposures by exposure class and instrument

This table provides a comprehensive picture of the credit quality of Barclays Bank UK Group's on balance sheet and off balance sheet exposures.

	Defaulted exposures	Non-defaulted exposure	Specific credit risk adjustment	General credit risk adjustment	Credit risk adjustment charges in the period	Net values	Accumulated write-offs
	£m	£m	£m	£m	£m	£m	£m
<b>As at 31 December 2019</b>							
1 Central governments or central banks	-	-	-	-	-	-	-
2 Institutions	3	30	-	-	(31)	33	-
3 Corporates	720	17,735	153	-	3	18,302	19
4 Of which Specialised lending	86	986	3	-	-	1,069	-
5 Of which SMEs	601	7,690	137	-	22	8,154	-
6 Retail	3,148	224,164	2,318	-	(383)	224,994	536
7 Secured by real estate property	1,041	149,831	70	-	3	150,802	5
8 SMEs	-	-	-	-	-	-	-
9 Non-SMEs	1,041	149,831	70	-	3	150,802	5
10 Qualifying revolving	1,052	61,951	1,804	-	(277)	61,199	321
11 Other retail	1,055	12,382	444	-	(109)	12,993	210
12 SMEs	758	6,600	93	-	18	7,265	38
13 Non-SMEs	297	5,782	351	-	(127)	5,728	172
14 Equity	-	-	-	-	-	-	-
<b>15 Total IRB approach</b>	<b>3,871</b>	<b>241,929</b>	<b>2,471</b>	<b>-</b>	<b>(411)</b>	<b>243,329</b>	<b>555</b>
16 Central governments or central banks	-	63,701	-	-	-	63,701	-
17 Regional governments or local authorities	-	7,805	-	-	-	7,805	-
18 Public sector entities	16	2,748	8	-	8	2,756	-
19 Multilateral development banks	-	1,924	-	-	-	1,924	-
20 International organisations	-	350	-	-	-	350	-
21 Institutions	-	1,686	-	-	-	1,686	-
22 Corporates	9	2,382	4	-	1	2,387	1
23 Of which: SMEs	-	165	1	-	1	164	-
24 Retail	150	4,911	198	-	(39)	4,863	29
25 Of which: SMEs	-	26	-	-	-	26	-
26 Secured by mortgages on immovable property	106	2,941	-	-	-	3,047	3
27 Of which: SMEs	-	99	-	-	-	99	-
28 Exposures in default	282	-	106	-	(40)	176	29
29 Items associated with particularly high risk	-	8	-	-	-	8	-
30 Covered bonds	-	1,766	-	-	-	1,766	-
31 Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-
32 Collective investments undertakings	-	-	-	-	-	-	-
33 Equity exposures	-	20	-	-	-	20	-
34 Other exposures	-	2,022	-	-	-	2,022	-
<b>35 Total standardised approach</b>	<b>281</b>	<b>92,264</b>	<b>210</b>	<b>-</b>	<b>(30)</b>	<b>92,335</b>	<b>33</b>
<b>36 Total</b>	<b>4,152</b>	<b>334,193</b>	<b>2,681</b>	<b>-</b>	<b>(441)</b>	<b>335,664</b>	<b>588</b>
37 Of which: Loans	3,919	224,410	2,461	-	(133)	225,868	588
38 Of which: Debt securities	-	22,318	-	-	-	22,318	-
39 Of which: Off-balance-sheet exposures	233	87,465	220	-	(308)	87,478	-

# Risk and capital position review

## Analysis of credit risk

Table 39: CR1-B – Credit quality of exposures by industry or counterparty types

This table provides a comprehensive picture of the credit quality of Barclays Bank UK Group's on balance sheet and off balance sheet exposures by industry types.

As at 31 December 2019	Defaulted exposures £m	Non-defaulted exposures £m	Specific credit risk adjustment £m	General credit risk adjustment £m	Credit risk adjustment charges in the period £m	Net values £m	Accumulated write-offs £m
1 Agriculture, forestry and fishing	542	4,261	96	-	10	4,707	-
2 Mining and quarrying	32	6	-	-	-	38	-
3 Manufacturing	38	508	6	-	1	540	-
4 Electricity, gas, steam and air conditioning supply	3	31	-	-	-	34	-
5 Water supply	7	36	-	-	-	43	-
6 Construction	32	593	13	-	2	612	-
7 Wholesale and retail trade	129	1,361	24	-	4	1,466	-
8 Transport and storage	20	335	5	-	1	350	-
9 Accommodation and food service activities	108	650	9	-	-	749	-
10 Information and communication	16	180	5	-	4	191	-
11 Real estate activities	312	14,425	58	-	(7)	14,679	-
12 Professional, scientific and technical activities	37	495	11	-	(1)	521	-
13 Administrative and support service activities	22	538	7	-	7	553	-
14 Public administration and defence, compulsory social security	-	21,663	-	-	(8)	21,663	-
15 Education	46	676	13	-	(10)	709	-
16 Human health services and social work activities	83	853	6	-	(14)	930	-
17 Arts, entertainment and recreation	32	214	5	-	1	241	-
18 Other services	2,693	287,368	2,423	-	(431)	287,638	588
<b>19 Total</b>	<b>4,152</b>	<b>334,193</b>	<b>2,681</b>	<b>-</b>	<b>(441)</b>	<b>335,664</b>	<b>588</b>

# Risk and capital position review

## Analysis of credit risk

Table 40: CR1-C – Credit quality of exposures by geography

This table provides a comprehensive picture of the credit quality of Barclays Bank UK Group's on balance sheet and off balance sheet exposures by geography.

As at 31 December 2019	Defaulted exposures £m	Non-defaulted exposures £m	Specific credit risk adjustment £m	General credit risk adjustment £m	Credit risk adjustment charges of the period £m	Net values £m	Accumulated write-offs £m
UK	4,120	312,096	2,679	-	(440)	313,537	588
Europe	5	9,972	-	-	(1)	9,977	-
Germany	1	4,849	-	-	-	4,850	-
Asia	1	4,737	-	-	-	4,738	-
Japan	-	4,465	-	-	-	4,465	-
Americas	21	7,325	2	-	1	7,344	-
United States	-	5,890	-	-	-	5,890	-
Africa and Middle East	5	63	-	-	(1)	68	-
<b>Total</b>	<b>4,152</b>	<b>334,193</b>	<b>2,681</b>	<b>-</b>	<b>(441)</b>	<b>335,664</b>	<b>588</b>

# Risk and capital position review

## Analysis of credit risk

Table 41: Credit quality of forbore exposures

This table provides an overview of the quality of forbore exposures.

		Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forbore exposures	
		Non Performing forbore				On performing forbore exposures	On non-performing forbore exposures	Total	Of which collateral and financial guarantees received on non-performing exposures with forbearance measures
		Performing forbore	Total	Of which defaulted	Of which impaired				
As at 31 December 2019		£m	£m	£m	£m	£m	£m	£m	
1	Loans and Advances	194	747	526	747	(39)	(123)	434	396
2	Central banks	-	-	-	-	-	-	-	-
3	General governments	-	-	-	-	-	-	-	-
4	Credit institutions	-	-	-	-	-	-	-	-
5	Other financial corporations	-	-	-	-	-	-	-	-
6	Non-financial corporations	47	449	268	449	(4)	(31)	215	196
7	Households	147	298	258	298	(35)	(92)	219	200
8	Debt securities	-	-	-	-	-	-	-	-
9	Loan commitments given	74	-	-	-	-	-	-	-
10	<b>Total</b>	<b>268</b>	<b>747</b>	<b>526</b>	<b>747</b>	<b>(39)</b>	<b>(123)</b>	<b>434</b>	<b>396</b>

Table 42: Credit quality of performing and non-performing exposures by past due days

This table follows the regulatory defined measures rather than the IFRS definition and they cannot be reconciled to the tables disclosed in the Annual Report. For example, loans and advances in the tables below include cash balances at central banks, cash collateral and settlement balances and reverse repos that are not part of the “loans and advances at amortised cost” disclosed in the Annual Report.

		Gross carrying amount/nominal amount									
		Performing exposures				Non-performing exposures					
		Total	Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days	Total	Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 5 years	Past due > 5 years	Of which defaulted
As at 31 December 2019	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	
1	Loans and advances	225,951	225,263	688	3,727	1,318	635	875	696	203	3,707
2	Central banks	28,000	28,000	-	-	-	-	-	-	-	-
3	General governments	7,052	7,052	-	-	-	-	-	-	-	-
4	Credit institutions	733	733	-	-	-	-	-	-	-	-
5	Other financial corporations	2,566	2,560	6	16	5	3	5	2	1	16
6	Non-financial corporations	22,580	22,568	12	1,236	309	171	258	459	39	1,216
7	Of which SMEs	11,150	11,143	7	1,200	273	171	258	459	39	1,200
8	Households	165,020	164,350	670	2,475	1,004	461	612	235	163	2,475
9	Debt securities	23,782	23,782	-	-	-	-	-	-	-	-
10	Central banks	18	18	-	-	-	-	-	-	-	-
11	General governments	14,625	14,625	-	-	-	-	-	-	-	-
12	Credit institutions	5,783	5,783	-	-	-	-	-	-	-	-
13	Other financial corporations	3,141	3,141	-	-	-	-	-	-	-	-
14	Non-financial corporations	215	215	-	-	-	-	-	-	-	-
15	Off-balance-sheet exposures	64,845	-	-	232	-	-	-	-	-	232
16	Central banks	750	-	-	-	-	-	-	-	-	-
17	General governments	-	-	-	-	-	-	-	-	-	-
18	Credit institutions	117	-	-	-	-	-	-	-	-	-
19	Other financial corporations	26	-	-	-	-	-	-	-	-	-
20	Non-financial corporations	2,860	-	-	46	-	-	-	-	-	46
21	Households	61,092	-	-	186	-	-	-	-	-	186
22	<b>Total</b>	<b>314,578</b>	<b>249,045</b>	<b>688</b>	<b>3,959</b>	<b>1,318</b>	<b>635</b>	<b>875</b>	<b>696</b>	<b>203</b>	<b>3,939</b>

# Risk and capital position review

## Analysis of credit risk

Table 43: Performing and non-performing exposures and related provisions

This table follows the regulatory defined measures rather than the IFRS definition and they cannot be reconciled to the tables disclosed in the Annual Report. For example, loans and advances in the tables below include cash balances at central banks, cash collateral and settlement balances and reverse repos that are not part of the “loans and advances at amortised cost” disclosed in the Annual Report.

	Gross carrying amount/nominal						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures - accumulated impairment and provisions			Non-performing exposures - accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
	Total	Of which stage 1	Of which stage 2	Total	Of which stage 2	Of which stage 3	Total	Of which stage 1	Of which stage 2	Total	Of which stage 2	Of which stage 3			
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m		£m	£m
<b>As at 31 December 2019</b>															
1 Loans and advances	225,951	200,508	25,443	3,727	151	3,576	(1,524)	(212)	(1,312)	(1,086)	(4)	(1,082)	-	158,095	1,908
2 Central banks	28,000	28,000	-	-	-	-	-	-	-	-	-	-	-	-	-
3 General governments	7,052	7,052	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Credit institutions	733	733	-	-	-	-	-	-	-	-	-	-	-	114	-
5 Other financial corporations	2,566	2,521	45	16	-	16	(1)	(1)	-	(1)	-	(1)	-	1,775	10
6 Non-financial corporations	22,580	19,721	2,859	1,236	20	1,216	(92)	(26)	(66)	(167)	(1)	(166)	-	13,527	737
7 Of which SMEs	11,150	8,838	2,312	1,200	-	1,200	(68)	(23)	(45)	(165)	-	(165)	-	-	705
8 Households	165,020	142,481	22,539	2,475	131	2,344	(1,431)	(185)	(1,246)	(918)	(3)	(915)	-	142,679	1,161
9 Debt securities	23,782	23,782	-	-	-	-	(2)	(2)	-	-	-	-	-	-	-
10 Central banks	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-
11 General governments	14,625	14,625	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Credit institutions	5,783	5,783	-	-	-	-	(1)	(1)	-	-	-	-	-	-	-
13 Other financial corporations	3,141	3,141	-	-	-	-	(1)	(1)	-	-	-	-	-	-	-
14 Non-financial corporations	215	215	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Off-balance-sheet exposures	64,845	59,768	5,077	232	2	230	(70)	(11)	(59)	-	-	-	-	-	19
16 Central banks	750	750	-	-	-	-	-	-	-	-	-	-	-	-	-
17 General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 Credit institutions	117	117	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Other financial corporations	26	24	2	-	-	-	-	-	-	-	-	-	-	-	-
20 Non-financial corporations	2,860	2,466	394	46	1	45	-	-	-	-	-	-	-	-	15
21 Households	61,092	56,411	4,681	186	1	185	(70)	(11)	(59)	-	-	-	-	-	4
22 Total	314,578	284,058	30,520	3,959	153	3,806	(1,596)	(225)	(1,371)	(1,086)	(4)	(1,082)	-	158,095	1,927

# Risk and capital position review

## Analysis of credit risk

Table 44: CR2-B - Changes in the stock of defaulted and impaired loans and debt securities

This table provides an overview of the stock of defaulted and impaired loans and debt securities.

	Gross carrying value defaulted exposures <sup>a</sup> £m
1 As at 1 January 2019	4,463
2 Loans and debt securities that have defaulted or impaired since the last reporting period	2,037
3 Returned to non-defaulted status	(940)
4 Amounts written off	(588)
5 Other changes <sup>b</sup>	(1,265)
10 As at 31 December 2019	3,707

Notes:

a Defaulted exposures are defined as all stage 3 impaired gross loans and debt securities under IFRS9 and any stage 1 and stage 2 gross loans and debt securities under IFRS9 that are more than 90 days past due.

b Other changes include repayments and disposals net drawdowns.

Table 45: CR2-A – Changes in the stock of general and specific credit risk adjustments

This table shows the movement in the impairment allowance during 2019. Please refer to pages 68 to 70 of this document and Note 7 of the Barclays Bank UK PLC Annual report 2019 for further information on impairment.

	Accumulated specific credit risk adjustment <sup>a</sup> £m	Accumulated general credit risk adjustment £m
1 As at 1 January 2019	2,981	-
2 Increases due to amounts set aside for estimated loan losses during the period <sup>b</sup>	288	-
3 Decreases due to amounts reversed for estimated loan losses during the period <sup>c</sup>	(588)	-
4 Decreases due to amounts taken against accumulated credit risk adjustments	-	-
5 Transfers between credit risk adjustments	-	-
6 Impact of exchange rate differences	-	-
7 Business combinations, including acquisitions and disposals of subsidiaries	-	-
9 Other adjustments	-	-
10 As at 31 December 2019	2,681	-
11 Recoveries on credit risk adjustments recorded directly to the statement of profit or loss	(51)	-
12 Specific credit risk adjustments directly recorded to the statement of profit or loss	-	-

Notes:

a Excludes other assets impairment.

b Increases due to amounts set aside for estimated loan losses during the period includes the net impact of changes made to parameters (such as probability of default, exposure at default and loss given default), changes in macro-economic variables, new assets originated, repayments and drawdowns.

c Represents amounts written off.



# Risk and capital position review

## Analysis of credit risk

### Regulatory adjustments to statutory Impairment

The IFRS impairment allowance is adjusted to reflect a regulatory view, which is used to calculate the provision misalignment adjustment to regulatory capital. The primary differences are detailed below:

- Scope of consolidation - adjustments driven by differences between the IFRS and regulatory consolidation, as highlighted on page 10. These include, but are not exclusive to associates and impairments relating to securitisation vehicles.

Table 46: Regulatory adjustments to statutory Impairment

As at 31 December 2019	£m
IFRS allowance for impairment	2,681
Scope of consolidation	1
Regulatory impairment allowance	2,682

# Risk and capital position review

## Analysis of credit risk

### Loss analysis – regulatory expected loss (EL) versus actual losses

The following table compares Barclays Bank UK Group's regulatory expected loss (EL) measure against the view of actual loss for those portfolios where credit risk is calculated using the IRB approach.

As expected loss best estimate (ELBE) represents a charge for assets already in default, it has been separately disclosed from total EL. This facilitates comparison of actual loss during the period to the expectation of future loss or EL, as per IRB models in the prior period.

The following should be considered when comparing EL and actual loss metrics:

- The purpose of EL is not to represent a prediction of future impairment charges
- Whilst the impairment charge and the EL measure respond to similar drivers, they are not directly comparable
- The EL does not reflect growth of portfolios or changes in the mix of exposures. In forecasting and calculating impairment, balances and trends in the cash flow behavior of customer accounts are considered

### Regulatory Expected Loss

EL is an input to the capital adequacy calculation which can be seen as an expectation of average future loss based on IRB models over a one year period as follows:

- Non-defaulted assets: EL is calculated using probability of default, downturn loss given default estimates and exposures at default
- Defaulted assets: EL is based upon an estimate of likely recovery levels for each asset and is generally referred to as ELBE

Table 47: Analysis of expected loss versus actual losses for IRB exposures

IRB Exposure Class	EL	ELBE	Total expected loss at 31 December 2018	Total actual loss at 31 December 2019
	£m	£m	£m	£m
Central governments or central banks	-	-	-	-
Institutions	7	-	7	-
Corporates	62	65	127	34
Retail	-	-	-	-
- SME	142	85	227	21
- Secured by real estate collateral	224	29	253	6
- Qualifying revolving retail	740	679	1,419	483
- Other retail	183	329	512	127
Equity	-	-	-	-
Securitisation positions	-	-	-	-
Non-credit obligation assets	-	-	-	-
<b>Total IRB</b>	<b>1,358</b>	<b>1,187</b>	<b>2,545</b>	<b>671</b>

# Risk and capital position review

## Analysis of credit risk

### Non-trading book equity investments

**Table 48: Fair value of and gains and losses on equity investments**

This table shows the fair value of non trading book equity positions subject to credit risk calculations, plus associated gains and losses.

Non trading book equity positions	As at 31 December 2019	
	Fair Value £m	RWAs £m
Exchange Traded	-	-
Private Equity	27	61
Other	-	-
<b>Total</b>	<b>27</b>	<b>61</b>
<b>Realised gains / (losses) from sale and liquidations of equity investments</b>	-	-
<b>Unrealised gains</b>	-	-
<b>Unrealised gains included in PRA transitional CET1 Capital</b>	-	-

# Risk and capital position review

## Analysis of counterparty credit risk

### Counterparty risk exposures

Counterparty credit risk (CCR) is the risk related to a counterparty defaulting before the final transaction settlement. Barclays Bank UK Group's calculates the exposures subject to CCR using two methods: Financial Collateral Comprehensive Method (FCCM), and Mark to Market Method (MTM).

The following tables analyse counterparty credit risk exposures and risk weighted assets split by regulatory exposure classes.

**Table 49: Exposure at default, RWA and capital requirements associated with counterparty credit risk**

This table summarises EAD post-credit risk mitigation, risk weighted assets and capital requirements by exposure class for counterparty credit risk. It should be noted that the disclosure below excludes CVA which is shown separately in Table 55.

As at 31 December 2019	Post-CRM EAD £m	RWA £m	Capital Requirements £m
<b>Counterparty credit risk exposure class</b>			
<b>Standardised approach</b>			
Central governments or central banks	14	-	-
Regional governments or local authorities	-	-	-
Public sector entities	-	-	-
Multilateral development banks	-	-	-
International organisations	-	-	-
Institutions	2,310	277	22
Corporates	9	2	-
Retail	-	-	-
Secured by mortgages	-	-	-
Exposures in default	-	-	-
Items associated with high risk	-	-	-
Covered bonds	-	-	-
Securitisation positions	-	-	-
Collective investment undertakings	-	-	-
Equity positions	-	-	-
Other items	-	-	-
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>2,333</b>	<b>279</b>	<b>22</b>
<b>Advanced IRB approach</b>			
Central governments or central banks	-	-	-
Institutions	-	-	-
Corporates	-	-	-
Retail	-	-	-
- Small and medium enterprises (SME)	-	-	-
- Secured by real estate collateral	-	-	-
- Qualifying revolving retail	-	-	-
- Other retail	-	-	-
Equity	-	-	-
Securitisation positions	-	-	-
Non-credit obligation assets	-	-	-
<b>Total Advanced IRB Credit Risk Exposure</b>	<b>-</b>	<b>-</b>	<b>-</b>
Default fund contributions	149	196	16
<b>Total Counterparty Credit Risk</b>	<b>2,482</b>	<b>475</b>	<b>38</b>

# Risk and capital position review

## Analysis of counterparty credit risk

Table 50: CCR1 – Analysis of CCR exposure by approach

This table provides the CCR regulatory requirements split between the method and main parameters used.

This table excludes default fund contribution and as such cannot be directly reconciled to Table 49.

As at 31 December 2019		Notional £m	Replacement cost/current market value £m	Potential future credit exposure £m	EEPE £m	Multiplier	EAD post CRM £m	RWAs £m
1	Mark to market		134	1,753			1,133	55
2	Original exposure	-					-	-
3	Standardised approach		-				-	-
4	IMM (for derivatives and SFTs)				-	-	-	-
5	Of which securities financing transactions				-	-	-	-
6	Of which derivatives and long settlement transactions				-	-	-	-
7	Of which from contractual cross-product netting				-		-	-
8	Financial collateral simple method (for SFTs)						-	-
9	Financial collateral comprehensive method (for SFTs)						1,200	224
10	VaR for SFTs						-	-
11	<b>Total</b>							<b>279</b>

# Risk and capital position review

## Analysis of counterparty credit risk

Table 51: CCR3 Counterparty credit risk exposures by exposure classes and risk weight under standardised approach

This table shows exposure at default, broken down by exposure class and risk weight. This table includes exposures subject to the Standardised approach only.

Exposures by regulatory portfolio and risk																			
	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Deducted	Total	of which: Unrated	
<b>As at 31 December 2019</b>																			
1 Central governments or central banks	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	
2 Regional governments or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3 Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4 Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5 International Organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6 Institutions	-	1,098	-	-	1,170	-	42	-	-	-	-	-	-	-	-	-	2,310	-	
7 Corporates	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	9	-	
8 Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9 Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10 Exposures in default	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11 Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12 Covered Bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13 Claims on institutions and corporate with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14 Claims in the form of CIU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15 Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16 Other items	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>17 Total</b>	<b>14</b>	<b>1,098</b>	<b>-</b>	<b>-</b>	<b>1,179</b>	<b>-</b>	<b>42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,333</b>	<b>-</b>	

# Risk and capital position review

## Analysis of counterparty credit risk

Table 52: CCR5-A - Impact of netting and collateral held on exposure values

This table shows the impact on exposure from netting and collateral held for derivatives and SFTs.

As at 31 December 2019		Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
		£m	£m	£m	£m	£m
1	Derivatives	5,379	5,246	133	257	123
2	SFTs	16,704	16,674	30	-	30
3	Cross-product netting	-	-	-	-	-
4	<b>Total</b>	<b>22,083</b>	<b>21,920</b>	<b>163</b>	<b>257</b>	<b>153</b>

Table 53: CCR5-B - Composition of collateral for exposures to CCR

This table shows the types of collateral posted or received to support or reduce CCR exposures relating to derivative transactions or SFTs, including transactions cleared through a central counterparty (CCP).

As at 31 December 2019		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		£m	£m	£m	£m	£m	£m
1	Cash	-	22	-	6,639	-	42
2	Debt	-	235	1,055	128	-	-
3	Equity	-	-	-	-	-	-
4	Others	-	-	-	-	-	-
<b>Total</b>		<b>-</b>	<b>257</b>	<b>1,055</b>	<b>6,767</b>	<b>-</b>	<b>42</b>

# Risk and capital position review

## Analysis of counterparty credit risk

Table 54: CCR8 Exposures to CCPs

This table provides a breakdown of the exposures and RWAs to qualifying central counterparties (CCP).

		As at 31 December 2019	
		EAD post CRM	RWAs
		£m	£m
1	<b>Exposures to QCCPs (total)</b>		<b>218</b>
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which		
3	(i) OTC derivatives	701	14
4	(ii) Exchange-traded derivatives	629	13
5	(iii) SFTs	-	-
6	(iv) Netting sets where cross-product netting has been approved	72	1
7	Segregated initial margin	-	-
8	Non-segregated initial margin	1,055	8
9	Prefunded default fund contributions	397	196
10	Alternative calculation of own funds requirements for exposures	149	-
11	<b>Exposures to non-QCCPs (total)</b>		<b>-</b>
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which		
13	(i) OTC derivatives	-	-
14	(ii) Exchange-traded derivatives	-	-
15	(iii) SFTs	-	-
16	(iv) Netting sets where cross-product netting has been approved	-	-
17	Segregated initial margin	-	-
18	Non-segregated initial margin	-	-
19	Prefunded default fund contributions	-	-
20	Unfunded default fund contributions	-	-



# Risk and capital position review

## Analysis of counterparty credit risk

### Credit valuation adjustments

The Credit valuation adjustment (CVA) measures the risk from MTM losses due to deterioration in the credit quality of a counterparty to over-the-counter derivative transactions with Barclays Bank UK Group's. It is a complement to the counterparty credit risk charge, that accounts for the risk of outright default of a counterparty.

**Table 55: CCR2 Credit valuation adjustment (CVA) capital charge**

Barclays Bank UK Group uses the standardised approach to calculate CVA capital charge: This approach takes account of the external credit rating of each counterparty, and incorporates the effective maturity and EAD for the calculation of the CCR.

Credit valuation adjustment (CVA) capital charge		Exposure value	RWA
		£m	£m
<b>As at 31 December 2019</b>			
1	Total portfolios subject to the Advanced Method	-	-
2	(i) VaR component (including the 3x multiplier)	-	-
3	(ii) Stressed VaR component (including 3x multiplier)	-	-
4	All portfolios subject to the Standardised Method	107	150
EU4	Based on original exposure method	-	-
<b>5</b>	<b>Total subject to the CVA capital charge</b>	<b>107</b>	<b>150</b>

# Risk and capital position review

## Analysis of market risk

### Capital requirements for market risk

The table below shows the elements of capital requirements and risk weighted assets under the market risk framework as defined in CRR. Barclays Bank UK Group is required to hold capital for the market risk exposures arising from regulatory trading books.

Table 56: Market risk own funds requirement

	RWA	Capital requirements
	As at 31 December 2019 £m	As at 31 December 2019 £m
1 <b>Internal models approach</b>	-	-
2 VaR	-	-
3 SVaR	-	-
4 Incremental risk charge	-	-
5 Comprehensive risk measure	-	-
6 Risks not in VaR	-	-
7 <b>Standardised approach</b>	178	14
8 Interest rate risk (general and specific)	132	10
9 Equity risk (general and specific)	-	-
10 Foreign exchange risk	46	4
11 Commodity risk	-	-
12 Specific interest rate risk of securitisation position	-	-
13 <b>Total</b>	178	14

Table 57: MR1 - Market risk under standardised approach

This table shows the RWAs and capital requirements for standardised market risk split between outright products, options and securitisation. This table includes exposures subject to the Standardised approach only.

	RWA	Capital requirements
	As at December 2019 £m	As at December 2019 £m
<b>Outright products</b>		
1 Interest rate risk (general and specific)	132	10
2 Equity risk (general and specific)	-	-
3 Foreign exchange risk	46	4
4 Commodity risk	-	-
<b>Options</b>		
5 Simplified approach	-	-
6 Delta-plus method	-	-
7 Scenario approach	-	-
8 <b>Securitisation ( Specific Risk )</b>	-	-
9 <b>Total</b>	178	14

# Risk and capital position review

## Analysis of securitisation exposures

### Analysis of securitisation exposures

As securitisation exposures are subject to a distinct regulatory framework, additional securitisation disclosures are provided separate to the credit, counterparty and market risk disclosures.

This table shows a reconciliation of securitisation exposures in the following section and where the balance can be found in the relevant credit, counterparty and market risk sections.

**Table 58: Reconciliation of exposures and capital requirements relating to securitisations**

As at 31 December 2019	Table number in this document	Exposure value £m	RWAs £m	Capital requirement £m
<b>Banking book</b>				
<b>Standardised approach</b>				
Credit risk	Table 16	159	16	1
Of which subject to New Securitisation framework <sup>a</sup>		159	16	1
<b>Total Standardised approach</b>		<b>159</b>	<b>16</b>	<b>1</b>
<b>Advanced IRB</b>				
Credit risk	Table 16	1,352	119	10
Counterparty credit risk		-	-	-
Of which subject to New Securitisation framework <sup>a</sup>		-	-	-
<b>Total IRB approach</b>		<b>1,352</b>	<b>119</b>	<b>10</b>
<b>Total banking book</b>		<b>1,511</b>	<b>135</b>	<b>11</b>

Note:

<sup>a</sup> Transactions risk weighted per the new securitisation framework (EU) 2017/2401 & 2017/2402 effective from 01/01/2019. Existing positions are subject to grandfathering provisions effective till 31/12/2019. From 01/01/2020 all exposures will be risk weighted per the new framework. Sec SA, Sec ERBA, Sec IAA and 1250% positions risk weighted per new rules are considered under Standardised approach.

# Risk and capital position review

## Analysis of securitisation exposures

Table 59: Securitisation exposures – by exposure class

The table below discloses the aggregate amount of securitisation exposures held, which is consistent with table 60 and 61.

For invested and sponsored positions, the table below presents the aggregate amount of positions purchased.

As at 31 December 2019	Banking book <sup>a,b</sup>			Total banking book £m
	Originator £m	Sponsor £m	Investor £m	
<b>On-balance sheet</b>				
Residential Mortgages	-	-	1,511	1,511
Commercial Mortgages	-	-	-	-
Credit Card Receivables	-	-	-	-
Leasing	-	-	-	-
Loans to Corporates or SMEs	-	-	-	-
Consumer Loans	-	-	-	-
Trade Receivables	-	-	-	-
Securitisations/ Re-securitisations	-	-	-	-
Other Assets	-	-	-	-
<b>Total On-balance sheet</b>	-	-	1,511	1,511
<b>Off-balance sheet</b>				
Residential Mortgages	-	-	-	-
Commercial Mortgages	-	-	-	-
Credit Card Receivables	-	-	-	-
Leasing	-	-	-	-
Loans to Corporates or SMEs	-	-	-	-
Consumer Loans	-	-	-	-
Trade Receivables	-	-	-	-
Securitisations/ Re-securitisations	-	-	-	-
Other Assets	-	-	-	-
<b>Total Off-balance sheet</b>	-	-	-	-
<b>Total</b>	-	-	1,511	1,511

Notes:

a The exposure type is based on the asset class of underlying positions.

b Off balance sheet relates to liquidity lines to securitisation vehicles, market risk derivative positions and where the Group is a swap provider to a SPV.

# Risk and capital position review

## Analysis of securitisation exposures

**Table 60: Securitisation exposures – by capital approach**

This table discloses the total exposure value and associated capital requirement of securitisation positions held by the approach adopted in accordance with the Basel framework. Barclays Bank UK Group has approval to use, and therefore applies the IRB approach for the calculation of its RWAs. The RWA calculation approaches per new securitisation Regulation (EU) 2017/2402 (the Securitisation Regulation) and Regulation (EU) 2017/2401 (amendments to Capital Requirements Regulation or CRR) have been added to Table 60. The 2019 disclosure incorporates Sec Internal Ratings Based approach (IRBA), Sec Standardised approach (SA), Sec External Ratings Based approach (ERBA) and Sec Internal Assessment approach (IAA). The total population is as per Tables 59 and 61.

As at 31 December 2019	Exposure values				Capital requirements			
	Originator £m	Sponsor £m	Investor £m	Total £m	Originator £m	Sponsor £m	Investor £m	Total £m
<b>Banking book</b>								
<b>Existing framework IRB (RBA, IAA) &amp; New securitisation framework approaches (Sec IRBA, Sec SA, Sec ERBA/Sec IAA)</b>								
<= 10%	-	-	1,354	1,354	-	-	8	8
> 10% <= 20%	-	-	141	141	-	-	2	2
> 20% <= 50%	-	-	-	-	-	-	-	-
> 50% <= 100%	-	-	16	16	-	-	1	1
> 100% <= 650%	-	-	-	-	-	-	-	-
> 650% < 1250%	-	-	-	-	-	-	-	-
= 1250% / Look through	-	-	-	-	-	-	-	-
Internal Assessment Approach	-	-	-	-	-	-	-	-
Supervisory Formula Method	-	-	-	-	-	-	-	-
<b>Sub-total IRB</b>	-	-	1,352	1,352	-	-	10	10
<b>Sub-total Standardised approach</b>	-	-	159	159	-	-	1	1
<b>Total banking book</b>	-	-	1,511	1,511	-	-	11	11

Risk Weighted Band	IRB S&P Equivalent Rating	STD S&P Equivalent Rating
<= 10%	AAA to A+ (Senior Position Only)	N/A
> 10% <= 20%	A to A- (Senior Position Only) / AAA to A+ (Base Case)	N/A
> 20% <= 50%	A to A- (Base Case)	AAA to AA-
> 50% <= 100%	BBB+ to BBB (Base Case)	A+ to A-
> 100% <= 650%	BBB- (Base Case) to BB (Base Case)	BBB+ to BBB-
> 650% < 1250%	BB- (Base Case)	BB to BB-
= 1250% / deduction	Below BB-	Below BB-

Risk Weighted Band	New securitisation Regulation (EU) 2017/2401&2 S&P Equivalent Rating (STS)	New securitisation Regulation (EU) 2017/2401&2 S&P Equivalent Rating (Non STS)
<= 70%	AAA to BBB- (Senior Position Only) / AAA to A (Base Case)	AAA to A- (Senior Position Only) / AAA to A+ (Base Case)
> 70% <= 160%	BBB to BB (Senior Position Only) / AA- to BBB+ (Base Case)	BBB+ to BB (Senior Position Only) / AA+ to A- (Base Case)
> 160% <= 280%	BB- to B (Senior Position Only) / A- to BBB- (Base Case)	BB to B+ (Senior Position Only) / A+ to BBB (Base Case)
> 280% <= 420%	B to CCC- (Senior Position Only) / BBB- to BB+ (Base Case)	B+ to B- (Senior Position Only) / BBB to BBB- (Base Case)
> 420% <= 860%	CCC+ to CCC- (Senior Position Only) / BB+ to B+ (Base Case)	B- to CCC- (Senior Position Only) / BBB- to BB- (Base Case)
> 860% <= 1130%	B to B- (Base Case)	BB- to B- (Base Case)
= 1250% / deduction	Below CCC-/Below B- (Base Case)	Below CCC-/ Below B- (Base Case)

# Risk and capital position review

## Analysis of securitisation exposures

**Table 61: Aggregate amount of securitised positions retained or purchased by geography - banking book**

This table presents total banking book securitised exposure type by geography, based on location of the counterparty.

Exposure Type	United Kingdom £m	Total £m
<b>As at 31 December 2019</b>		
Residential Mortgages	1,511	1,511
Commercial Mortgages	-	-
Credit Card Receivables	-	-
Leasing	-	-
Loans to Corporates or SMEs	-	-
Consumer Loans	-	-
Trade Receivables	-	-
Securitisations/ Re-securitisations	-	-
Other Assets	-	-
<b>Total</b>	<b>1,511</b>	<b>1,511</b>

# Risk and capital position review

## Analysis of operational risk

### Operational risk - risk weighted assets

The following table details the Barclays Bank UK Group's operational risk RWAs. Barclays Bank UK Group has the approval from PRA to calculate its operational risk capital requirement using the Standardised Approach (TSA).

See pages 99 to 101 for information on operational risk management.

Table 62: Risk weighted assets for operational risk

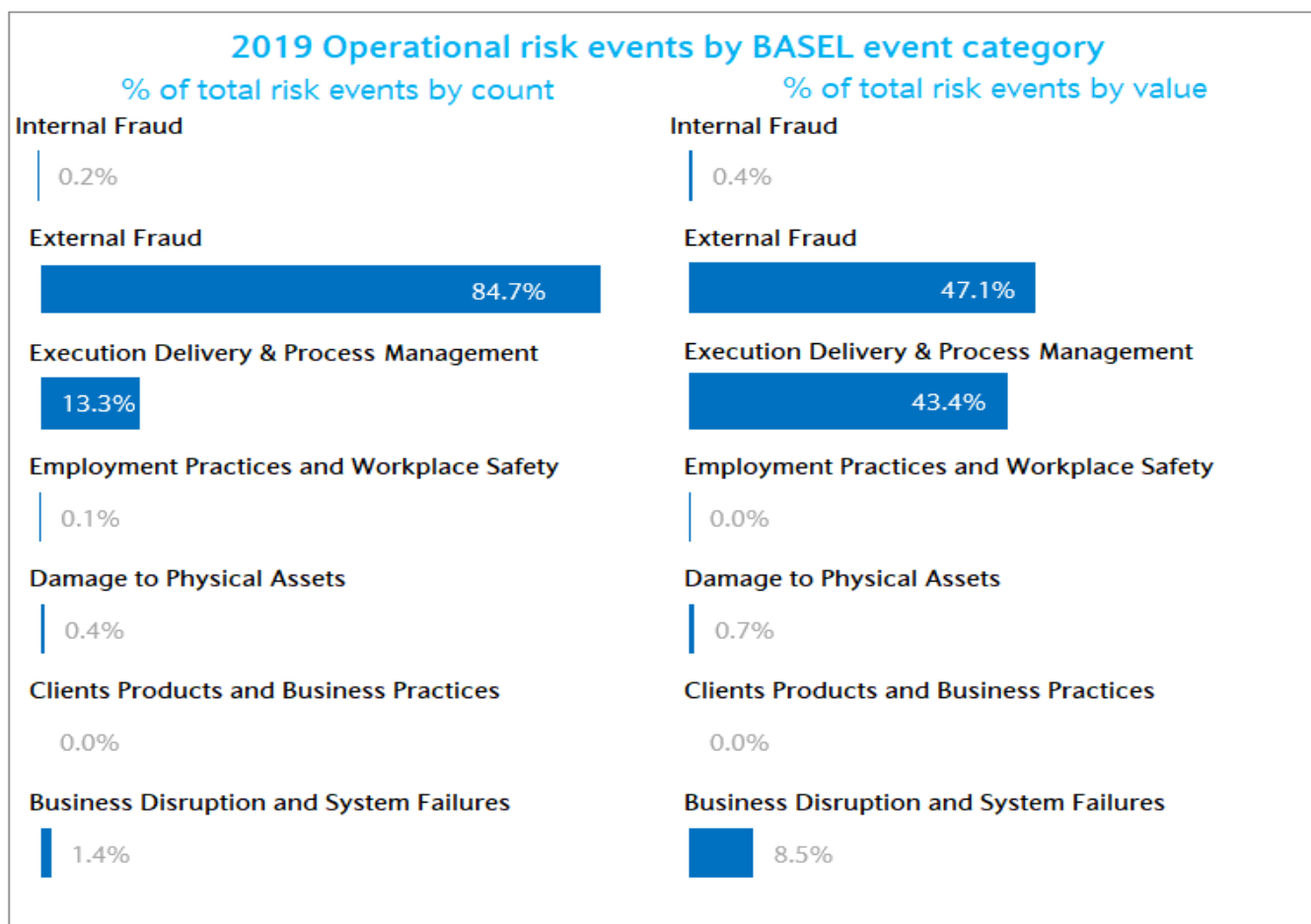
As at 31 December 2019		£m
<b>Operational Risk</b>		
Basic Indicator Approach		-
Standardised Approach		11,617
Advanced Measurement Approach		-
<b>Total operational risk RWAs</b>		<b>11,617</b>

### Operational risk profile

During 2019, total operational risk losses<sup>a</sup> totalled £47m while the number of recorded events for 2019 amounted to 1,030. The total operational risk losses for the year were mainly driven by events falling within the Execution, Delivery and Process Management and External Fraud categories, which tend to be high volume but low impact events.

Within operational risk, there are a large number of small risk events. In 2019, 89% of the Barclays Bank UK Group's reportable operational risk events by volume had a value of less than £50,000 each. Cumulatively, events under this £50,000 threshold accounted for only 36% of the Barclays Bank UK Group's total net operational risk losses. A small proportion of operational risk events have a material impact on the financial results of the Barclays Bank UK Group.

The analysis below presents the Barclays Bank UK Group's operational risk events by Basel event category:



Note:

<sup>a</sup> The data disclosed includes operational risk losses for reportable events having net impact of > £10,000 and excludes events that are conduct or legal risk, aggregate and boundary events. A boundary event is an operational risk event that results in a credit risk impact.

# Risk and capital position review

## Analysis of operational risk

- Execution, Delivery and Process Management impacts totalled £20m and accounted for 43% of overall operational risk losses. The events in this category are typical of the banking industry as a whole where high volumes of transactions are processed on a daily basis, mapping mainly to Barclays Transaction Operations risk type. The volume of events accounted for 13% of total events.
- External Fraud remains the category with the highest frequency of events at 85% of total events in 2019 and losses of £22m accounted for 47% of total losses. In this category, high volume, low value events are driven by transactional fraud often related to debit and credit card usage.

The Barclays Bank UK Group's operational risk profile is informed by bottom-up risk assessments undertaken by each business unit and top-down qualitative review by the Operational Risk specialists for each risk type. Fraud, Transaction Operations and Technology continue to be highlighted as key operational risk exposures. The operational risk profile is also informed by a number of risk themes: Cyber, Data, Execution and Resilience. These represent threats to the Barclays Bank UK Group that extend across multiple risk types, and therefore require an integrated risk management approach.

Investment continues to be made in improving the control environment across the Barclays Bank UK Group. Particular areas of focus include new and enhanced fraud prevention systems and tools to combat the increasing level of fraud attempts being made and to minimise any disruption to genuine transactions. Fraud remains an industry wide threat and the Barclays Bank UK Group continues to work closely with external partners on various prevention initiatives.

Operational Resilience is a key area of focus for the Barclays Bank UK Group. Disruption to our business activities is a material inherent risk within the Barclays Bank UK Group and across the financial services industry, whether arising through impacts on our technology systems, our real estate services, availability of personnel or services supplied by third parties. Failure to build resilience and recovery capabilities into our business activities may result in significant customer detriment, costs to reimburse losses incurred by the Barclays Bank UK Group's customers, market impact and reputational damage. In common with the rest of the Financial Services industry, the Barclays Bank UK Group expects continued regulatory scrutiny in relation to resilience. Technology, resilience and cyber security risks evolve rapidly so the Barclays Bank UK Group maintains continued focus and investment in our control environment to manage these risks, and actively partners with peers and relevant organisations to understand and disrupt threats originating outside the Barclays Bank UK Group.

Cyber-attacks are a global threat that are inherent across all industries. The financial sector remains a primary target for cyber criminals, hostile nation states, opportunists and hacktivists. There are high levels of sophistication in criminal hacking for the purpose of stealing money, stealing, destroying or manipulating data (including customer data) and/or disrupting operations, where multiple threats exist including threats arising from malicious emails, distributed denial of service (DDoS) attacks, payment system compromises, insider attackers, supply chain and vulnerability exploitation. Cyber events can have a compounding impact on services and customers, e.g. data breaches in social networking sites, retail companies and payments networks.

The threat of cyber-attack is recognised by the Barclays Bank UK Group along with the significant potential impact on all areas of its business ranging from operational matters to its scrutiny of its relationships with its suppliers, customers and other external stakeholders. Regulators in the UK, US and Europe continue to focus on cyber-security risk management in the financial sector and have highlighted the need for financial institutions to improve their monitoring and control of, and resilience (particularly of critical services) to cyber-attacks, and to provide timely notification of them, as appropriate. This has resulted in a number of proposed laws, regulations and other requirements that necessitate implementation of a variety of increased controls and enhancement activities for regulated Barclays Bank UK Group entities. These include, among others, the adoption of cyber security policies and procedures meeting specified criteria, minimum required security measures, controls and procedures for enhanced reporting and public disclosures, compliance certification requirements, and other cyber and information risk governance measures. The Barclays Bank UK Group continues to use an intelligence-driven defence approach, analysing external events for current and emerging cyber threats which allows the delivery of proactive counter measures; the Barclays Bank UK Group also completes cyber threat scenarios and incident playbooks to assess our security posture and business impacts and runs an internal adversarial capability which simulates hackers to proactively test controls and responses. The increased control environment will continue to enhance our security posture and our ability to better protect the organisation and our customers. Cyber-attacks however are increasingly sophisticated and there can be no assurance that the measures implemented will be fully effective to prevent or mitigate future attacks, the consequences of which could be significant to the Barclays Bank UK Group. Furthermore, such measures have resulted and will result in increased technology and other costs in connection with cyber security mitigation and compliance for the Barclays Bank UK Group.

For further information, refer to operational risk management section (pages 99-101).



# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

### Barclays Bank UK Group's risk management strategy

This section introduces Barclays Bank UK Group's approach to managing and identifying risks, and for fostering a strong risk culture.

#### Enterprise Risk Management Framework (ERMF)

The ERMF sets the strategic direction for risk management by defining standards, objectives and responsibilities for all areas of Barclays Group. It is approved by the Barclays PLC Board on recommendation of the Barclays Group Chief Risk Officer; it is then adopted by the Barclays Bank UK Group with modifications where needed. It supports senior management in effective risk management and developing a strong risk culture.

The ERMF sets out:

- Segregation of duties: The ERMF clearly defines a Three Lines of Defence model
- Principal risks faced by Barclays Bank UK Group. This list guides the organisation of the risk management function, and the identification, management and reporting of risks.
- Risk appetite requirements
- Roles and responsibilities for risk management: The ERMF sets out the accountabilities of the Barclays Bank UK Group CEO and other senior managers, as well as Barclays Bank UK PLC committees

The ERMF is complemented by Frameworks, Policies and Standards that are mainly aligned to individual Principal Risks:

- Frameworks cover the management processes for a collection of related activities and define the associated policies used to govern them.
- Policies set out principles and other core requirements for the activities of the firm. Policies describe "what" must be done.
- Standards set out the key control objectives that describe how the requirements set out in the Policy are met, and who needs to carry them out. Standards describe "how" controls should be undertaken.

#### Segregation of duties - the "Three Lines of Defence" model

The ERMF sets out a clear lines of defence model. All colleagues are responsible for understanding and managing risks within the context of their individual roles and responsibilities, as set out below:

- First line comprises all employees engaged in the revenue generating and client facing areas of the firm and all associated support functions, including Finance, Treasury, and Human Resources. First line is responsible for identifying and managing the risks they generate, establishing a control framework, and escalating risk events to Risk and Compliance.
- Second line is comprised of the Risk and Compliance functions. The role of the second line is to establish the limits, rules and constraints under which first line activities shall be performed, consistent with the Risk Appetite of the firm, and to monitor the performance of the first line against these limits and constraints. Note that limits for a number of first line activities, related to Operational Risk, will be set by the first line and overseen by the Chief Controls Office (described below). These will remain subject to supervision by the second line.
- Third line of defence is Internal Audit, who are responsible for providing independent assurance over the effectiveness of governance, risk management and control over current, systemic and evolving risks.
- The Legal function provides support to all areas of the bank and is not formally part of any of the three lines, however is subject to second line oversight.

#### Principal risks

The ERMF identifies eight principal risks (see table below) and sets out associated responsibilities and risk management standards.

Each of the Principal Risks is overseen by an accountable executive within the Barclays Group who is responsible for the Framework, Policies and Standards that detail the related requirements. Risk reports to executive and Board committees are clearly organised by Principal Risk.

Accountable executives, their delegates and teams frequently collaborate to address issues and drive initiatives that span more than one Principal Risk.

# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

Financial Principal Risks	Non-Financial Principal Risks
<ul style="list-style-type: none"> <li>▪ <b>Credit risk:</b> The risk of loss to the firm from the failure of clients, customers or counterparties, including sovereigns, to fully honour their obligations to the firm, including the whole and timely payment of principal, interest, collateral and other receivables.</li> <li>▪ <b>Market risk:</b> The risk of loss arising from potential adverse changes in the value of the firm's assets and liabilities from fluctuation in market variables including, but not limited to, interest rates, foreign exchange, equity prices, commodity prices, credit spreads, implied volatilities and asset correlations.</li> <li>▪ <b>Treasury and capital risk:</b> <ul style="list-style-type: none"> <li>– <b>Liquidity risk:</b> The risk that the firm is unable to meet its contractual or contingent obligations or that it does not have the appropriate amount, tenor and composition of funding and liquidity to support its assets.</li> <li>– <b>Capital risk:</b> The risk that the firm has an insufficient level or composition of capital to support its normal business activities and to meet its regulatory capital requirements under normal operating environments or stressed conditions (both actual and as defined for internal planning or regulatory testing purposes). This includes the risk from the firm's pension plans.</li> <li>– <b>Interest rate risk in the banking book:</b> The risk that the firm is exposed to capital or income volatility because of a mismatch between the interest rate exposures of its (non-traded) assets and liabilities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Operational risk:</b> The risk of loss to the firm from inadequate or failed processes or systems, human factors or due to external events (for example fraud) where the root cause is not due to credit or market risks.</li> <li>▪ <b>Model risk:</b> The risk of the potential adverse consequences from financial assessments or decisions based on incorrect or misused model outputs and reports.</li> <li>▪ <b>Conduct risk:</b> The risk of detriment to customers, clients, market integrity, effective competition or Barclays from the inappropriate supply of financial services, including instances of wilful or negligent misconduct.</li> <li>▪ <b>Reputation risk:</b> The risk that an action, transaction, investment or event will reduce trust in the firm's integrity and competence by clients, counterparties, investors, regulators, employees or the public.</li> <li>▪ <b>Legal risk:</b> The risk of loss or imposition of penalties, damages or fines from the failure of the firm to meet its legal obligations including regulatory or contractual requirements.</li> </ul>

### Risk appetite for the principal risks

Risk appetite is defined as the level of risk which Barclays Bank UK Group's businesses are prepared to accept in the conduct of their activities.

Risk appetite is approved by the Barclays PLC Board and disseminated across legal entities, including Barclays Bank UK Group. The Barclays Bank UK Group may choose to adopt a lower risk appetite than allocated to it by the Barclays Group. Total Barclays Group appetite and its allocation to Barclays Bank UK Group are supported by limits to control exposures and activities that have material concentration risk implications.

### Roles and responsibilities in the management of risk

Certain roles within the Barclays Bank UK Group carry specific responsibilities and accountabilities with respect to risk management and the ERMF. These include the following:

**Barclays Bank UK Group CEO:** accountable for leading the development and execution of the strategy in line with the Barclays Group's Purpose and Values, and within the Risk Appetite allocated to the Barclays Bank UK Group.

**Barclays Bank UK Group CRO:** leads the Barclays Bank UK Group Risk function. Responsibilities include;

- recommending to the Barclays Bank UK PLC Board the planned utilisation of the allocated Risk Appetite and its allocation to the main business lines
- has the power to identify and assign actions to the business in order to comply with the ERMF and remain within the risk appetite, suspend or stop decisions that carry unacceptable risks, and escalate unresolved concerns directly to the Group CEO, the Board or any of its committees; and
- reporting to the Board and its relevant committees, including the Barclays Bank UK PLC BRC, regulators and other stakeholders on Barclays Bank UK Group's risk positions, adherence to Risk Appetite and enterprise wide risks and control.

**Barclays Bank UK Group Chief Compliance Officer:** is accountable to the Barclays Group Chief Compliance Officer for the strategic and function leadership of the Barclays Bank UK Group Compliance Function. The main responsibilities are:

- to ensure that Barclays Bank UK Group's Conduct and Reputation Risks are effectively managed and escalated to the Barclays Bank UK Board where appropriate
- to apply global compliance standards, and to maintain robust breach reporting and whistleblowing processes, and
- similarly to the Barclays Bank UK Group CRO, to utilise their mandate to access any part of Barclays Bank UK Group and any information, and to bring to the attention of the Barclays Group organisation or the Barclays Bank UK PLC Board, as appropriate, any situation that is of concern from a Conduct or Reputation Risk management perspective that could materially violate the approved Risk Appetite guidelines.

**Barclays Bank UK Group General Counsel:** responsibilities are:

- operate the Legal Risk Framework within the Barclays Bank UK Group
- oversee the allocated Risk Appetite / Tolerance for Legal Risk.

### Senior Managers Regime

A number of Members of the Board, the majority of the Barclays Group Executive Committee and a limited number of specified senior individuals are also subject to additional rules included within the Senior Managers Regime (SMR), which clarifies their accountability and responsibilities. Those designated with a Senior Manager Function under the SMR are held to four specific rules of conduct in which they must:

- take reasonable steps to establish that the business of the Barclays Group for which they are responsible is controlled effectively
- take reasonable steps to establish that the business of the Barclays Group for which they are responsible complies with relevant regulatory requirements and standards of the regulatory system
- take reasonable steps to make certain that any delegation of their responsibilities is to an appropriate individual and that they oversee the discharge of the delegated responsibilities effectively
- disclose appropriately any information to the FCA or PRA, of which they would reasonably expect notice.

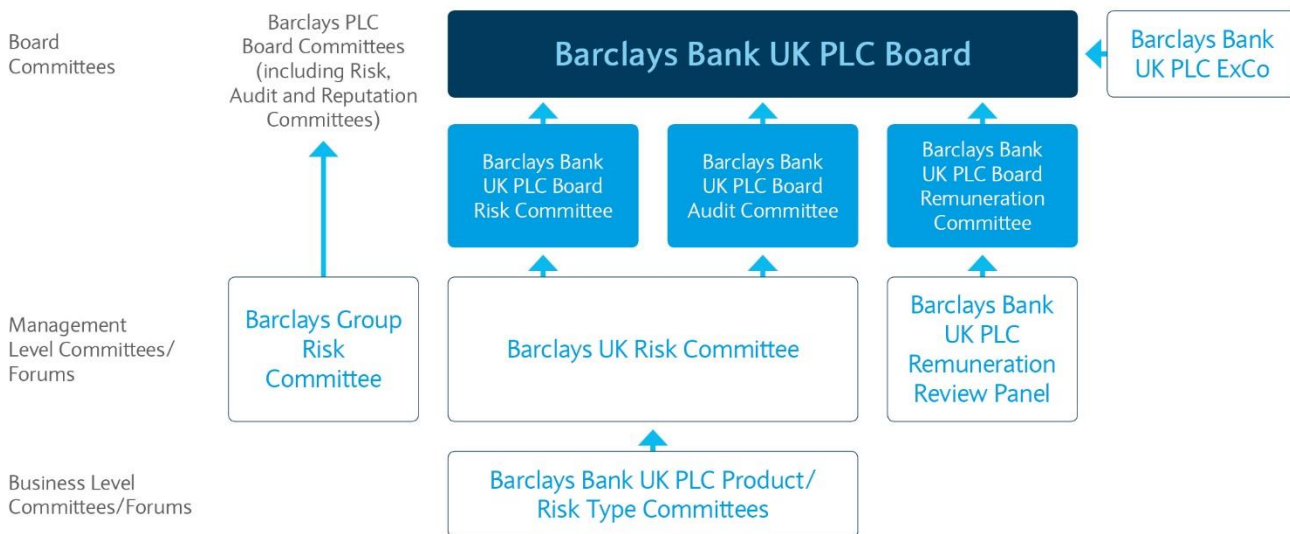
# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

### Risk committees

Barclays Bank UK Group Product/Risk Type Committees consider risk matters relevant to their business, and escalate as required to the Barclays UK Risk Committee, whose Chairman, in turn, escalates to the Barclays Group Risk Committee, Barclays Bank UK PLC Board Committees and the Barclays Bank UK PLC Board.

Risk Management



There are two Board-level forums which oversee the application of the ERMF and review and monitor risk across the Barclays Bank UK Group. These are: the Barclays Bank UK PLC Board Risk Committee and the Barclays Bank UK PLC Board Audit Committee. Additionally, the Barclays Bank UK PLC Board Remuneration Committee oversees pay practices focusing on aligning pay to sustainable performance. The Barclays Bank UK PLC Board receives regular information on the risk profile of the Barclays Bank UK Group.

- **The Barclays Bank UK PLC Board:** One of the Board's responsibilities is the approval of risk appetite allocated to Barclays Bank UK Group. Risk appetite is approved by the Barclays PLC Board and disseminated across legal entities, including the Barclays Bank UK Group. The Barclays Bank UK Group may choose to adopt a lower risk appetite than allocated to it by the Barclays Group. The Barclays Bank UK PLC Board is also responsible for the adoption of the ERMF.
- **The Barclays Bank UK PLC Board Risk Committee (BRC):** monitors the risk profile against the agreed appetite. Where actual performance differs from expectations, the actions taken by management are reviewed to ascertain that the Committee is comfortable with them. The BRC also reviews certain key risk methodologies, the effectiveness of risk management, and Barclays Bank UK Group's risk profile, including the material issues affecting each business portfolio and forward risk trends. The Committee also commissions in-depth analyses of significant risk topics, which are presented by the Barclays Bank UK Group CRO or senior risk managers in the business
- **The Barclays Bank UK PLC Board Audit Committee (BAC):** receives regular reports on the effectiveness of internal control systems, on material control issues of significance, and on accounting judgements (including impairment). It also receives a half-yearly review of the adequacy of impairment allowances, which it reviews relative to the risk inherent in the portfolios, the business environment, and Barclays Bank UK Group's policies and methodologies
- **The Barclays Bank UK PLC Board Remuneration Committee (RemCo):** receives a report on risk management performance and risk profile, and proposals on ex-ante and ex-post risk adjustments to variable remuneration. These inputs are considered in the setting of performance incentives.

### Role of Barclays Bank UK Group Risk Management Processes and Forums in Barclays Bank UK Group

The Barclays Bank UK Group Risk teams and Board Committees conduct risk management activity, and oversight, in respect of Barclays Bank UK Group:

- Barclays Group Board allocates a portion of the overall risk appetite to Barclays Bank UK Group;
- Certain Barclays Group Committees and executives review, and take decisions on, matters, events or transactions originating in Barclays Bank UK Group that are relevant to the risk profile of the Barclays Group
- Barclays Group-wide risk policies are owned by the Barclays Group Risk Function teams, and adopted by Barclays Bank UK Group. Entity-specific agenda are agreed with the Barclays Group where local regulations would otherwise preclude adoption, or to clarify or emphasise particular aspects.

### Frameworks, Policies and Standards

Frameworks, policies and standards set out the governance around Barclays' activities:

- Frameworks cover the management processes for a collection of related activities and define the associated policies used to govern them
- Policies set out control objectives, principles and other core requirements for the activities of the Barclays Group. Policies describe "what" must be done
- Standards set out the key controls that must be followed for the objectives set out in the Policy to be met, and who needs to carry them out. Standards describe "how" controls should be undertaken.

Frameworks, Policies and Standards are owned by the area responsible for performing the described activity.

# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

The Barclays Group CRO is accountable for the development and implementation of frameworks, policies and associated standards for each of the Financial Principal Risks, Operational Risk and Model Risk. These must be subject to limits, monitored, reported on and escalated as required. The Barclays Group Chief Compliance Officer is likewise accountable for Conduct Risk and Reputation Risk, and the Barclays Group General Counsel for Legal Risk. The Barclays Group CRO and Barclays Group Chief Compliance Officer have the right to require amendments to any Frameworks, Policies or Standards in the Barclays Group, for any reason, including inconsistencies or contradictions among them.

Frameworks, Policies and Standards are subject to minimum annual review, and challenge by the Risk and/or Compliance functions, unless explicitly waived by the relevant heads of those functions. Principal Risk Frameworks are subject to approval by relevant committees of the Board.

### Assurance

Assurance is undertaken to assess the control environment. The Controls Assurance Standard defines the requirements for Controls Assurance and Controls Testing.

In addition, the Risk function carry out conformance reviews to assess the implementation of, and adherence to, principal risk framework and component policies. This activity is undertaken independently of the business

Internal Audit is responsible for the independent review of risk management and the control environment. Its objective is to provide reliable, valued and timely assurance to the Board and executive management over the effectiveness of controls, mitigating current and evolving material risks and thus enhancing the control culture within the Barclays Bank UK Group. The Board Audit Committee reviews and approves Internal Audit's plans and resources, and evaluates the effectiveness of Internal Audit. An assessment by independent external advisers is also carried out periodically.

### Effectiveness of risk management arrangements

The embedding of the ERMF is monitored by executive and board committees as described above. The ERMF and its component Principal Risks are subject to control testing assurance reviews to confirm its effectiveness or identify issues to be mitigated. Management and the Board are satisfied that the design of the ERMF and its components are appropriate given the risk profile of the Barclays Bank UK Group.

### Learning from our mistakes

Learning from mistakes is central to Barclays' culture and values, demonstrating a commitment to excellence, service and stewardship and taking accountability for failure as well as success. The Barclays Bank UK Group seeks to learn lessons on a continuous basis to support achievement of strategic objectives, increase operational excellence and to meet commitments to stakeholders, including colleagues, customers, shareholders and regulators. Barclays has implemented a Barclays Bank UK Group Lessons Learned process, setting out requirements for the completion of Lessons Learned assessments in response to internal and external risk events. The approach is aligned to the Three Lines of Defence model (see page 57), with businesses and functions accountable for undertaking Lessons Learned Assessments; the Second Line providing oversight and challenge; and independent review by Internal Audit.

Core components of the Lessons Learned approach include:

- Defined triggers for when Lessons Learned Assessments must be completed
- Requirements and guidance for the completion of root cause analysis to identify the causes of risk events impacting the Barclays Bank UK Group
- Standardised Templates to report conclusions consistently to relevant management fora and committees

Use of a central system to record completed Lessons Learned Assessments and to facilitate sharing across the Barclays Bank UK Group.

### Barclays' risk culture

Risk culture can be defined as the norms, attitudes and behaviours related to risk awareness, risk taking and risk management. This is reflected in how the Barclays Bank UK Group identifies, escalates and manages risk matters.

The Barclays Bank UK Group is committed to maintaining a robust risk culture in which:

- management expect, model and reward the right behaviours from a risk and control perspective;
- colleagues identify, manage and escalate risk and control matters, and meet their responsibilities around risk management.

Specifically, all employees regardless of their positions, functions or locations must play their part in the Barclays Bank UK Group's risk management. Employees are required to be familiar with risk management policies which are relevant to their responsibilities, know how to escalate actual or potential risk issues, and have a role-appropriate level of awareness of the risk management process as defined by the ERMF.

### Our Code of Conduct – the Barclays Way

Globally, all colleagues must attest to the "Barclays Way", our Code of Conduct, and comply with all frameworks, policies and standards applicable to their roles. The Code of Conduct outlines the purpose and values which govern our "Barclays Way" of working across our business globally. It constitutes a reference point covering the aspects of colleagues' working relationships, with other Barclays employees, customers and clients, governments and regulators, business partners, suppliers, competitors and the broader community.

# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

### Barclays Bank UK Group risk management tools

To support Barclays Bank UK Group's management of risks, the Barclays Bank UK PLC Board uses risk appetite, mandate and scale, and stress testing as key inputs in the annual planning cycle, including setting of its strategy. The following describes in further detail the risk management tools used as part of this process.

#### Risk appetite

Risk appetite is defined as the level of risk which Barclays Bank UK Group is prepared to accept in the conduct of its activities.

Risk appetite sets the 'tone from the top' and provides a basis for ongoing dialogue between management and Board with respect to Barclays Bank UK Group's current and evolving risk profile and enables strategic and financial decisions to be made on an informed basis. Thus the risk appetite setting process aims to consider the material risks Barclays Bank UK Group is exposed to under its business plans.

The risk appetite of Barclays Bank UK Group aims to:

- Specify the level of risk we are willing to take to enable specific risk taking activities.
- Consider all Principal Risks individually and, where appropriate, in aggregate.
- Consistently communicate the acceptable level of risk for different risk types.

Risk appetite is approved by the Board and must be formally reviewed at least annually in conjunction with the Medium Term Planning (MTP) process.

Risk appetite is formally expressed by the Barclays Bank UK PLC Board as the acceptable level of deterioration in a set of key financial parameters under a severe but plausible stress scenario defined as the Adverse stress test scenario. For 2020 the key financial parameters are listed below.

Measure relevant to strategy and risk	Link between strategy and risk profile
Profit after tax	Fundamental performance of Barclays Bank UK Group and underpins its capacity to make capital distributions to Barclays Group.
Common Equity Tier 1 (CET1)	Monitors capital adequacy in relation to capital plan, targets and regulatory hurdle rates.
Liquidity Risk Appetite	Monitors liquidity of the bank and its ability to meet financial obligations in a stress.

Based on the specified risk appetite, Barclays Bank UK Group develops both stress loss and mandate & scale limits to control specific activities.

#### Stress loss limits

Stress loss limits are derived from the results of the Adverse stress test scenario. Limits are a reflection of the losses absorbed by the stressed capital plans within risk appetite and provide a crucial link between the strategic planning process and risk appetite. Stress loss limits are conservatively assumed to be additive but in practice stresses may not happen at the same time. Risk management may over-allocate stress loss limits where they deem it unlikely all businesses will require full limit utilisation at the same time. Aggregate utilisation across all risk types is monitored against both the aggregate of stress loss limits and losses absorbed by the stressed capital plan. It is the role of Risk to manage the over-allocation within capital constraints.

#### Mandate and scale

Mandate and scale is a risk management approach that seeks to formally review and control business activities to make sure that they are within mandate (i.e. aligned with expectations), and are of an appropriate scale (relative to the risk and reward of the underlying activities) based on an appropriately detailed system of limits. The use of limits and triggers helps mitigate the risk of concentrations that could be out of line with expectations, and which may lead to unexpected losses of a scale detrimental to the stability of the relevant business line or Barclays Bank UK Group. There are, for example, individual limits for High Loan to Value and Buy to Let mortgages, and limits on the concentration of lower credit quality unsecured products, for example the access product in Barclaycard UK.

The mandate and scale framework is used to:

- limit concentration risk
- keep business activities within Barclays Bank UK Group and individual business mandate
- maintain activities at an appropriate scale relative to the underlying risk and reward
- confirm that risk-taking is supported by appropriate expertise and capabilities and take corrective actions otherwise.

The most material stress loss and mandate and scale limits are designated as A-level (Barclays PLC Board level) and B-Level (Barclays Group level). All B-level and lower limits are set by the Risk function. Barclays Bank UK Group limits are approved by the Barclays Bank UK Group CRO and are reportable to the Barclays UK risk committee. Unapproved excesses of limits may result in performance management and disciplinary consequences. All limits are subject to escalation and governance requirements.

Limits reflect the nature of the risk being managed and controlled and are measured by total financing limits, LGD, stress loss or other metrics as appropriate. There is explicit identification of the exposures that are captured by limits and any material exclusion must be agreed. Limits are reviewed at least annually. The factors taken into consideration when setting the limit include:

- Barclays Group and Barclays Bank UK Group Risk Appetite
- current exposure/MTP forecasts
- risk return considerations
- senior risk management judgement.

#### Internal stress testing

Barclays Bank UK Group-wide stress tests are integrated within the MTP process and annual review of risk appetite, forming part of a Barclays Group-wide approach to stress testing. They aim to check that Barclays Bank UK Group's financial position and risk profile provide sufficient resilience to withstand the impact of severe economic stress, allowing Barclays to make changes to plans as necessary. Barclays Bank UK Group-

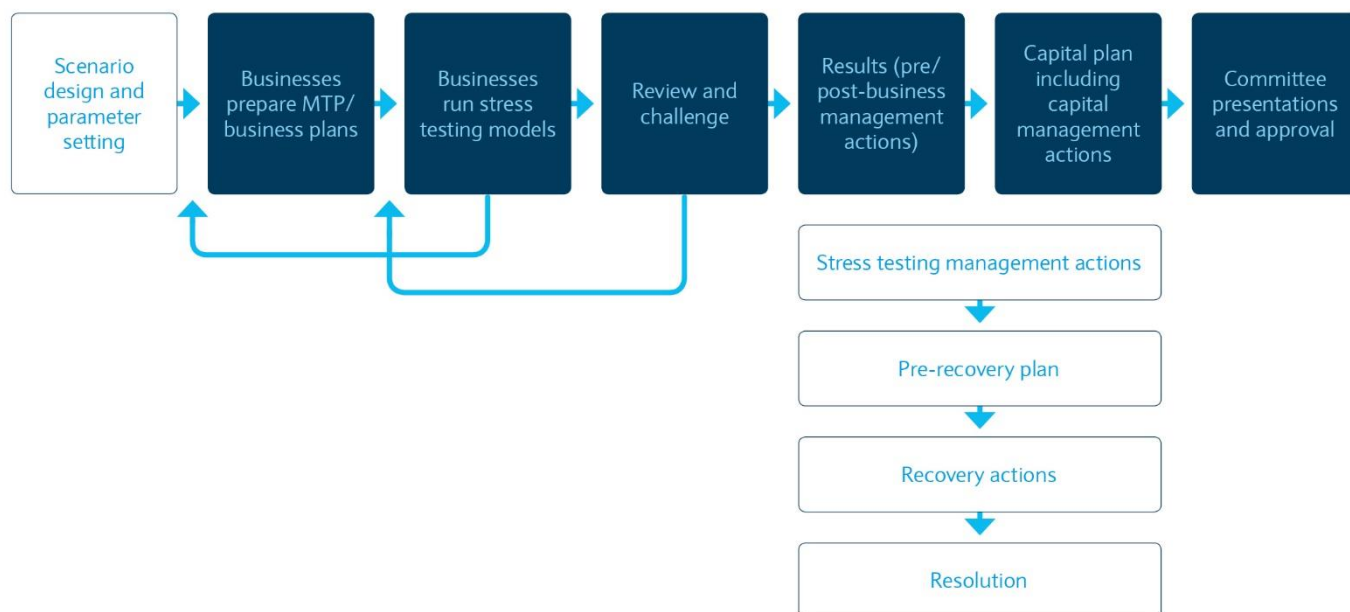


# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

wide stress testing process is supported by a Capital Stress Testing Standard which sets out the minimum control requirements and defines clear roles and responsibilities across businesses and central functions. The results also feed into our internal capital adequacy assessment process (ICAAP).

The following diagram outlines the key steps in Barclays Group-wide stress testing process, which are described below.



Barclays Group-wide stress testing process begins with a detailed scenario setting process, with the GRC and BRC agreeing the range of scenarios to be tested. The scenarios are designed to be severe but plausible, and relevant to the business. A wide range of macroeconomic parameters are defined (such as GDP, unemployment, house prices, FX and interest rates), which allows the impact of the scenarios across the wide range of products and portfolios to be assessed across Barclays Group.

Businesses prepare detailed MTP business plans which form the baseline for the stress test assessment. The stress test process aims to support this level of complexity, using bottom-up analysis across all of our businesses including both on- and off-balance sheet positions, and combines running statistical models with expert judgement. An overview of the stress testing approach by Principal Risk is provided in the table below. As part of their stress test assessments, businesses are also required to identify potential management actions that could be taken to mitigate the impact of stress and document these within their results.

The governance process in place includes a detailed review of stress testing methodology, assumptions, judgements, results and management actions within each business (including sign-off by business CROs and CFOs) and by central functions.

The relevant businesses stress test results are consolidated to form a Barclays Bank UK Group view which is used to assess the stress impact on both Barclays Bank UK Group's and Barclays Group's capital plans both of which consider capital management actions such as reducing dividends or redeeming certain capital instruments. Barclays Bank UK Group also maintains recovery plans which take into consideration actions to facilitate recovery from severe stress or an orderly resolution. These actions are additional to those included in Barclays Bank UK Group-wide stress testing results.

The overall stress testing results are reviewed and signed off by the Barclays Bank UK PLC Board, following review by the Barclays Bank UK PLC Board Risk Committee while also feeding into the Barclays Group level reviews with the Stress Testing Steering Committee, the Barclays Group Risk Committee and the Barclays PLC Board Risk Committee.

# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

### Summary of methodologies for Barclays Bank UK Group-wide stress testing by risk type

Principal Risk	Stress testing approach
Credit risk	<ul style="list-style-type: none"> <li>Credit risk impairment: For retail portfolios businesses use statistical models to establish a relationship between IFRS9 impairment loss levels and key macroeconomic parameters such as GDP, inflation and unemployment, incorporating credit quality migration analysis to estimate stressed levels. In addition, house price reductions (for mortgages), increased customer drawdowns (for revolving facilities) and higher interest rates impacting customer affordability lead to higher losses which also contribute to increased impairment levels. For wholesale portfolios the stress shocks on credit risk drivers (PDs, LGDs and EADs) are primarily calibrated using historical and expected relationships with key macro-economic parameters.</li> </ul>
	<ul style="list-style-type: none"> <li>Counterparty credit risk losses: The scenarios include market risk shocks that are applied to determine the market value under stress of contracts that give rise to Counterparty Credit Risk (CCR). Counterparty losses, including from changes to the Credit Valuation Adjustment and from defaults, are modelled based on the impact of these shocks as well as using stressed credit risk drivers (PDs and LGDs). The same approach is used to stress the market value of assets held as available for sale or at fair value in the banking book.</li> <li>Credit risk weighted assets: The impact of the scenarios is calculated via a combination of business volumes and using similar factors to impairment drivers above, with consideration of the portfolio-specific requirements for the calculation of regulatory capital.</li> </ul>
Treasury and capital risk	<ul style="list-style-type: none"> <li>The analysis of treasury and capital risk also contributes to the estimate of stressed income and costs: <ul style="list-style-type: none"> <li>Stress impact on non-interest income is primarily driven by lower projected business volumes and hence lower income from fees and commissions</li> <li>Impact on net interest income is driven by stressed margins, which depend on the level of interest rates under stress as well as funding costs, and on stressed balance sheet volumes. This can be partly mitigated by management actions that may include repricing of variable rate products, taking into account interbank lending rates under stress</li> <li>The impact on costs is mainly driven by business volumes and exchange rates with management actions to partly offset profit reductions (due to impairment increases and decreases in income) such as headcount reductions and lower performance costs.</li> </ul> </li> <li>Capital Risk: <p>Capital risk is assessed by taking all modelled risk impacts as part of the stress test (as listed above) into consideration when assessing Barclays Bank UK Group's ability to withstand a severe stress. The stressed results are considered against internally agreed risk appetite levels but also regulatory minima and perceived market expectations. The MTP can only be agreed by the Board if this is within the agreed risk appetite levels under stress.</p> </li> </ul>
	<ul style="list-style-type: none"> <li>Liquidity risk is assessed by the internal liquidity risk metric (LRA), which analyses specific liquidity risk drivers such as wholesale funding and contingent funding needs based on the below scenarios: <ul style="list-style-type: none"> <li>The Barclays Bank UK Group idiosyncratic liquidity scenario: the Barclays Bank UK Group faces a loss of market confidence while the market overall is not impacted</li> <li>Market wide liquidity stress scenario: confidence market-wide stress leading to increased market volatility and loss of confidence</li> <li>Combined liquidity stress scenario: A simultaneous Barclays Bank UK Group idiosyncratic and market liquidity stress scenario</li> <li>Liquidity Coverage Ratio: Regulatory prescribed 30-day liquidity metric</li> </ul> </li> <li>Interest Rate Risk in the Banking Book (IRRBB): <ul style="list-style-type: none"> <li>Risk assessment for interest rate risk in the banking book is driven by the economic risk of the underlying positions but also considers the accounting treatment:</li> <li>Earnings based measures are used to assess risk to net interest income from positions in customer banking books, hedging portfolios (held to mitigate those risks), and Treasury investment and funding activities.</li> <li>Value based measures are used to assess risk to the fair value of assets held as part of investments in the liquid asset portfolio and associated risk management portfolios.</li> </ul> <p>Risk under stress is assessed by considering:</p> <ul style="list-style-type: none"> <li>The impact on net interest income resulting from stressed product margins and volumes, which are dependent on the level of interest rates and funding costs under stress conditions. This can be partly mitigated by management actions which may include repricing of variable rate products taking into account interbank lending rates under stress.</li> <li>Securities in the buffer are subject to several market risk stresses designed to estimate potential losses in various scenarios. This includes, but is not limited to, an annual internal stress test, regulatory stress tests as well as various ad hoc exploratory exercises</li> </ul> </li> </ul>

# Barclays' approach to managing risks

## Risk management strategy, governance and risk culture

Operational risk	<ul style="list-style-type: none"> <li>Operational risk loss projections include the effect of the stressed macroeconomic scenario as well as the impact of forward-looking idiosyncratic risk events under stress. Operational risk is also part of the reverse stress testing framework through scenario assessments of such idiosyncratic events.</li> </ul>
Model risk	<ul style="list-style-type: none"> <li>IVU reviews the models and assumptions used in the MTP and stress test and may request the application of overlays to address model deficiencies.</li> </ul>
Conduct risk	<ul style="list-style-type: none"> <li>Stress projections of future losses for conduct risk matters are estimated by exercising expert judgment in accordance with the methodology provided by regulators (EBA, PRA).</li> </ul>
Reputation risk	<ul style="list-style-type: none"> <li>Reputation risk is not quantified or stressed.</li> </ul>
Legal risk	<ul style="list-style-type: none"> <li>Legal risk is not quantified or stressed.</li> </ul>

In 2019, the internal Barclays Group-wide stress testing exercise, of which the Barclays Bank UK Group was a participant, ran as part of the MTP process, assessing the impact of an "Adverse" global recession scenario. This was used for risk appetite setting process.

The Barclays Group-wide stress testing framework also includes reverse stress testing techniques, which aim to identify the circumstances under which Barclays Bank UK Group's business model would no longer be viable, leading to a significant change in business strategy and to the identification of appropriate mitigating actions. Examples include extreme macroeconomic downturn ('severely adverse') scenarios, or specific idiosyncratic events, covering both operational risk and capital/liquidity events but also the implication of a failure of Barclays Group non-ring fenced bank.

Reverse stress testing is used to help support ongoing risk management and is an input to our Recovery Planning process.

### Business and risk type specific stress tests

Stress testing techniques at portfolio and product level are also used to support risk management. For example, portfolio management in the UK cards business employs stressed assumptions of loss rates to determine profitability hurdles for new accounts. In the mortgage business, affordability thresholds incorporate stressed estimates of interest rates. Stress testing is also conducted on positions in particular asset classes, including interest rates and credit.

### Regulatory stress testing

In addition to running internal Barclays Group-wide stress tests, Barclays Group also runs regulatory stress tests for which Barclays Bank UK Group is a sub-component. In 2019, the PRA ran its annual concurrent stress testing of the major UK banks, which was based on the Bank of England (BoE) stress scenario. The results of the stress test were published in December 2019, and support the BoE's aim for increased transparency as part of its stress testing framework.

Barclays Bank UK Group also feeds into Barclays Group stress testing submissions to non-UK regulators such as the European Banking Authority (EBA). For 2019 the results of the EBA stress test were published in November 2019.

### Risk management in the setting of strategy

The risk appetite and (internal) stress testing processes described above form the basis of the risk review of the Medium Term Plan (MTP), performed annually. The MTP embeds Barclays Bank UK Group's objectives into detailed business plans taking into account the likely business and macroeconomic environment. The strategy is informed by the risk review process, which includes reviewing Barclays Bank UK Group's risk profile and setting of risk appetite.

- The risk review process includes a review of the proposed risk appetite by the business, including assessment of business plans under stress which is used to inform the MTP.
- If the business' plans entail too high a level of risk, management can challenge them. This assessment is based on a comparison of the businesses' own risk appetite assessment reflected in their business plans ('bottom-up' risk appetite) with the central risk team's view ('top-down' risk appetite) based on the financial constraints set by the Board for Barclays Bank UK Group.
- Businesses may be asked to update their business plans until the bottom-up risk appetite is within top-down appetite. There is also a detailed review of the stressed estimates and the methodology used to translate the economic scenario to these stressed estimates, as well as the management actions included in the businesses' results to verify that these are appropriate and realistic in a stressed environment.
- Risk review meetings are held with each business, where they present their business plans to Barclays Bank UK Group's CRO and CFO. The findings from the risk reviews are discussed, including the risk appetite proposals and stress testing results. Businesses may be required to change their business plans as a result of these meetings.
- Interim internal capital adequacy assessments inform the capital planning process and are reviewed during the meetings. These assessments are refreshed based on year-end positions and reflected in the ICAAP.

The BRC has overall responsibility for reviewing Barclays Bank UK Group's risk profile and making appropriate recommendations to the Board. The Board is ultimately responsible for approving the MTP and Barclays Bank UK Group's risk appetite. The risk appetite process allows senior management and the Board to understand the MTP's sensitivities by risk type, and includes a set of limits to help the Barclays Bank UK Group stay within its risk appetite, as described above.



# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### Credit risk (audited)

The risk of loss to the firm from the failure of clients, customers or counterparties, including sovereigns, to fully honour their obligations to the firm, including the whole and timely payment of principal, interest, collateral and other receivables.

### Overview

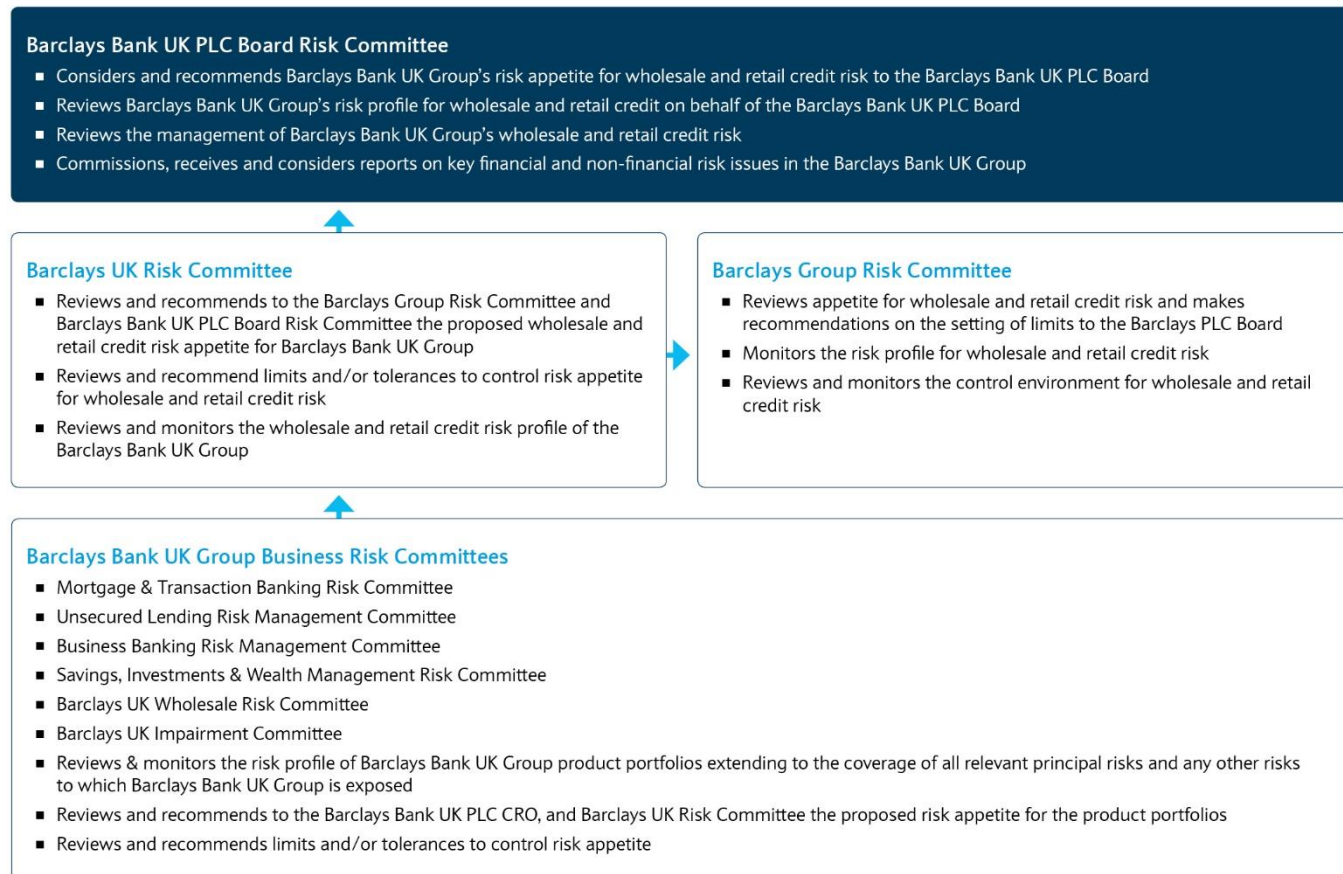
The credit risk that Barclays Bank UK Group faces arises from retail and wholesale loans and advances together with the counterparty credit risk arising from derivative contracts with market counterparties; trading activities, including: debt securities, settlement balances with market counterparties, FVOCI assets and reverse repurchase loans. Wholesale lending in Barclays Bank UK Group includes Business Banking, ESHLA and Wealth UK portfolios.

Credit risk management objectives are to:

- maintain a framework of controls to oversee credit risk;
- identify, assess and measure credit risk clearly and accurately across Barclays Bank UK Group and within each separate business, from the level of individual facilities up to the total portfolio;
- control and plan credit risk taking in line with external stakeholder expectations and avoiding undesirable concentrations;
- monitor credit risk and adherence to agreed controls.

### Organisation and structure

Wholesale and retail portfolios are managed separately to reflect the differing nature of the assets; wholesale balances tend to be larger and are managed on an individual basis, while retail balances are greater in number but lesser in value and are, therefore, managed in aggregated segments.



# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### Roles and responsibilities

The first line of defence has primary responsibility for managing credit risk within the risk appetite and limits set by the Risk function, supported by a defined set of policies, standards and controls. In Barclays Bank UK Group, business risk committees (attended by the first line) monitor and review the credit risk profile of each business unit where the most material issues are escalated to the Retail Credit Risk Management Committee, Wholesale Credit Risk Management Committee and Barclays UK Risk Committee.

The responsibilities of the credit risk management teams in the businesses, the sanctioning team and other shared services include: sanctioning new credit agreements (principally wholesale); setting strategies for approval of transactions (principally retail); setting risk appetite; monitoring risk against limits and other parameters; maintaining robust processes, data gathering, quality, storage and reporting methods for effective credit risk management; performing effective turnaround and workout scenarios for wholesale portfolios via dedicated restructuring and recoveries teams; maintaining robust collections and recovery processes/units for retail portfolios; and review and validation of credit risk measurement models. The credit risk management teams in Barclays Bank UK Group are accountable to the Barclays Bank UK Group CRO who, in turn, reports to the Barclays Group CRO.

For the wholesale portfolios, credit risk managers are organised in sanctioning teams by client portfolio. In wholesale portfolios, credit risk approval is undertaken by experienced credit risk professionals operating within a clearly defined delegated authority framework, with only the most senior credit officers entrusted with the higher levels of delegated authority. The largest credit exposures require the support of the Barclays Bank UK PLC Senior Credit Officer. For exposures in excess of the Barclays Bank UK PLC Senior Credit Officer's authority, approval by the Barclays Bank UK PLC CRO is also required. Where exposures are also of Barclays Group level significance, the Barclays Group Credit Risk Committee, attended by the Barclays Bank UK PLC Senior Credit Officer, provides a formal mechanism for the Barclays Group Senior Credit Officer to exercise the highest level of credit authority.

The role of the Central Risk function is to provide Barclays Group-wide direction, oversight and challenge of credit risk taking. Central Risk sets the Credit Risk Control Framework, which provides the structure within which credit risk is managed, together with supporting credit risk policies and standards.

### Reporting

The Barclays Bank UK Group dedicates considerable resources to gaining a clear and accurate understanding of credit risk across the business and maintaining that its balance sheet correctly reflects the value of the assets in accordance with applicable accounting principles. This process can be summarised in five broad stages:

- measuring exposures and concentrations
- monitoring performance and asset quality
- monitoring for weaknesses in portfolios
- raising allowances for impairment and other credit provisions
- returning assets to a performing status or writing off assets when the whole or part of a debt is considered irrecoverable.

#### Measuring exposures and concentrations

Loans and advances to customers provide the principal source of credit risk to the Barclays Bank UK Group although it is also exposed to other forms of credit risk through, for example, loans and advances to banks, loan commitments and debt securities. Risk management policies and processes are designed to identify and analyse risk, to set appropriate risk appetite, limits and controls, and to monitor the risks and adherence to limits by means of reliable and timely data.

One area of particular review is concentration risk. A concentration of credit risk exists when a number of counterparties or customers are engaged in similar activities or geographies, and have similar economic characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic and other conditions. As a result, the Barclays Bank UK Group constantly reviews its concentration in a number of areas including, for example, geography, maturity and industry.

Mandate and scale limits are used to maintain concentrations at appropriate levels, which are aligned with the businesses' stated risk appetite. Limits are typically based on the nature of the lending and the amount of the portfolio meeting certain standards of underwriting criteria. Diversification, to reduce concentration risk, is achieved through setting maximum exposure limits to individual counterparties' exposures. Excesses are reported to the BRC.

#### Monitoring performance and asset quality

Trends in the quality of Barclays Bank UK Group's loan portfolio are monitored in a number of ways including tracking loan loss rate and coverage ratios.

#### Loan loss rate

The loan loss rate (LLR) provides a way of consistently monitoring trends in loan portfolio quality at Barclays Bank UK Group, business and product levels. The LLR represents the annualised impairment charges on loans and advances to customers and other credit provisions as a percentage of the total, period-end loans and advances to customers, gross of impairment allowances. Details of the LLR for the current period may be found in the Credit Risk Performance section on page 159 of the Barclays PLC Annual Report 2019.

#### Loans and advances total impairment coverage

Total coverage ratios will vary according to the type of product. The increase in 2017 reflects the transition to the new accounting standard IFRS9. Overall, coverage ratios would therefore be expected to remain fairly steady over a defined period of time but in principle, a number of factors may affect Barclays Bank UK Group's overall coverage ratios, including:

- **The mix of products:** coverage ratios will tend to be lower when there is a high proportion of secured retail and wholesale balances. This is due to the fact that the recovery outlook on these types of exposures is typically higher than retail unsecured products, with the result that they will have lower impairment requirements;
- **The stage in the economic cycle:** coverage ratios will tend to be lower in the earlier stages of deterioration in credit conditions. At this stage, retail delinquent balances will be predominantly in the early delinquency cycles and wholesale names will have only recently shown signs of deterioration;

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

- **Staging:** coverage ratios will tend to be higher when there is a high proportion of balances that have met the criteria for significant increase in credit risk with associated expected credit losses (ECL) moving from a 12-month to a lifetime assessment; and
- **Write-off policies:** the speed with which defaulted assets are written off will affect coverage ratios. The more quickly assets are written off, the lower the ratios will be, since stock with 100% coverage will tend to roll out more quickly.

Details of the coverage ratios for the current period can be found in the analysis of loans and advances and impairment section at page 50 of the Barclays Bank UK PLC Annual Report 2019.

### Monitoring weaknesses in portfolios

While the basic principles for monitoring weaknesses in wholesale and retail exposures are broadly similar, they reflect the differing nature of the assets. As a matter of policy, all facilities granted to wholesale counterparties are subject to a review on, at least, an annual basis, even when they are performing satisfactorily. Retail exposures are monitored to identify customers exhibiting signs of potential financial difficulty. Identified customers are included in the High Risk Account Management (HRAM) population. Businesses have a contact strategy for their HRAM populations and they are excluded from credit expansion activities and, where appropriate, also considered for credit reduction activities or other mitigating actions.

### Wholesale portfolios<sup>1</sup>

Within the wholesale portfolios, the Basel definitions of default are used as default indicators. A default is deemed to have occurred with regard to a particular obligor if one or both of the following applies:

- the obligor is considered unlikely to pay its credit obligations to the Barclays Bank UK Group in full without recourse to actions such as the realisation of collateral,
- the obligor is 90 days or more past due on any material credit obligation to the Barclays Bank UK Group.

Examples of unlikelihood to pay include:

- The Barclays Bank UK Group puts the credit obligation on a non-accrued status;
- The Barclays Bank UK Group makes a charge-off or account specific identified impairment resulting from a significant perceived decline in credit quality;
- The Barclays Bank UK Group sells the credit obligation at a material credit-related economic loss;
- The Barclays Bank UK Group triggers a petition for obligor's bankruptcy or similar order;
- The Barclays Bank UK Group becomes aware of the obligor having sought or having been placed in bankruptcy or similar protection where this would avoid or delay repayment of the credit obligation to the Group;
- The Barclays Bank UK Group becomes aware of an acceleration of an obligation by a firm;

Wholesale accounts that are deemed to contain heightened levels of risk are recorded on Watch Lists (WL) comprising four categories graded in line with the perceived severity of the risk attached to the lending, and its probability of default. Examples of heightened levels of risk may include, for example:

- a material reduction in profits;
- a material reduction in the value of collateral held;
- a decline in net tangible assets in circumstances which are not satisfactorily explained;
- periodic waiver requests or changes to the terms of the credit agreement over an extended period of time.

These lists are updated monthly and circulated to the relevant risk control points. Once an account has been placed on WL, the exposure is monitored and, where appropriate, exposure reductions are effected. While all counterparties, regardless of financial health, are subject to a full review of all facilities on at least an annual basis, more frequent interim reviews may be undertaken should circumstances dictate. The Business Support team deal with defaulted counterparties in higher levels of WL and default. Their priority is working intensively with the counterparty to help them to return to financial health or, in the cases of insolvency, obtain the orderly and timely recovery of impaired debts in order to maximise shareholder value. Where a counterparty's financial health gives grounds for concern, it is immediately placed into the appropriate category.

### Retail portfolios

Within the retail portfolios, which tend to comprise homogeneous assets, statistical techniques more readily allow potential credit weaknesses to be monitored on a portfolio basis. Retail accounts can be classified according to specified categories of arrears status (or 30-day cycle), which reflects the level of contractual payments which are overdue. An outstanding balance is deemed to be delinquent when it is one day or "one penny" down.

Once a loan has passed through a prescribed number of cycles, normally six, it will be charged-off and enter recovery status. Charge-off refers to the point in time when collections activity changes from the collection of arrears to the recovery of the full balance. In most cases, charge-off will result in the account moving to a legal recovery function or debt sale. This will typically occur after an account has been treated by a collections function. However, in certain cases, an account may be charged off directly from a performing status, such as in the case of insolvency or death.

The timings of the charge-off points are established based on the type of loan. For the majority of products, the standard period for charging off accounts is more than six contractual payments in arrears (greater than 180 days past due date of contractual obligation). Early charge-off points are prescribed for unsecured assets. For example, in cases of customer bankruptcy or insolvency, associated accounts are charged off within 60 days of notification.

### Returning assets to a performing status

#### Wholesale portfolios

In wholesale portfolios, an account may only be returned to a performing status when it ceases to have any actual or perceived financial stress and no longer meets any of the WL criteria, or once facilities have been fully repaid or cancelled. In Barclays Bank UK Group, the decision to return an account to performing status may only be made by the Credit Sanctioning team or Business Support team.

<sup>1</sup> Includes certain Business Banking facilities which are recorded as retail for management purposes.

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### Retail portfolios

Retail forbearance exposures are classified as either Performing Forbearance (PF) or Non-Performing Forbearance (NPF) at the point the programme is agreed.

An up-to-date (i.e. not in arrears in relation to the agreed Forbearance programme) NPF may be reclassified as PF upon receipt (on-time) of all due payments (at current agreed repayment amount), over a 12 month period.

An up-to-date (i.e. not in arrears in relation to the agreed Forbearance programme) PF may be reclassified to the 'in order' book when the customer completes a minimum probation period of 24 months from the point of entering PF, even if they are no longer on a Forbearance programme. They must also meet the following criteria:

- 12 consecutive on-time payments have been made during the probation period at the agreed repayment amount (i.e. the forbearance amount while forbearance is continuing or the contractual monthly payment once forbearance has concluded);
- Arrears must not have been >30 days past due during the probation period
- Account is not past due at the point of exit

If a performing forbearance contract under probation is granted additional forbearance measures or becomes more than 30 days past-due, it is classified as non-performing.

### Recovery units

Recovery units are responsible for exposures where deterioration of the counterparty/customer credit profile is severe, to the extent that timely or full recovery of exposure is considered unlikely and default has occurred or is likely in the short term. Recovery teams set and implement strategies to recover Barclays Bank UK Group's exposure through realisation of assets and collateral, in co-operation with counterparties/customers and where this is not possible through insolvency and legal procedures.

In wholesale, for a case to be transferred to a recovery unit, it must be in default and have ceased to actively trade or be in insolvency. In retail, the timings of the charge-off points to recovery units are established based on the type of loan. For the majority of products, the standard period for charging off accounts is more than six missed contractual payments (greater than 180 days past due date of contractual obligation) unless a Forbearance programme is agreed. Early points are prescribed for unsecured assets. For example, in case of customer bankruptcy or insolvency, associated accounts are charged off within 60 days of notification. See recovery information included in Analysis of Specific Portfolio and Asset Types section on page 75 in the Barclays Bank UK PLC Annual Report 2019.

### Foreclosures in process and properties in possession

Foreclosure is the process where Barclays Bank UK Group initiates legal action against a customer, with the intention of terminating the loan agreement whereby Barclays Bank UK Group may repossess the property subject to local law and recover amounts it is owed. This process can be initiated by Barclays Bank UK Group independent of the impairment treatment and it is therefore possible that the foreclosure process may be initiated while the account is still in collections (delinquent) or in recoveries (post charge-off) where the customer has not agreed a satisfactory repayment schedule with Barclays Bank UK Group.

Properties in possession include properties held as 'loans and advances to customers' and properties held as 'other real estate owned'.

Held as 'loans and advances to customers' refers to the properties where the customer continues to retain legal title but where Barclays Bank UK Group has enforced the possession order as part of the foreclosure process to allow for the disposal of the asset, or the court has ordered the auction of the property.

### Writing off assets

Write-off refers to the point where it is determined that the asset is irrecoverable, it is no longer considered economically viable to try and recover the asset, it is deemed immaterial, or full and final settlement is reached and a shortfall remains. In the event of write-off, the customer balance is removed from the balance sheet and the impairment reserve held against the asset is released.

The timing and extent of write-offs may involve some element of subjective judgement. Nevertheless, a write-off will often be prompted by a specific event, such as the inception of insolvency proceedings or other formal recovery action, which makes it possible to establish that some or the entire advance is beyond realistic prospect of recovery. The position of impaired loans is also reviewed at least quarterly to make sure that irrecoverable advances are being written off in a prompt and orderly manner and in compliance with any local regulations.

For retail portfolios, the timings of the write-off points are established based on the type of loan. For unsecured, assets are written off based on contractual payment criteria or accelerated criteria. Assets in the recovery book will be written-off if the required qualifying repayments are not made within a rolling twelve-month period. In certain circumstances accounts will be eligible for accelerated write off (e.g. deceased, insolvency, inappropriate to pursue (medical, vulnerable, small balance) or settlement is accepted in lieu of the full balance). For secured loans, any shortfall after the receipt of the proceeds from the disposal of the collateral is written off within three months of that date if a repayment schedule has not been agreed with the borrower/estate. Such assets are only written off once all the necessary procedures have been completed and the amount of the loss has been determined.

Subsequent recoveries of amounts previously written off are written back and hence decrease the amount of the reported loan impairment charge in the income statement.

In 2019, total write-offs of impaired financial assets totalled £588m.

### Assessment of Impairment Under IFRS9

Under the IFRS9 accounting standard, businesses are required to assess and recognise Expected Credit Losses (ECL) on financial assets from the point of origination or purchase, and to update said assessment at each reporting date, reflecting changes in the credit risk of the financial asset.

ECL represents present value measure of the credit losses expected to result from default events that may occur during a specified period of time. ECLs must reflect the present value of cash shortfalls, i.e. the difference between cash flows due under the contract and the cash flows that the business now expects to receive. Given ECLs take into account both the amount and the timing of payments, a credit loss may result if a contractual payment is missed or received late, even if the debt is ultimately paid in full. ECL assessments must reflect an unbiased and probability weighted assessment of a range of possible outcomes, including reasonable and supportable information about future economic conditions.

Exposures must be assessed and assigned to one of the following populations at each reporting point:

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### ▪ Stage 1: Performing risk assets.

In scope items classified as stage 1 exposure for IFRS9 purposes are those assets performing in line with expectations in place at the point of origination/acquisition. This includes new originations or purchased assets (from the point of initial origination), but excludes exposures deemed credit impaired at point of origination.

Businesses must recognise an impairment allowance equal to 12 months expected credit losses. This allowance must be raised at point of initial reporting of an asset and the assessment updated at each subsequent reporting point.

### ▪ Stage 2: Significantly Increase in Credit Risk (SICR) assets.

Assets classified as stage 2 exposures for IFRS9 purposes are those where credit risk has significantly increased compared with expectations at point of origination/acquisition, but which are not yet considered 'Credit Impaired'.

In order to maintain that individual exposures or groups of assets are correctly classified as stage 2 assets, businesses must undertake regular assessments to identify whether a significant increase in credit risk has occurred since initial recognition. This must take the form of the following:

#### • Quantitative Test

Where the residual annualised weighted average lifetime PD for an individual exposure at the latest reporting date shows a material deterioration compared with that at the origination/acquisition point, then the assets must be classified under stage 2 as having significantly increased credit risk.

The assessment of materiality, i.e. at what point the PD increase is deemed 'significant', is based upon analysis of the portfolio risk profile against a common set of defined principles and key performance metrics.

#### • Qualitative Test

For personal banking assets managed under retail portfolios, accounts meeting the portfolios 'high risk' criteria (i.e. within the last 12 months reclassified from forbearance, rehabilitated from charge-off or subject to either re-age or collections arrangement; and external behavioural metric indicate an increased probability of financial difficulty, for example excessive or increasing indebtedness and/or missed or late payments recorded at credit bureau), must be classified under stage 2 as having significantly increased credit risk. For wholesale portfolios and Business Banking assets managed under retail portfolios where accounts are managed under the Watch List framework, then customers on WL 2/3, not breaching the quantitative test must be classified under stage 2 as having SICR. Obligors on WL1 may be classified as stage 1 for a maximum period of 6 months. In exceptional circumstances for an obligor on WL2 where it can be proven that a specific exposure is not deteriorated e.g. it is newly originated and therefore cannot have deteriorated, stage 1 ECL may be applied.

#### • Backstop Criteria

For retail portfolios, adverse changes in payment status must be considered within the assessment, and accounts 1 or more contractual payment in arrears (more than 1 contractual payment in arrears for the UK cards) at reporting date classified under stage 2, except where:

- a. The missed payment is a result of a bank error or technical issue;
- b. The arrears can be analytically proven not to represent deterioration from risk performance expectations at point of origination/acquisition, e.g. where there is a very small period between cycle point and reporting date. Such exceptions must be approved by the GCRD or nominated delegate. Exposures at 30 days or more past contractual payment due date at the reporting date must be classified as stage 2 assets without exception.

For wholesale portfolios adverse changes in payment status must be considered within the assessment, and accounts with contractual payment 30 days or more in arrears at reporting date are included within the entry criteria for stage 2, except where the missed payment is a result of a proven bank error or administrative issue. Where 30 days is used it must be proven that this is a backstop, not a lead driver of exposure moving to stage 2.

Where the assessment of SICR is undertaken on a collective basis, assets must be grouped on the basis of similar risk characteristics, taking into account asset type, industry, geographical location, collateral type, past-due status and other relevant factors.

Businesses must raise an impairment allowance equivalent to the latest assessment of lifetime expected credit losses. This increased allowance must be recognised at the first reporting point following entry to stage 2 and the assessment updated at each subsequent reporting date.

The assessment of lifetime ECLs for stage 2 (and stage 3) assets must consider the maximum contractual period over which the business is exposed to credit risk, including the impact of permitted extensions and pre-payments, i.e. those available at the option of the borrower to which the business must agree.

For loan commitments, the lifetime assessment period is normally the maximum contractual life, i.e. the period from the point the loan commitment is established to closure/full repayment of the exposure. However, where customer use of contractually available pre-payments and/or extension has a material impact on the expected life of the asset, then use of behavioural life may be justified.

For revolving credit facilities, the lifetime assessment period is set to the period over which the business is expected to be exposed to credit risk, based on historical experience i.e. an assessment of the average time to default, closure or withdrawal of the facility.

Assets may be removed from stage 2 and re-assigned to stage 1 once there is objective evidence that the criteria used to indicate a significant increase in credit risk are no longer met.

### ▪ Stage 3: Credit impaired risk assets.

Assets classified as stage 3 exposures for IFRS9 purposes are those where credit risk has increased to a point where they are now considered 'Credit Impaired'. For retail portfolios, this incorporates all defaulted accounts as defined under the Regulatory Definition of Default. For wholesale portfolios cases of forbearance not captured by stage 3 (i.e. those not meeting the regulatory definition of default - EBA classification of non-performing) must be classified as stage 2 until such time as the relevant forbearance probation period has been completed.



# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

Businesses must raise an impairment allowance equivalent to the latest assessment of lifetime expected credit losses, i.e. on the same basis as for stage 2 assets.

For single name wholesale assets, a threshold approach is taken with stage 3 impairment calculated individually. A discounted cash flow is completed establishing a base estimated impairment allowance, derived from the difference between asset carrying values and the recoverable amount.

Where the base allowance is greater than GBP 10m, a bespoke assessment is performed reflecting individual work out strategies. The assessment is clearly and specifically articulated including how general economic scenarios and downside analyses have been applied.

Interest and fee income on stage 3 assets is recognised based on the net amortised value, i.e. the gross carrying amount adjusted for the loss allowance in line with IFRS principles.

For exposures that are considered credit-impaired on purchase or origination, lifetime ECLs must be taken into account within the estimated cash flows at point of initial recognition, and the asset classified as stage 3.

In subsequent reporting periods, businesses must recognise cumulative changes in lifetime ECLs since initial recognition as a loss allowance, i.e. the amount of change in lifetime ECLs is treated as an impairment gain or loss. Assets may only exit stage 3 and be reclassified into stage 1 or stage 2 once the original default trigger event no longer applies. In addition, the following criteria must be met;

- the customer has demonstrated consistently good payment behaviour by making a minimum of 12 months of consecutive contractual payments;
- for forbore exposures, a minimum of 12 months has passed since the date the most recent forbearance concession was granted, and payments have been made in line with plan during this period;
- no other regulatory default 'unlikely to pay' triggers are identified;
- the performance conditions defined and approved by the regulator as part of an existing IRB waiver for the specific portfolio have been met.

To fully embed this standard into businesses, management requires frequent periodic reviews of ECL performance across Barclays Bank UK Group both in isolation and, more importantly, in comparison to the underlying performance of portfolios and product types.

Review and challenge is carried out through a hierarchy of committees confirming both the adequacy of provisions under the ECL requirements and that all policies, standards and processes have been adhered to (see below) and that appropriate controls are evidenced.

### Governance and oversight of impairment under IFRS 9

Barclays Bank UK Group relies on Barclays Group processes in overseeing the estimation of ECL, including: i) setting requirements in policy, including key assumptions and the application of key judgements; and ii) the design and execution of models.

- i) Impairment policy requirements are set and reviewed regularly by Barclays Group, at a minimum annually, to maintain adherence to accounting standards. Key judgements inherent in policy, including the estimated life of revolving credit facilities and the quantitative criteria for assessing the significant increase in credit risk (SICR), are separately supported by analytical study. In particular, the quantitative thresholds used for
- ii) assessing SICR are subject to a number of internal validation criteria, particularly in retail portfolios where thresholds decrease as the origination PD of each facility increases. Key policy requirements are also typically aligned to Barclays Bank UK Group's credit risk management strategy and practices, for example, wholesale customers that are risk managed on an individual basis are assessed for ECL on an individual basis upon entering Stage 3; furthermore, key internal risk management indicators of high risk are used to set SICR policy, for example, retail customers identified as High Risk Management Accounts are automatically deemed to have met the SICR criteria.
- iii) ECL is estimated in line with internal policy requirements using models which are validated by a qualified independent party to the model development area, the Independent Validation Unit (IVU), before first use and at a minimum annually thereafter. The IVU is a Barclays Group function. Each model is designated an owner who is responsible for:
  - Monitoring the performance of the model, which includes comparing predicted ECL versus flow into Stage 3 and coverage ratios; and
  - Proposing post-model adjustments (PMA) to address model weaknesses or to account for situations where known or expected risk factors and information have not been considered in the modelling process. Each PMA above an absolute and relative threshold is approved by the IVU for a set time period (usually a maximum of six months) together with a plan for remediation. The most material PMAs are reviewed by Barclays Bank UK PLC Chief Risk Officer. PMAs must also be approved by the Barclays Bank UK PLC Chief Risk Officer, with the most material also requiring approval from the Barclays Group Credit Risk Director or Barclays Group Chief Risk Officer.

Models must also assess ECL across a range of future economic conditions. These economic scenarios are generated via an independent model and ultimately set by the Senior Scenario Review Committee, run by Barclays Group. Economic scenarios are regenerated at a minimum annually, to align with Barclays medium term planning exercise, but also if the external consensus of the UK or US economy materially worsen. The scenario probability weights are also updated when scenarios are regenerated and reviewed by the Senior Scenario Committee. Each model used in the estimation of ECL, including key inputs, are governed by a series of internal controls, which include the validation of completeness and accuracy of data in golden source systems, documented data transformations and documented lineage of data transfers between systems.

- iv) The Barclays Bank UK Group's organisational structure and internal governance processes oversee the review of impairment results. The Barclays Bank UK Group Impairment Committee, formed of members from both Finance and Risk, is responsible for overseeing impairment policy and practice across Barclays Bank UK Group and will approve impairment results. Reported results and key messages are communicated to the Barclays Bank UK PLC Board Audit Committee, which has an oversight role and provides challenge of key assumptions, including the basis of the scenarios adopted. Impairment results are then factored into management decision making. Including but not limited to, business planning, risk appetite setting and portfolio management.

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### Forbearance and other concession programmes

#### Forbearance programmes

Forbearance takes place when a concession is made on the contractual terms of a facility in response to an obligor's financial difficulties. Barclays Bank UK Group offers forbearance programmes to assist customers and clients in financial difficulty through agreements that may include accepting less than contractual amounts due where financial distress would otherwise prevent satisfactory repayment within the original terms and conditions of the contract. These agreements may be initiated by the customer, Barclays Bank UK Group or a third party.

#### Forbearance programmes for wholesale portfolios

The majority of wholesale client relationships are individually managed, with lending decisions made with reference to specific circumstances and on bespoke terms.

Forbearance measures consist of concessions made towards a debtor that is experiencing or about to experience difficulties in meeting their financial commitments.

A concession is a sanctioned action, outside of market terms that is beneficial to the debtor. The concession arises solely due to the financial distress of the debtor and the terms are more favourable than those which would be offered to a new or existing obligor with a similar risk profile. Concessions are represented by:

- A change or alteration to the previous terms and conditions of a contract,
- A total or partial refinancing of a troubled debt contract.

The following are some examples of concessions which would be deemed forbearance (where granted to debtors in financial difficulties and outside of market terms):

- A restructuring of the contractual terms of a credit facility (such as a reduction in the interest rate).
- An extension to the maturity date.
- Change to the collateral structure (typically resulting in a net reduction in collateral).
- Favourable adjustment to covenants where repayment profile changes, or non-enforcement of material covenant breach.
- Repayment in some form other than cash (e.g. equity).
- Capitalisation of accrued interest.
- Any other concession made which is designed to alleviate actual or apparent financial stress e.g. a capital repayment holiday.

Where a concession is granted that is not a result of financial difficulty and/or is within Barclays Bank UK Group's current market terms, the concession would not amount to forbearance. For example, a commercially balanced restructure within the Barclays Bank UK Group's current terms which involves the granting of concessions and receiving risk mitigation/structural enhancement of benefit to Barclays Bank UK Group would not be indicative of forbearance.

Forbearance is not deemed to have occurred in the following situations:

- There is a pending maturity event anticipated at the onset of lending i.e. the loan was never structured to amortise to zero.
- A maturity extension or a temporary covenant waiver (e.g. short term standstill) is granted to support a period of negotiation, subject to Barclays Bank UK Group being satisfied that:
  - the debtor is actively pursuing refinancing or the sale of an asset enabling full repayment at expiry of the extended term
  - no loss is anticipated
  - payments of interest and capital continues as originally scheduled,
  - there is a high probability of a successful outcome within a "reasonable" time scale (6 months for bilateral facilities, 9 months for multi-lender).
- Immaterial amendments to lending terms are agreed, including changes to non-financial internal risk triggers that are only used for internal monitoring purposes.

Forbearance is considered evidence of a Significant Increase in Credit Risk and all forborne debtors are impaired as IFRS9 stage 2 (Lifetime Expected Credit Loss) regardless of Watch List category as a minimum for the lifetime of the forbearance. Those forbearance cases in regulatory default will attract stage 3 impairment treatment.

Debtors granted forbearance are classified on watch list (WL) for the duration of the forbearance. Counterparties placed on WL status are subject to increased levels of credit risk oversight.

Forborne debtors are classified for reporting as either Performing or Non-Performing.

Non-Performing debtors are defined as:

- More than 90 days past due.
- Assessed as unlikely to pay credit obligations in full without realisation of collateral, regardless of the existence of any past due amount or of the number of days past due.
- Credit impaired.
- Performing forborne debtors granted additional forbearance measures or becoming more than 30 days past-due on a facility obligation.

Performing debtors are classified as debtors that are less than 30 days past due and are without risk of non-payment.

Non-performing status remains in force for a minimum 12 months from the date of classification before the debtor can be considered for performing status. Performing debtors remain forborne for a minimum 24 months before forborne status may be reviewed. The minimum time spent in forbearance for a case that is Non-Performing at the point forbearance is granted is therefore 36 months.

A control framework exists along with regular sampling so that policies for watch list and impairment are enforced as defined and all assets have suitable levels of impairment applied. Portfolios are subject to independent assessment.

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

Aggregate data for wholesale forbearance cases is reviewed by the Wholesale Credit Risk Management Committee.

### Forbearance programmes for retail portfolios

Retail forbearance is available to customers experiencing financial difficulties. Forbearance solutions take a number of forms depending on individual customer circumstances. It is imperative that the solution agreed is both appropriate to that customer and sustainable, with a clear demonstration from the customer of both willingness and ability to repay. Before any permanent programme of forbearance is granted, an affordability assessment is undertaken to confirm suitability of the offer. Short-term solutions focus on temporary reductions to contractual payments and may change from capital and interest payments to interest only. For loan customers with longer-term financial difficulties, term extensions may be offered, which may include interest rate concessions. For credit card customers with longer-term financial difficulties, a switch to a fully amortising plan may be offered, which may include an interest rate concession.

When an account is placed into a programme of forbearance, the asset will be classified as such until a defined cure period has been successfully completed, incorporating a successful track record of payment in line with the revised terms, upon which it will be returned to the up-to-date book. When Barclays Group agrees a forbearance programme with a customer, impairment allowances recognise the impact on cash flows of the agreement to receive less than the original contractual payments. The Retail Impairment Policy prescribes the methodology for the impairment of forbearance assets, in line with the new IFRS9 methodology adopted in January 2018. Forborne exposures are classified as stage 3 (credit impaired) assets under IFRS9, resulting in higher impairment than for fully performing assets, reflecting the additional credit risk attached to loans subject to forbearance.

When customers exit forbearance, the accounts are ring-fenced as High Risk within the up-to-date book for a period of at least twelve months.

Barclays has continued to assist customers in financial difficulty through the use of forbearance programmes. However, the extent of forbearance offered by Barclays Bank UK Group to customers and clients remains small in comparison to the overall size of the loan book.

The level of forbearance extended to customers in other retail portfolios is not material and, typically, does not currently play a significant part in the way customer relationships are managed. However, additional portfolios will be added to this disclosure should the forbearance in respect of such portfolios become material.

A retail loan is not considered to be renegotiated where the amendment is at the request of the customer, there is no evidence of actual or imminent financial difficulty and the amendment meets with all underwriting criteria. In this case it would be treated as a new loan. In the normal course of business, customers who are not in financial difficulties frequently apply for new loan terms, for example to take advantage of a lower interest rate or to secure a further advance on a mortgage product. Where these applications meet our underwriting criteria and the loan is made at market interest rates, the loan is not classified as being in forbearance. Only in circumstances where a customer has requested a term extension, interest rate reduction or further advance and there is evidence of financial difficulty is the loan classified as forbearance and included in our disclosures on forbearance on page 172 of the Barclays PLC Annual Report 2019.

Please see the credit risk performance section on page 173-174 of the Barclays PLC Annual Report 2019 for details of principal wholesale and retail assets currently in forbearance.

### Other programmes

#### Retail re-aging activity

Re-aging refers to the placing of an account into an up-to-date position without the requisite repayment of arrears. The re-age policy applies to revolving products that have a minimum payment requirement only. No reduction is made to the minimum due payment amounts which are calculated, as a percentage of balance, with any unpaid principal included in the calculation of the following month's minimum due payment.

The changes in timing of cash flows following re-aging do not result in any additional cost to Barclays Bank UK Group. The following are the conditions required to be met before a re-age may occur:

- the account must not have been previously charged off or written off
- the borrower cannot be bankrupt, subject to an Individual Voluntary Arrangement (a UK contractual arrangement with creditors for individuals wishing to avoid bankruptcy), or deceased
- the borrower must show a renewed willingness and ability to repay the debt. This will be achieved by the borrower making at least three consecutive contractual monthly payments or the equivalent cumulative amount. Contractual monthly payment is defined as the contractual minimum due. Funds may not be advanced for any part of this
- the account cannot exceed cycle 3 arrears at the time of the final qualifying payment
- no account should be re-aged more than twice within any twelve-month period, or more than four times in a five-year period.

Re-aged assets are included in portfolios High Risk population, and are classified as stage 2 assets (i.e. as having significantly increases credit risk) for IFRS9 impairment purposes. This results in an appropriately higher impairment allowance being recognised on the assets.

#### Retail small arrears capitalisation

All small arrears capitalisations are now considered a form of Forbearance, based on the European Banking Authority's requirements for Supervisory Reporting on Forbearance and Non-Performing exposures.



# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

### Refinancing risk

This is the risk that the borrower or group of correlated borrowers may be unable to repay bullet-repayment loans at expiry, and will therefore need refinancing.

Refinancing risk is taken into account on a case by case basis as part of the credit review and approval process for each individual loan. The review will consider factors such as the strength of the business model and sustainability of the cash flows; and for bridge loans, the certainty of the sources of repayment and any associated market risk.

Commercial real estate loans may incorporate a bullet repayment element at maturity. Where this is the case, deals are sized and structured to enable Barclays Bank UK Group to term out the loan if the client were unable to refinance the loan at expiry. Credit review will incorporate an examination of various factors that are central to this consideration, such as tenant quality, tenancy agreement (including break clauses), property quality and interest rate sensitivity. Loans to small and medium enterprises (SMEs) will typically be either revolving credit lines to cover working capital needs or amortising exposures, with periodic refinancing to give the opportunity to review structure, pricing, etc.

### Environmental risk

Environmental risk is recognised as a mainstream credit risk issue and Barclays Group has a dedicated Environmental Risk Management team, as part of the Enterprise Risk Management function. Environmental issues are considered in credit risk assessment, and environmental risk standards are included in the Wholesale Credit Risk Control Framework.

Barclays Group's approach to environmental credit risk management addresses risk under two categories, namely Direct risk and Indirect risk, which are covered below.

**Direct risk** can arise when Barclays Group takes commercial land as collateral. In many jurisdictions, enforcement of a commercial mortgage by Barclays Group, leading to possession, potentially renders Barclays Group liable for the costs of remediating a site if deemed by the regulator to be contaminated, including for pre-existing conditions. In the UK, Barclays Group's approach requires commercial land, if being pledged as collateral, to be subject to a screening mechanism. Where required, a further assessment of the commercial history of a piece of land and its potential for environmental contamination helps reflect any potential environmental degradation in the value ascribed to that security. It also identifies potential liabilities which may be incurred by Barclays Group, if realisation of the security were to become likely.

**Indirect risk** can arise when environmental issues may impact the creditworthiness of the borrower. For instance, incremental costs may be incurred in upgrading a business' operations to meet emerging environmental regulations or tightening standards. In other circumstances, failure to meet those standards may lead to fines. Environmental impacts on businesses may also include shifts in the market demand for goods or services generated by our customers, or changing supply chain pressures. Environmental considerations affecting our clients can be varied. Barclays Group has developed a series of environmental risk briefing notes, covering ten broad industry headings ranging from Agriculture and Fisheries to Oil and Gas, from Mining and Metals to Utilities and Waste Management. These briefing notes are available to colleagues in business development and credit risk functions across the organisation, outlining the nature of environmental and social risks of which to be aware, as well as the factors which mitigate those risks.

Climate change is an increasing driver of environmental risk. More information on our approach to managing risks associated with climate change can be found on page 138 of Barclays PLC Annual Report 2019.

### Internal ratings based (IRB) approach

The IRB approach largely relies on internal models to derive the risk parameters/components used in determining the capital requirement for a given exposure. The main risk components include measures of the probability of default (PD), loss given default (LGD) and the exposure at default (EAD). The IRB approach is divided into three alternative applications: Own-Estimates, Supervisory Estimates and Specialised Lending:

**Own-Estimates IRB (OEIRB):** Barclays Bank UK Group uses its own models to estimate PD, LGD and EAD to calculate given risk exposures for various asset classes and the associated Risk Weighted Assets (RWAs).

**Supervisory IRB (SIRB):** Barclays uses its own PD estimates, but relies on supervisory estimates for other risk components. The SIRB approach is particularly used to floor risk parameters for wholesale credit exposures where default data scarcity may impact the robustness of the model build process.

**Specialised Lending IRB:** For specialised lending exposures for which PD cannot be modelled reliably, Barclays uses a set of risk weights defined in the relevant regulation, and takes into account a range of prescribed risk factors.

While in the past the industry has used the terms 'Advanced', 'Foundation' and 'Slotting' IRB, the current enforcing regulation (the Capital Requirements Regulation) does not use these terms.

#### The IRB calculation for credit risk

For both OEIRB and SIRB approaches, Barclays Bank UK Group uses the regulatory prescribed risk-weight functions for the purposes of deriving capital requirements.

In line with regulatory requirements, Long Run Average PD and downturn LGD and CF (Conversion Factor) estimates are used for each customer/facility to determine regulatory capital for all exposures in scope.

For the purpose of pricing and existing customer management, point in time (PIT) PD, LGD and EAD are generally used as these represent the best estimates of risk given the current position in the credit cycle. Whilst Long Run Average PDs are always tested at grade/pool level, PIT PDs are also used for the calculation of capital on certain retail unsecured products, in line with regulation.

#### Applications of internal ratings

The three components – PD, LGD and CF – are the building blocks used in a variety of applications that measure credit risk across the entire portfolio:

- **credit approval:** PD models are used in the approval process in both retail and wholesale portfolios. In high-volume retail portfolios, application and behaviour scorecards are frequently used as decision-making tools. In wholesale, PD models are used to direct applications to an appropriate credit-sanctioning level

# Barclays' approach to managing risks

## Management of credit risk and the internal ratings-based approach

- **credit grading:** this was originally introduced in the early 1990s to provide a common measure of risk across Barclays Group. Barclays now employs a 21-point scale of default probabilities. In some applications, grades in this scale are divided further to permit more detailed analysis. These are shown in Table 29 on page 30.
- **risk-reward and pricing:** PD, LGD and CF estimates are used to assess the profitability of deals and portfolios and to facilitate risk-adjusted pricing and strategy decisions
- **risk appetite:** estimates are used to calculate the expected loss and the potential volatility of loss in Barclays Group's risk appetite framework. See page 61.
- **impairment calculation:** under IFRS9, ECL outputs are produced based on PD, EAD and LGD IRB feeder models, with different economic scenarios used on a probability-weighted basis. See page 68.
- **collections and recoveries:** model outputs are used to identify segments of the portfolio where collection and recovery efforts should be prioritised
- **economic capital (EC) calculation:** most EC calculations use similar inputs as the regulatory capital (RC) process
- **risk management information:** Risk generate reports to inform senior management on issues such as business performance, risk appetite and EC consumption. Model outputs are used as key indicators in those reports. Risk also generates regular reports on model risk, which covers model accuracy, model use, input data integrity and regulatory compliance among other issues.

### Ratings processes and models for credit exposures

#### Wholesale credit

To construct ratings for wholesale customers, including financial institutions, corporations, specialised lending, purchased corporate receivables and equity exposures, Barclays complements its internal models suite with external models and rating agencies' information. A model hierarchy is in place requiring users/credit officers to adopt a consistent approach/model to rate each counterparty based on the asset class type and the nature of the transaction.

#### Wholesale PD models

Barclays Bank UK Group employs a range of methods in the construction of these models:

- statistical models are used for our high volume portfolios such as small or medium enterprises (SME). The models are typically built using large amounts of internal data, combined with supplemental data from external data suppliers where available. Wherever external data is sourced to validate or enhance internally held data, similar data quality standards to those applicable to the internal data management are enforced.
- structural models incorporate, in their specification, the elements of the industry-accepted Merton framework to identify the distance to default for a counterparty. This relies upon the modeller having access to specific time series data or data proxies for the portfolio. Data samples used to build and validate these models are typically constructed by appropriately combining data sets from internal default observations with comparable externally obtained data sets from commercial providers such as rating agencies and industry data gathering consortia.
- expert lender models are used for those parts of the portfolio where there is insufficient internal or external data to support the construction of a statistically robust model. These models utilise the knowledge and in-depth expertise of the senior credit officers dealing with the specific customer type being modelled. For all portfolios with a low number of default observations, Barclays Group adopts specific regulatory rules, methodologies and floors in its estimates so that the calibration of the model meets the current regulatory criteria for conservatism.

#### Wholesale LGD models

The LGD models typically rely on statistical analysis to derive the model drivers (including seniority of claim, collateral coverage, recovery periods, industry and costs) that best explain Barclays Group's historical loss experience, often supplemented with other relevant and representative external information where available. The models are calibrated to downturn conditions for regulatory capital purposes and, where internal and external data is scarce, they are subject to SIRB floors so that the calibration of the model meets the current regulatory criteria for conservatism.

#### Wholesale CF models

The wholesale CF models estimate the potential utilisation of the currently available headroom based on statistical analysis of the available internal and external data and past client behaviour. As is the case with the LGD models, the CF models are subject to downturn calibration for regulatory capital purposes and to floors where data is scarce.

#### Retail credit

Retail banking and cards operations have long and extensive experience of using credit models in assessing and managing risks. As a result, models play an integral role in customer approval and management decisions. Most retail portfolios are data rich; consequently, most models are built in-house using statistical techniques and internal data. Exceptions are some expert lender models (similar to those described in the wholesale context) where data scarcity precludes the statistically robust derivation of model parameters. In these cases, appropriately conservative assumptions are typically used, and wherever possible these models are validated/benchmarked against external data.

#### Retail PD models

Application and behavioural scorecards are most commonly used for retail PD modelling:

- application scorecards are derived from historically observed performance of new clients. They are built using customer demographic and financial information, supplemented by credit bureau information where available. Through statistical techniques, the relationship between these candidate variables and the default marker is quantified to produce output scores reflecting a PD. These scores are used primarily for new customer decisioning but are, in some cases, also used to allocate a PD to new customers for the purpose of capital calculation.
- behavioural scorecards differ from application scorecards in that they rely on the historically observed performance of existing clients. The statistically derived output scores are used for existing customer management activities as well as for the purpose of capital calculation.

#### Retail LGD models

Retail LGD models are built using bespoke methods chosen to best model the operational recovery process and practices. In a number of secured portfolios, LGD drivers are parameterised with market factors (e.g. house price indices, haircut of the property value) to capture market trends. For unsecured portfolios, where recoveries are not based on collateral, statistical models of cash flows are used to estimate ultimate recoveries

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and LGDs. In all instances, cash flows are discounted to the point of default by using bespoke country and product level factors. For capital calculations, customised economic downturn adjustments, taking into account loss and default dependency, are made to adjust losses to stressed conditions.

### Retail CF models

CF models within retail portfolios are split into two main methodological categories. The general methodology is to derive product level credit conversion factors (CCFs) from historical balance migrations, typically for amortising product, such as mortgages, consumer loans. These are frequently further segmented at a bucket level (e.g. by delinquency). The most sophisticated CF models are based on behavioural factors, determining customer level CCFs from characteristics of the individual facility, typically for overdrafts and credit cards. For capital calculations, customised downturn adjustments, taking into account loss and default dependency, are made to adjust for stressed conditions.

### The control mechanisms for the rating system

Model risk is a risk managed under the ERMF. Consequently, Barclays Group Model Risk Policy (GMRP) and its supporting standards covering the end-to-end model life cycle are in place to support the management of risk models.

Key controls captured by the GMRP cover:

- model governance is anchored in assigning accountabilities and responsibilities to each of the main stakeholders:
  - model owner – each model must have an owner who has overall accountability for the model
  - model developers – support the model owner and drive development according to the model owner's defined scope/purpose
  - Independent Validation Unit (IVU) – responsible for independent review, challenge and approval of all models.
- externally developed models are subject to the same governance standards as internal models
- models are classified by materiality (high/low) and complexity (complex/non-complex)
- all models must be validated and approved by IVU before initial implementation/use
- models are subject to annual review by the model owner and periodic validation and approval by IVU
- all models must be recorded in Barclays Group Models Database (GMD), which records model owners and developers
- model owners must evidence that model implementation is accurate and tested.

If a model is found to perform sub-optimally, it may be rejected and/or subjected to a Post Model Adjustment (PMA) before approval for continued use is granted.

The IVU reporting line is separate from that of the model developers. IVU is part of Model Risk Management (MRM), and the head of MRM reports to Barclays Group Chief Risk Officer (GCRO). The model development teams have separate reporting lines to the Group Head of Quantitative Analytics, who in turn reports to the Barclays Group CRO.

Under the Three Lines of Defence approach stated in the ERMF, the actions of all parties with responsibilities under the GMRP are subject to independent review by Barclays Internal Audit.

### Validation processes for credit exposures

Validation of credit models covers observed model performance but also the scope of model use, interactions between models, data use and quality, the model's theoretical basis, regulatory compliance and any remediation to model risk that are proposed or in place. The following sections provide more detail on processes for validating the performance of each model type (covered as part of an Annual Validation & SAT review).

### Wholesale PD models

To assess model calibration, the IVU compares the model predicted default rate to the observed default rate over the latest year and over all available model history. On low default portfolios the relative infrequency of default of large wholesale obligors means a long-run perspective on default risk is vital. For these portfolios, default rates are also compared to external benchmarks where these are relevant and available, such as default rates in rating-agency data. In practice, since financial crises have been infrequent, IVU would expect the model PD used in calculating regulatory capital to exceed the long run observed default rate.

To assess model discrimination performance, the IVU compares the rank-ordering of internal ratings with the pattern of defaults, if any, to construct the industry-standard Gini statistic or similar. The ordering of internal ratings is also compared to the ordering of internal and external comparator ratings where these are available.

Measures of grade stability and the degree to which PD tracks default rates over time are also routinely calculated to infer relevant aspects of model performance (e.g. rating philosophy).

### Wholesale LGD models

To assess model calibration, model outputs are compared to the LGD observed on facilities that entered default. Comparisons are performed by individual model component, and at overall level. Model outputs are also compared to the long-run average of observed LGD. The time-lapse between facility default and the closure of recovery is varied and may be long. In the construction of observed LGD, recoveries are discounted back to the date of default at a conservative interest rate, following regulatory guidance of at least 9%. As noted above, regulatory floors are in place for the LGD used in calculating regulatory capital for exposure types with low default rates.

### Wholesale CF / EAD models

To assess model calibration, the EADs observed in internal data are compared to model predictions, both in downturn periods as defined by the regulator, and on a long-run average basis. Comparisons are performed separately for different product types. The primary validation tests are performed on customer weighted basis rather than exposure weighted basis, in line with the relevant regulations.

### Retail PD models

To assess rating philosophy, i.e. whether it is a Point-in-Time system or Through-the-Cycle system, the IVU reviews migration indices to investigate relevant grade migration. To assess model calibration, the IVU compares the model prediction of default frequency to the realised internal default rate by grade/pool as required by CRR. As a minimum, IVU expects the expected default rate is at least equal or above the level of observed default rate. To assess model discrimination performance, the IVU compares the rank-ordering of internal ratings with the pattern of

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defaults, if any, to construct the industry-standard Gini statistic or similar. To assess model stability, the population distribution, the character distribution and parameter estimates are assessed individually. PD trends are also compared to external industry benchmarking data.

A 0.03% regulatory floor is in place for the facility level PD used in calculating regulatory capital.

### Retail LGD models

LGD model components are compared to observed values respectively, this may include but not limited to probability of possession/charge off, forced sale discount, time from default to crystallisation and discount rate. Where components are similar to PD in nature, the approach stated in the PD section applies to assess the calibration, discrimination and stability of the component.

The calibration of the overall LGD is assessed through the expected against actual comparison by default flow and stock population respectively. The downturn LGD appropriateness is further assessed to test that the downturn LGD is equal to or above the long-run average of observed LGD. This exercise is performed at grade/pool level according to CRR. In the construction of observed LGD, recoveries are discounted back to the date of default at a conservative interest rate, following regulatory guidance. As noted above, regulatory floors are in place for the LGD used in calculating regulatory capital where appropriate (this includes but not limited to the non-zero LGD floor at account level, the collateral uncertainty consideration, the portfolio level LGD floor and UK property haircut floor).

The primary validation tests are performed on facility/obligor-weighted rather than exposure-weighted basis in line with the relevant regulations.

LGD trends are also compared to external industry benchmarking data.

### Retail CF models

The calibration of the overall CF is assessed through the expected against actual comparison by default flow and stock population respectively. The downturn CF appropriateness is further assessed to test that the downturn CF is equal to or above the long-run average of observed CF. This exercise is performed at grade/pool level according to CRR. Particular care is used in separating cases where facility limits changed between the date of observation and default, as these can lead to measurements of conversion factors that take extreme values.

Depending on the modelling approach, the relevant measure used for PD/LGD may be used accordingly to assess calibration, discrimination and stability. CF is floored so that the exposure at the point of default cannot be less than exposure observed at point of regulatory reporting. The primary validation tests are performed on facility/obligor-weighted rather than exposure-weighted basis in line with the relevant regulations. EAD trends are also compared to external industry benchmarking data.

Table 63 for credit risk model characteristics shows modelled variables to calculate RWAs (PD, LGD, and EAD) at portfolio level, with number of models and their significance in terms of RWAs, model method or approach, numbers of years of data used, Basel asset class of the customer or client, and regulatory thresholds applied.

### Selected features of material models

The table below contains selected features of Barclays Bank UK Group's AIRB credit risk models which are used to calculate RWAs. Please note that the RWAs reported in this table are based on the models in production as of Nov'19.

- PD models listed in the table account for £44bn of total AIRB approach RWAs
- LGD models listed in the table account for £39bn of total AIRB approach RWAs

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Table 63: IRB credit risk model's selected features

Component modelled	Portfolio	Size of associated portfolio (RWAs) BUK (£m)	Model description and methodology	Number of years loss data	Basel asset classes measured	Applicable industry-wide regulatory thresholds
PD	SME customers with turnover < £20m	8,592	Statistical models that uses regression techniques to derive relationship between observed default experience and a set of behavioural variables.	> 10 Years	Corporate SME, SME	Regulatory PD floor of 0.03%
PD	UK Home Finance	19,536	Statistical scorecards estimated using regression techniques, segmented along arrears status and portfolio type.	>10 Years	Secured By Real Estate (residential and buy-to-let mortgages)	Regulatory PD floor of 0.03%
PD	Barclaycard UK	15,463	Statistical scorecards estimated using regression techniques, segmented along arrears status and portfolio type.	6 - 10 Years	Qualifying Revolving Retail (QRRE)	PD floor of 0.03%
LGD	All business customers (excluding certain specialized sectors)	3,587	Model is based on a function estimated using actual recoveries experience. It takes account of collateral value and an allowance for non-collateral recovery.	> 10 Years	Corporate	LGD floor of 5%
LGD	UK Home Finance	19,536	Data driven estimates of loss and probability of possession	6 - 10 Years	Secured By Real Estate (residential and buy-to-let mortgages)	The portfolio average downturn LGD is floored at 10%
LGD	Barclaycard UK	15,463	Statistical models combining segmented regression and other forecasting techniques	6 - 10 Years	Qualifying Revolving Retail (QRRE)	-

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### Credit Risk IRB models performance back testing - estimated versus actual

The following tables compare the PDs and LGDs estimated by the BUK's IRB models with the actual default and loss rates. Comparisons are based on the assets in IRB approach portfolios and are used to assess performance of the models. The estimates and actual figures represent direct outputs from the models rather than outputs used in regulatory capital calculations that may be adjusted to apply more conservative assumptions.

Risk models are subject to the Group Model Risk Policy which contains detailed guidance on the minimum standards for model risk management. For example, PDs must be estimated over a sufficient period, show sufficient differentiation in predictions for different customers, show conservatism where data limitations exist, and follow prescriptive techniques. These standards are achieved via an independent validation process through appropriately independent experts. Once validated and correctly implemented, models are subject to regular monitoring to ensure they can still be used. Comparing model estimates with actual default rates for PD and loss rates for LGD form part of this monitoring. Such analysis is used to assess and enhance the performance of the models.

Further detail is provided in the management of model risk on page 102.

### PD measures

- The model estimated PIT PDs are compared with the actual default rates by PD ranges within each IRB exposure class. PD ranges, estimated PDs and actual default rates are based on the existing models default definitions. UK Cards, UK Home Finance, UK Current Account, and SME are the only CRD IV compliant portfolio as of the reference month (Nov'18), for the remaining portfolios CRD IV compliant models are either implemented post the reference month or under implementation or currently under development/approval as per the CRD IV roll out plan agreed with the PRA.
- The estimated PDs are forward-looking average PD by the model at the beginning of the twelve-month period, i.e. average PD of the Nov'18 non-defaulted obligors including inactive and non-borrowers. Both EAD weighted and simple average PDs have been reported.
- The estimated PDs are compared with the simple average of historical annual default rates over the past 5 years, starting Nov'14.
- The PIT PD is used as a predicted measure in internal monitoring and annual validation of the models. In contrast, the capital calculation uses TTC or Regulatory PDs (not shown below), calibrated to long-run default averages with additional adjustments where modelled outputs display evidence of risk understatement (including credit expert overrides, regulatory adjustments etc.). The PIT measure is subject to under or over prediction depending on the relative position of the portfolio to the credit cycle.
- A mapping has been provided between external ratings and internal PD ranges based on the published reports from the two rating agencies - Moody's and S&P.
- For the wholesale models, the average default probabilities in the tables have been determined from the full scope of clients graded by BUK ESHLA IRB model suite, which may include some clients that have either zero exposure or zero limits marked at the time of calculation.

### LGD measures

- The model estimated LGDs, unadjusted for regulatory floors and for downturn adjustments, are compared with the actual LGDs within each IRB exposure class.
- The estimated LGDs are derived from a simple average of LGDs at the time of default for the set of cases closed over the previous twelve months.
- The actual LGD rate is the simple average observed loss rate for the set of cases closed over the previous twelve months, regardless of the time of default.
- The LGD measures are used as a predicted measure in internal monitoring and annual validation of the models. The capital calculation uses Downturn LGDs with additional adjustments and regulatory floors where modelled outputs display evidence of risk understatement.

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Table 64: Analysis of expected performance versus actual results

This table provides an overview of credit risk model performance, assessed by the analysis of average PDs and average LGDs. Please note these tables exclude exposures calculated under the supervisory slotting approach and the straddling obligors between BUK and BI have been classified under BUK.

The table compares the raw model output to the actual experience in our portfolios. Such analysis is used to assess and enhance the adequacy and accuracy of models. The raw outputs are subject to a number of adjustments before they are used in the calculation of capital, for example to allow for the position in the credit cycle and the impact of stress on recovery rates.

### Asset Class

Asset Class	EBA PD Range (%)	External Ratings Equivalent		Weighted Average PD	Arithmetic Average PD by obligors	Number of obligors		Defaulted obligors in the year	of which: new defaulted in the year	Average historical annual default
		Moody's	S&P			As at Nov'18	As at Nov'19			
Wholesale	0.00 to <0.15	Aaa,Aa1,Aa2,Aa3,A1,A2,A3,Baa1	AAA, AA+,AA,AA-,A+,A,A-,BBB+	0.04%	0.05%	151	149	0	0	0.00%
	0.15 to <0.25	Baa2	BBB	0.18%	0.18%	5	1	0	0	0.00%
	0.25 to <0.50	Baa3,Ba1	BBB-, BB+	0.34%	0.31%	2	2	0	0	0.00%
	0.50 to <0.75	Ba1,Ba2	BB	0.00%	0.00%	0	0	0	0	0.00%
	0.75 to <2.50	Ba2,Ba3,B1	BB-,B+	0.00%	0.00%	0	0	0	0	0.00%
	2.50 to <10.00	B1,B2,B3,Caa1,Caa2	B+,B,B-,CCC+	0.00%	0.00%	0	0	0	0	0.00%
	10.00 to <100.00	Caa2,Caa3,Ca,C	CCC,CCC+,CCC-,CC+,CC,C	0.00%	0.00%	0	0	0	0	0.00%
100.00 (default)	D	D								
SME	0.00 to <0.15	Aaa,Aa1,Aa2,Aa3,A1,A2,A3,Baa1	AAA, AA+,AA,AA-,A+,A,A-,BBB+	0.12%	0.06%	472,782	293,760	771	758	0.08%
	0.15 to <0.25	Baa2	BBB	0.20%	0.19%	110,772	142,069	319	308	0.21%
	0.25 to <0.50	Baa3,Ba1	BBB-, BB+	0.39%	0.36%	128,642	197,978	602	533	0.38%
	0.50 to <0.75	Ba1,Ba2	BB	0.62%	0.61%	74,906	99,331	546	427	0.66%
	0.75 to <2.50	Ba2,Ba3,B1	BB-,B+	1.46%	1.39%	158,085	217,101	2,399	1,471	1.42%
	2.50 to <10.00	B1,B2,B3,Caa1,Caa2	B+,B,B-,CCC+	4.84%	4.43%	73,679	79,136	3,131	593	5.84%
	10.00 to <100.00	Caa2,Caa3,Ca,C	CCC,CCC+,CCC-,CC+,CC,C	26.85%	27.10%	21,176	19,549	5,491	13	28.08%
	100.00 (default)	D	D	100.00%	100.00%	14,583	12,101	-	-	0.00%



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### Asset Class

Retail	EBA PD Range (%)	External Ratings Equivalent		Weighted Average PD	Arithmetic Average PD by obligors	Number of obligors		Defaulted obligors in the year	of which: new default in the year	Average historical annual default
		Moody's	S&P			As at Nov'18	As at Nov'19			
				%	%			£m	£m	%
Secured by Real Estate	0.00 to <0.15	Aaa,Aa1,Aa2,Aa3,A1,A2,A3,Baa1	AAA, AA+,AA,AA-,A+,A,A-,BBB+	0.07%	0.08%	674,635	689,346	498	-	0.07%
	0.15 to <0.25	Baa2	BBB	0.19%	0.19%	89,473	82,524	152	-	0.18%
	0.25 to <0.50	Baa3,Ba1	BBB-, BB+	0.34%	0.34%	34,060	39,565	173	-	0.46%
	0.50 to <0.75	Ba1,Ba2	BB	0.61%	0.60%	9,223	8,724	70	-	0.85%
	0.75 to <2.50	Ba2,Ba3,B1	BB-,B+	1.51%	1.48%	18,856	17,958	210	-	1.36%
	2.50 to <10.00	B1,B2,B3,Caa1,Caa2	B+,B,B-,CCC+	4.97%	4.80%	13,155	12,722	578	-	5.11%
	10.00 to <100.00	Caa2,Caa3,Ca,C	CCC,CCC+,CCC-,CC+,CC,C	29.73%	29.28%	6,459	5,676	1,861	-	46.16%
	100.00 (default)	D	D	100.00%	100.00%	9,260	8,082	-	-	0.00%
Qualifying Revolving Retail	0.00 to <0.15	Aaa,Aa1,Aa2,Aa3,A1,A2,A3,Baa1	AAA, AA+,AA,AA-,A+,A,A-,BBB+	0.08%	0.06%	9,377,553	9,060,412	5,225	1,030	0.05%
	0.15 to <0.25	Baa2	BBB	0.20%	0.20%	2,475,774	2,476,437	4,862	877	0.18%
	0.25 to <0.50	Baa3,Ba1	BBB-, BB+	0.36%	0.36%	3,195,514	3,343,432	10,697	1,403	0.33%
	0.50 to <0.75	Ba1,Ba2	BB	0.62%	0.61%	1,204,664	1,229,319	7,612	778	0.58%
	0.75 to <2.50	Ba2,Ba3,B1	BB-,B+	1.45%	1.38%	2,437,259	2,429,939	34,514	1,639	1.36%
	2.50 to <10.00	B1,B2,B3,Caa1,Caa2	B+,B,B-,CCC+	5.10%	4.97%	1,628,513	1,586,847	81,439	1,327	4.84%
	10.00 to <100.00	Caa2,Caa3,Ca,C	CCC,CCC+,CCC-,CC+,CC,C	23.46%	24.01%	488,716	446,616	125,684	97	25.93%
	100.00 (default)	D	D	100.00%	100.00%	448,753	405,213	-	-	0.00%



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### Asset Class

Retail	EBA PD Range (%)	External Ratings Equivalent		Weighted Average PD %	Arithmetic Average PD by obligors %	Number of obligors		Defaulted obligors in the year £m	of which: new defaulted in the year £m	Average historical annual default %
		Moody's	S&P			As at Nov'18	As at Nov'19			
	0.00 to <0.15	Aaa,Aa1,Aa2,Aa3,A1,A2,A3,Baa1	AAA, AA+,AA,AA-,A+,A,A-,BBB+	0.13%	0.13%	99	95	-	-	1.28%
	0.15 to <0.25	Baa2	BBB	0.22%	0.22%	3,300	3,856	6	-	0.61%
	0.25 to <0.50	Baa3,Ba1	BBB-,BB+	0.40%	0.40%	60,750	65,901	137	-	0.35%
Other Retail	0.50 to <0.75	Ba1,Ba2	BB	0.63%	0.63%	101,531	107,885	355	-	0.39%
	0.75 to <2.50	Ba2,Ba3,B1	BB-,B+	1.36%	1.37%	353,489	357,008	4,897	-	1.17%
	2.50 to <10.00	B1,B2,B3,Caa1,Caa2	B+,B,B-,CCC+	4.23%	4.34%	102,373	95,213	5,449	-	4.53%
	10.00 to <100.00	Caa2,Caa3,Ca,C	CCC,CCC+,CCC-,CC+,CC,C	45.02%	40.06%	25,361	23,212	10,913	-	40.77%
	100.00 (default)	D	D	100.00%	100.00%	48,818	31,089	-	-	-

### Asset Class

	Number of resolved cases over last one year (Dec'18 to Nov'19)	Predicted LGD (Simple Average) %	Actual LGD (Simple Average) %
<b>Wholesale</b>			
SME	5,354	80%	86%
<b>Retail</b>			
Secured by Real Estate	1,697	1%	2%
Qualifying Revolving Retail	307,985	70%	72%
Other Retail	54,628	77%	85%

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### 2019 AIRB models back testing summary

Section below provides AIRB model performance summary based on the above back testing results, along with the remediation plans.

#### Wholesale

- For Corporate Bank (Social Housing)
  - Corporate Banking asset class shows zero default rates across IRB exposures.
  - There are no resolved cases for latest one year period.
  - Further Education and Local Authority were moved to the Standardized approach following PRA approval in Oct'19. New PD model to move Social Housing under FIRB approach is planned to be submitted to the PRA in 2020.
- For SME
  - The back testing report is based on the current CRD IV compliant model implemented in 2017 and looks at data from 2014. October data has been used as November 19 data was not available when the reporting process was initiated. Historical average has been calculated using 5 years of data where Oct'14, Oct'15, Oct'16 and Oct'17 are based on proxy BUK/BI split based on Sales Turnover and Oct'18 is based on SRP (Structural Reform Program) implemented legal identifier. LGD back testing is reported on the basis of proxy BUK/BI split due to unavailability of SRP implemented identifier prior to Apr'18.
  - The estimated PiT PDs under-predict the default rate (1.21% expected vs. 1.27% actual) for SME. The migration of customers towards higher PD bands in 2019 is largely attributable to non-borrowing customers. The proportion of the portfolio showing improvement in PDs over the 12 months window is higher than the proportion showing deterioration when weighted by exposure for borrowing customers. TTC PD model continues to maintain conservatism.
  - LGD model under-estimates (79.85% estimated vs. 86.35% actual) on a PiT basis due to operational issues and changes that affect underlying data. Downturn LGD adds buffer on PiT LGD reducing the non-conservatism observed.
  - Capital adjustments are in place to address model weaknesses

#### Secured by Real Estate

- This covers the Mortgage portfolios for UK. Rank ordering is maintained across PD ranges.
- For UK Mortgages, the PD model overestimates/accurate at an overall level (0.42% expected vs. 0.41% actual). The portfolio maintains low LGD and the LGD model underestimates (0.86% estimated vs. 1.42% actual). Increased Forced Sale Discount (FSD) and lower expected Probability of Possession given default (PPD) causes LGD underestimation. FSD and PPD make major components in the expected LGD calculation for the new to default book on which numbers have been reported.
  - 5 year averages of actual defaults are taken from 5 snapshot months of which Nov'14 is based on the older generation of models and Nov'15, Nov'16, Nov'17 & Nov'18 are based on the new CRD IV complaint models (G4).
  - For accounts where actual sale cost was not available, an average sale cost is used while calculating Actual LGD.
  - G4 PPD model was developed on the total default population base whereas this analysis is done at the point of collateral entering into default. The total default base contains a mixed set of collateral, ranging from recent defaults to the ones in default for a longer time. We expect the predicted PPD (and hence LGD as well) for collateral defaulting at any month to be lower compared to the total default base.

#### Qualifying Revolving Retail

- This constitutes UK Cards and UK Current Account portfolios. The estimated PDs rank order well across all 3 portfolios and at an overall level.
  - For UK Cards, a slight underestimation is observed in the PD model driven by the high risk bands - 2.30% estimated vs. 2.40% actual at an overall level. However, an additional layer of conservatism is applied through Regulatory PD buffers in the capital calculation, so overall PD is still conservative. The LGD model is non-conservative with an under-estimation (69.6% estimated vs. 74.7% actual). The primary driver of this is that the volume of accounts debt-sold in 2019 vs. 2018 have increased by 40%, largely driven by the one off vulnerable bulk sale and increased Informal Arrangements (IA) sale. Given current LGD model construct does not account for recoveries from bulk sale income it means actual LGD is higher, as we are selling these accounts sooner than model initially values them. However, Downturn LGD used for capital calculation is conservative.
  - For UK Current Account, PD Model is accurate at overall level (0.57% estimated vs. 0.57% actual). The LGD model overestimates (69.54% estimated vs. 62.65% actual). 5 year averages of actual defaults are taken from 5 snapshot months of which Nov'14 is based on the older generation of models and Oct'15, Oct'16, Oct'17 are Oct'18 are based on the new CRD IV complaint models (G2).

#### Other Retail

- This covers UK Barclayloan portfolio. A new set of CRD IV compliant models were approved by the PRA and implemented in Jul'19. However, the current back testing report is based on the models which were in production as of Nov'18.
- The PD rank ordering does not hold for a few bands and the model underestimates (3.14% estimated vs. 3.36% actual) at an overall level. The LGD model underestimates (77.33% expected vs. 85.34% actual) at an overall level due to bulk write-off in Jul'19 (operational changes) and execution of a Debt sale in Nov'19, worsening off the observed LGD.

### Credit risk mitigation

The Barclays Bank UK Group employs a range of techniques and strategies to actively mitigate credit risks. These can broadly be divided into three types:

- netting and set-off
- collateral
- risk transfer.

Barclays Bank UK Group has detailed policies in place to maintain that credit risk mitigation is appropriately recognised and recorded. The recognition of credit risk mitigation is subject to a number of considerations including legal certainty of enforceability and effectiveness, that the valuation and liquidity of the collateral is adequately monitored, and that the value of the collateral is not materially correlated with the credit quality of the counterparty.

All three types of credit risk mitigation may be used by different areas of Barclays Bank UK Group for exposures with a full range of counterparties. For instance, businesses may take property, cash or other physical assets as collateral for exposures to retailers, property companies or other client types.

#### Netting and set-off

In most jurisdictions in which the Barclays Bank UK Group operates, credit risk exposures can be reduced by applying netting and set-off. In exposure terms, this credit risk mitigation technique has the largest overall impact on net exposure to derivative transactions, compared with other risk mitigation techniques.

For derivative transactions, the Barclays Bank UK Group's normal practice is to enter into standard master agreements with counterparties (e.g. ISDAs). These master agreements typically allow for netting of credit risk exposure to a counterparty resulting from derivative transactions against the obligations to the counterparty in the event of default, and so produce a lower net credit exposure. These agreements may also reduce settlement exposure (e.g. for foreign exchange transactions) by allowing payments on the same day in the same currency to be set-off against one another.

Under IFRS, netting is permitted only if both of the following criteria are satisfied:

- the entity currently has a legally enforceable right to set off the recognised amounts
- the entity intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Under US GAAP, netting is also permitted, regardless of a currently legally enforceable right of set-off and/or the intention to settle on a net basis, where there is a counterparty master agreement that would be enforceable in the event of bankruptcy.

#### Collateral

The Barclays Bank UK Group has the ability to call on collateral in the event of default of the counterparty, comprising:

- **home loans:** a fixed charge over residential property in the form of houses, flats and other dwellings. The value of collateral is impacted by property market conditions which drive demand and therefore value of the property. Other regulatory interventions on ability to repossess, longer period to repossession and granting of forbearance may also affect the collateral value.
- **wholesale lending:** a fixed charge over commercial property and other physical assets, in various forms.
- **other retail lending:** includes charges over motor vehicle and other physical assets; second lien charges over residential property, which are subordinate to first charges held either by the Barclays Bank UK Group or by another party; and finance lease receivables, for which typically the Barclays Bank UK Group retains legal title to the leased asset and has the right to repossess the asset on the default of the borrower.
- **derivatives:** the Barclays Bank UK Group also often seeks to enter into a margin agreement (e.g. Credit Support Annex) with counterparties with which the Barclays Bank UK Group has master netting agreements in place. These annexes to master agreements provide a mechanism for further reducing credit risk, whereby collateral (margin) is posted on a regular basis (typically daily) to collateralise the mark to market exposure of a derivative portfolio measured on a net basis. The Barclays Bank UK Group may additionally negotiate the receipt of an independent amount further mitigating risk by collateralising potential mark to market exposure moves.
- **reverse repurchase agreements:** collateral typically comprises highly liquid securities which have been legally transferred to the Barclays Bank UK Group subject to an agreement to return them for a fixed price.
- **financial guarantees and similar off-balance sheet commitments:** cash collateral may be held against these arrangements.

#### Risk transfer

A range of instruments including guarantees can be used to transfer credit risk from one counterparty to another. These mitigate credit risk in two main ways:

- if the risk is transferred to a counterparty which is more creditworthy than the original counterparty, then overall credit risk is reduced;
- where recourse to the first counterparty remains, both counterparties must default before a loss materialises. This is less likely than the default of either counterparty individually so credit risk is reduced.

Risk transfer can also be used to reduce risk concentrations within portfolios lowering the impact of stress events.

Risk transfer transactions are undertaken with consideration to whether the collateral provider is correlated with the exposure, the credit worthiness of the collateral provider and legal certainty of enforceability and effectiveness. Where credit risk mitigation is deemed to transfer credit risk, this exposure is appropriately recorded against the credit risk mitigation provider.

In exposure terms, risk transfer is used most extensively as a credit risk mitigation technique for wholesale loans and derivative financial instrument

# Barclays' approach to managing risks

## Management counterparty credit risk and credit risk mitigation techniques

### Off-balance sheet risk mitigation

Barclays Bank UK Group applies fundamentally the same risk management policies for off-balance sheet risks as it does for its on-balance sheet risks. In the case of commitments to lend, counterparties/customers will be subject to the same credit management policies as for loans and advances. Collateral may be sought depending on the strength of the counterparty and the nature of the transaction.

### Recognition of credit risk mitigation in capital calculations

Credit risk mitigation is used to reduce credit risk associated with an exposure, which may reduce potential losses in the event of obligor default or other specified credit events.

Credit risk mitigation that meets certain regulatory criteria may be used to improve risk parameters and reduce RWA consumption against a given obligor. Collateral that meets these regulatory conditions is referred to as eligible collateral. Eligibility criteria are specified in articles 195 to 204 of the Capital Regulations Requirement (CRR).

Barclays Bank UK Group's policies and standards set out criteria for the recognition of collateral as eligible credit risk mitigation and are designed to be fully consistent with all applicable local regulations and regulatory permissions.

Where regulatory capital is calculated under AIRB regulations, the benefit of collateral is generally taken by adjusting LGDs. For standardised portfolios, the benefit of collateral is taken using the financial collateral comprehensive method: supervisory volatility adjustments approach.

For instruments that are deemed to transfer credit risk, in AIRB portfolios the protection is generally recognised by using the PD and LGD of the protection provider.

For exposures treated under the standardised approach, the impact of eligible credit risk mitigation is primarily recognised by reducing the EAD associated with the exposure that benefits from the mitigation.

### Managing concentrations within credit risk mitigation

Credit risk mitigation taken by Barclays Bank UK Group to reduce credit risk may result in credit or market risk concentrations.

Guarantees that are treated as eligible credit risk mitigation are marked as an exposure against the guarantor and aggregated with other credit exposure to the guarantor. Limit monitoring at the counterparty level is then used for monitoring of concentrations in line with Barclays Bank UK Group policy.

Commercial real estate lending is another potential source of concentration risk arising from the use of credit risk mitigation. The portfolio is regularly reviewed to assess whether a concentration type exists, and portfolio limits are in place to control the level of exposure to commercial, residential, investment and development activity. See page 83 for more information on collateral, valuation and monitoring of concentrations.

### Counterparty credit risk

#### Derivative counterparty credit exposures

Barclays Bank UK Group enters into financial instruments through Barclays Bank UK Group Treasury that are traded or cleared on an exchange, including interest rate swaps, futures and options on futures. Holders of exchange traded instruments provide daily margins with cash or other securities at the exchange, to which the holders look for ultimate settlement. Barclays Bank UK Group Treasury enters into financial instruments taking into account regulatory exemption rules for the ring-fenced bank to manage predominantly hedging of interest rate in the banking book and cross currency exposures, with market counterparties.

Barclays Bank UK Group also enters into financial instruments that are traded over the counter, rather than on a recognised exchange. These instruments arise mainly from standardised transactions in derivative markets. In most cases, industry standard documentation is used, most commonly in the form of a master agreement, with individual transaction confirmations. The existence of a signed master agreement is intended to give Barclays Bank UK Group protection in situations where Barclays Bank UK Group's counterparty is in default.

Counterparty credit exposure arises from the risk that parties are unable to meet their payment obligations under certain financial contracts such as derivatives, securities financing transactions (e.g. repurchase agreements), or long settlement transactions.

A Monte Carlo simulation engine is used to estimate the Potential Future Exposure (PFE) to derivative and securities financing counterparties. The exposure simulation model simulates future market states and the MTM of the derivative transactions under those states. Simulated exposures including the effect of credit mitigants such as netting, collateral and mandatory break clauses can then be generated.

Credit limits for CCR are assessed and allocated using the PFE measure. A number of factors are taken into account when setting credit limits for individual counterparties, including but not limited to the credit quality and nature of the counterparty, the rationale for the trading activity entered into and any wrong-way risk considerations.

The expected exposures generated by this engine are also used as an input into both internal and regulatory capital calculations covering CCR.

'Wrong-way risk' in a trading exposure arises when there is significant correlation between the underlying asset and the counterparty, which in the event of default would lead to a significant MTM loss to the counterparty. Specific wrong-way risk trades, which are self-referencing or reference to other entities within the same counterparty group, require approval by a senior credit officer. The exposure to the counterparty will reflect the additional risk generated by these transactions.

#### Derivative CCR (credit value adjustments)

As Barclays Bank UK Group participates in derivative transactions it is exposed to CCR, which is the risk that a counterparty will fail to make the future payments agreed in the derivative contract. This is considered as a separate risk to the volatility of the MTM payment flows.

The counterparty risk arising under derivative transactions is taken into account when reporting the fair value of derivative positions. The adjustment to the value is known as credit value adjustment (CVA). It is the difference between the value of a derivative contract with a risk-free counterparty and that of a contract with the actual counterparty. This is equivalent to the cost of hedging the counterparty risk in the Credit Default Swap (CDS) market.

Barclays Bank UK Group uses the standardised approach to calculate CVA capital charge: This approach takes account of the external credit rating of each counterparty, and incorporates the effective maturity and EAD from the calculation of the CCR.

#### Derivative netting and collateral arrangements

Credit risk from derivatives is mitigated where possible through netting agreements whereby derivative assets and liabilities with the same counterparty can be offset. Barclays Bank UK Group policy requires all netting arrangements to be legally documented. The ISDA Master Agreement is Barclays Bank UK Group's preferred agreement for documenting OTC derivatives. It provides the contractual framework within which dealing activities across a full range of OTC products are conducted, and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or other predetermined events occur. The majority of Barclays Bank UK Group's OTC derivative exposures are covered by ISDA master netting and ISDA CSA collateral agreements.

Collateral is obtained against derivative assets, depending on the creditworthiness of the counterparty and/or nature of the transaction. Any collateral taken in respect of OTC trading exposures will be subject to a 'haircut', which is negotiated at the time of signing the collateral agreement. A haircut is the valuation percentage applicable to each type of collateral and will be largely based on liquidity and price volatility of the underlying security. The collateral obtained for derivatives is predominantly either cash, direct debt obligation government (G14+) bonds denominated in the domestic currency of the issuing country, debt issued by supranationals or letters of credit issued by an institution with a long-term unsecured debt rating of A+/A3 or better. Where Barclays Bank UK Group has ISDA master agreements, the collateral document will be the ISDA CSA. The collateral document must give Barclays Bank UK Group the power to realise any collateral placed with it in the event of the failure of the counterparty.

# Barclays' approach to managing risks

## Management of market risk

### Market risk (audited)

The risk of loss arising from potential adverse changes in the value of the firm's assets and liabilities from fluctuation in market variables including, but not limited to, interest rates, foreign exchange, equity prices, commodity prices, credit spreads, implied volatilities and asset correlations.

### Overview

Market Risk within Barclays Bank UK Group arises from the risk management of the assets held within the liquidity pool. As a result, the market risk in Barclays Bank UK Group is minimal. Transactions carrying market risk are executed by the Barclays Bank UK Group Treasury function.

### Organisation and structure



### Roles and responsibilities

The objectives of market risk management are to:

- understand and control market risk by robust measurement, limit setting, reporting and oversight
- control market risk within the allocated appetite.

To meet the above objectives, a governance structure is in place to manage these risks consistent with the ERMF. See page 57-60 on risk management strategy, governance and risk culture.

The Barclays Bank UK PLC Board Risk Committee recommends market risk appetite to the Barclays Bank UK PLC Board for their approval, within the parameters set by the Barclays PLC Board. The Barclays Bank UK Group CRO confirms the Barclays Bank UK Group market risk appetite with the Barclays Group CRO.

The Market Risk Committee approves and makes recommendations concerning the Barclays Group-wide market risk profile. This includes overseeing the operation of the Market Risk Framework and associated standards and policies; reviewing market or regulatory issues and limits and utilisation. The committee is chaired by the Barclays Group Market Risk Principal Risk Lead.

The Barclays Bank UK Group Treasurer is accountable for all market risks associated with its activities, whilst the Barclays Bank UK Group CRO is the Senior Manager accountable for the creation, maintenance and implementation of the risk control framework for market risk.

#### Risk management in the setting of strategy

Mandate and scales are set to control levels of market risk and maintain the Barclays Bank UK Group remains within the BRC approved risk appetite. The Barclays Bank UK Group participates in an annual Barclays Group-wide stress testing exercise which aims to simulate the dynamics of exposures across the Barclays Bank UK Group and cover all risk factors. The exercise is also designed to measure the impact to the Barclays Bank UK Group's fundamental business plan, and is used to manage the wider Group's strategy.

See page 64 for more detail on the role of risk in the setting of strategy.



# Barclays' approach to managing risks

## Management of market risk

### Market risk culture

Market risk managers are independent from the businesses they cover, and their line management reports into the CRO. This embeds a risk culture with strong adherence to limits that support the Barclays Bank UK Group -wide risk appetite. See page 60 for more detail on risk culture.

### Management of market risk, mitigation and hedging policies

The governance structure helps maintain all market risks that the Barclays Bank UK Group is exposed to are well managed and understood. Traded market risk is generated primarily as a result of liquidity buffer management activities. Barclays Bank UK Group Treasury supports the businesses in managing their interest rate risk. Positions will contribute both to market risk limits and regulatory capital if relevant.

As part of the continuous monitoring of the risk profile, Market Risk meets with the businesses to discuss the risk profile on a regular basis. The outcome of these reviews includes further detailed assessments of event risk via stress testing, risk mitigation and risk reduction.

### Market risk measurement

#### Market risk management measures

A range of complementary approaches to measure market risk are used which aim to capture the level of losses that the Barclays Bank UK Group is exposed to due to unfavourable changes in asset prices. The primary tools to control Barclays UK Plc's exposures are:

Measure	Description
<b>Management Value at Risk (VaR)</b>	An estimate of the potential losses that might arise due to liquid risk factors from extreme market moves or scenarios.
<b>Primary stress tests</b>	An estimate of the potential losses that might arise due to liquid risk factors from extreme market moves or scenarios.
<b>Secondary stress tests</b>	An estimate of the potential losses that might arise due to illiquid risk factors from extreme market moves or scenarios.
<b>Business scenario stresses</b>	Multi-asset scenario analysis of extreme, but plausible events that may simultaneously impact Market Risk exposures across all primary and secondary stresses.

The scope of Management VaR is what the Barclays Bank UK Group deems as material market risk exposures which may have a detrimental impact on the performance of the trading business.

Stress testing and scenario analysis are also an important part of the risk management framework, to capture potential risk that may arise in severe but plausible events.

#### Management VaR

Management VaR estimates the potential loss arising from unfavourable market movements, over one day for a given confidence level. VaR is an estimate of the potential loss arising from unfavourable market movements if the current positions were to be held unchanged for one business day. For internal market risk management purposes, a historical simulation methodology with a two-year equally weighted historical period, at the 95% confidence level is used for all trading books and some banking books. Risk factors driving VaR are grouped into key risk types as summarised below:

Risk factor	Description
<b>Interest rate</b>	Risk arises from changes in the level or shape of interest rate curves can impact the price of interest rate sensitive assets, such as bonds and derivatives instruments. For example, the price of an interest rate swap will vary due to changes in the absolute level of interest rates and/or in the shape of the yield curve.
<b>Foreign exchange</b>	Risk arises from changes in foreign exchange rates and volatilities.

In some instances, historical data is not available for particular market risk factors for the entire look-back period, for example, complete historical data would not be available for our equity security following an initial public offering. In these cases, market risk managers will proxy the unavailable market risk factor data with available data for a related market risk factor.

The output of the management VaR model can be readily tested through back testing. This checks instances where actual losses exceed the predicted potential loss estimated by the VaR model. If the number of instances is higher than expected, where actual losses exceed the predicted potential loss estimated by the VaR model, this may indicate limitations with the VaR calculation, for example, a risk factor that would not be adequately captured by the model.

The management VaR model in some instances may not appropriately measure some market risk exposures, especially for market moves that are not directly observable via prices. Market risk managers are required to identify risks which are not adequately captured in VaR ('risks not in VaR' or 'RNIVs', discussed below).

When reviewing VaR estimates, the following considerations are taken into account:

- the historical simulation uses the most recent two years of past data to generate possible future market moves, but the past may not be a good indicator of the future
- the one-day time horizon may not fully capture the market risk of positions that cannot be closed out or hedged within one day
- VaR is based on positions as at close of business and consequently, it is not an appropriate measure for intra-day risk arising from a position bought and sold on the same day

# Barclays' approach to managing risks

## Management of market risk

- VaR does not indicate the potential loss beyond the VaR confidence level.

Limits are applied at the total level as well as by risk factor type, which are then cascaded down to particular trading desks and businesses by the market risk management function.

### Primary stress tests

Primary stress tests are key tools used by management to measure liquid market risks from extreme market movements or scenarios in each major trading asset class.

Stress testing provides an estimate of potential significant future losses that might arise from extreme market moves or scenarios. Primary stress tests apply stress moves to key liquid risk factors for each of the major trading asset classes, namely:

- interest rates: shock to the level and structure of interest rates and inflation across currencies
- foreign exchange: impact of unfavourable moves in currency prices and volatility

Primary stresses apply moves to liquid assets incorporating up to 10 days holding period. Shock scenarios are determined by a combination of observed extreme historical moves and forward looking elements as appropriate.

Primary stresses are calculated for each asset class on a standalone basis. Risk managers calculate several stress scenarios and communicate the results to senior managers to highlight concentrations and the level of exposures. Primary stress loss limits are applied across the trading businesses and is a key market risk control.

### Secondary stress tests

Secondary stress tests are key tools used by management to measure illiquid market risks from extreme market movements or scenarios in each major trading asset class.

Secondary stress tests are used in measuring potential losses arising from market risks that are not captured in the primary stress tests. These may relate to financial instruments or risk exposures which are not readily or easily tradable or markets that are naturally sensitive to a rapid deterioration in market conditions.

For each asset class, secondary stresses are aggregated to a single stress loss which allows the business to manage its liquid and illiquid risk factors. Limits against secondary stress losses are also applied, which allows the Barclays Bank UK Group to manage and control the level of illiquid risk factors.

Stresses are specific to the exposure held and are calibrated on both observed extreme moves and some forward-looking elements as appropriate.

### Business scenario stresses

Business scenario stresses are key tools used by management to measure aggregated losses across the entire trading book as a result of extreme forward-looking scenarios encompassing simultaneous shocks to multiple asset classes.

Business scenario stresses apply simultaneous shocks to all risk factors assessed by applying changes to foreign exchange rates, interest rates, credit spreads, commodities and equities to the entire portfolio, for example, the impact of a rapid and extreme slowdown in the global economy. The measure shows results on a multi-asset basis across all trading exposures. Business scenarios are used for risk appetite monitoring purposes and are useful in identifying concentrations of exposures and highlighting areas that may provide some diversification.

The estimated impacts on market risk exposures are calculated and reported by the market risk management function on a frequent and regular basis. The stress scenario and the calibration on the shocks are also reviewed by market risk managers periodically for its relevance considering any market environment.

Scenarios focusing on adverse global recession, deterioration in the availability of liquidity, contagion effects of a slowdown in one of the major economies, easing of global growth concerns, and a historical event scenario are examples of business scenarios. If necessary, market event-specific scenarios are also calculated, such as:

- a unilateral decision to exit the Eurozone by a member country
- the impact of a large financial institution collapse, or
- a disorderly exit of quantitative easing programmes, including unexpected rapid and continuous interest rate rises as a result.

### Regulatory view of traded positions

For the purposes of calculating capital requirements, Barclays Bank UK adopts a standardised approach and in contrast to other Group entities does not apply a regulatory VaR model.

For regulatory purposes, the trading book is defined as one that consists of all positions in CRD financial instruments and commodities held either with trading intent, or in order to hedge other elements of trading, and which are either free of any restrictive covenants on their tradability, or able to be hedged. A CRD financial instrument is defined as a contract that gives rise to both a financial asset of one party and a financial liability or equity instrument of another party.

All of the below regulatory measures, including the standardised approach, generate market risk capital requirements, in line with the regulatory requirements set out in the Capital Requirements Directive ('CRD IV') and Regulation. Positions which cannot be included in the trading book are included within the banking book and generate risk capital requirements in line with this treatment.

### Inclusion of exposures in the regulatory trading book

The Barclays Bank UK Group adheres to the Barclays Group Trading Book Policies, which define the minimum requirements a business must meet to run trading positions and the process by which positions are allocated to trading or banking books. Trading intent is a key element in deciding whether a position should be treated as a trading or banking book exposure.



# Barclays' approach to managing risks

## Management of market risk

Positions in the trading book are subject to market risk capital, computed using models where regulatory approval has been granted, otherwise the market risk capital requirement is calculated using standard rules as defined in the Capital Requirement Regulation (CRR), part of the CRD IV package. If any of the criteria specified in the policy are not met for a position, then that position must be allocated to the banking book.

As a ring-fenced body (RFB), the Barclays Bank UK Group is prohibited from conducting certain regulated activities ('excluded activities') and is subject to a number of 'prohibitions', including the participation in traded activities. One or more exceptions to an excluded activity and/or prohibition may be available. The use of exceptions must however be documented and reported to the PRA. The Barclays Bank UK Group manages the process via Excluded Activities and Prohibitions Order (EAPO) Policy and the Excluded Activities and Prohibitions Order (EAPO) Standard.

### Valuation standards

CRR article 105 defines regulatory principles which need to be applied to fair value assets and liabilities, in order to determine a prudent valuation.

The Prudent Valuation Adjustment (PVA) is applied to accounting fair values where there are a range of plausible alternative valuations. It is calculated in accordance with Article 105 of the CRR, and includes (where relevant) adjustments for the following factors: unearned credit spreads, close-out costs, operational risk, market price uncertainty, early termination, investing and funding costs, future administrative costs and model risk. The PVA includes adjustment for all fair valued financial instruments and commodities, irrespective of whether they are in the trading or banking book.

Page 138 of the Barclays Bank UK PLC Annual Report 2019 sets out the valuation control framework for accounting valuations and the related responsibilities of the Finance-product control valuations function and the Valuation Committee. This function and committee are also responsible for the oversight of the PVA and maintaining compliance with article 105 of the CRR.

### Management of risks not fully captured in models, including Risks not in VaR (RNIVs)

Barclays Bank UK Group's risk identification process captures risks that either have been observed to, or have the capacity to, produce material losses in normal and stressed market conditions. To maintain risk coverage, the range of core risks is identified following either market convention, regulatory guidance, or the specific historical experience of Barclays Bank UK Group and is considered as part of the new product processes.

In some instances, the Management and Regulatory VaR model may not appropriately measure some market risks, especially where market moves are not directly observable via prices. Barclays Bank UK Group has policies to apply add-ons where risks are not captured by the model. RNIVs refer to those core risks that are not captured, or not adequately captured, in VaR and SVaR. RNIVs can include:

- risks not fully captured elsewhere and/or illiquid risk factors such as cross-risks;
- basis risks;
- higher-order risks;
- calibration parameters, for instance to model parameter uncertainty; and
- potential losses in excess of fair valuation adjustments taken in line with the Valuation Control Framework. Please see Note 15 in the Barclays Bank UK PLC Annual Report 2019 'Fair value of assets and liabilities' for more details on fair value adjustments.

The treatment of RNIVs follows whether the risks are considered VaR type or non-VaR type, which depends on, and can change with, the evolving state of financial markets:

- **VaR-type RNIVs:** Typically represent risks that are not well captured in VaR, mainly because of infrastructure limitations or methodology limitations. In this instance two metrics are calculated, a VaR RNIV and a SVaR RNIV, using the same confidence level, capital horizon and observation period as VaR and SVaR respectively and are capitalised using the same multipliers as VaR and SVaR
- **Non VaR-type RNIVs:** Typically represent risks which would not be well captured by any VaR model either because it represents an event not historically observed in the VaR time series (e.g., currency peg break) or a market risk factor which is not seen to move frequently (e.g. correlation). These are typically estimated using stress scenarios. The stress methodology is calibrated equivalently to at least 99% confidence level and a capital horizon of at least 10 days over an appropriate observation period, depending on the liquidity of the risk. For the purpose of regulatory capital, the capital charge is equal to the loss arising from the stress test except when these risks are already adequately captured elsewhere e.g. via the IRC or CRM models, which are intended to capture certain risks not adequately covered by VaR

For regulatory capital these RNIVs are aggregated without any offsetting or diversification benefit.

### Market risk control

The metrics that are used to measure market risk are controlled through the implementation of appropriate limit frameworks. Limits are set at the total Barclays Bank UK Group level, asset class level, for example, interest rate risk. Stress limits and book limits, such as foreign exchange and interest rate sensitivity limits, are also used to control risk appetite.

Barclays Bank UK Group-wide limits are reported to the Barclays Bank UK Group BRC and are termed B-level limits for total management VaR, primary stress and secondary stresses and business scenarios. These are then cascaded down by risk managers in order to meet the Barclays Bank UK Group-wide risk appetite.

Throughout 2019, Barclays Bank UK Group Market Risk continued its ongoing programme of control testing and conformance testing on the trading businesses' market risk management practices. These reviews are intended to verify the business's conformance with the Market Risk Control Framework and best practices.

### Market risk reporting

Market risk managers produce a number of detailed and summary market risk reports daily, weekly, fortnightly and monthly for business and risk managers. Where relevant on a Barclays Bank UK Group-wide basis, these are sent to Barclays Bank UK Group Risk Committee for review and a risk summary is presented at Barclays Bank UK Group Market Risk Committee. The overall market risk profile is also presented to Barclays Bank UK Group BRC on a regular basis.

# Barclays' approach to managing risks

## Management of securitisation exposures

### Management of Securitisation Exposures

This section discloses information about the Barclays Bank UK Group's securitisation activities distinguishing between the various functions performed in supporting its customers and managing its risks. It includes traditional securitisations as well as synthetic transactions effected through the use of derivatives or guarantees.

For the purposes of Pillar 3 disclosures on pages 51-54 a securitisation is defined as a transaction or scheme where the payments are dependent upon the performance of a single exposure or pool of exposures and where the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme. Such transactions are ordinarily undertaken to transfer risk for the Barclays Bank UK Group or on behalf of a client.

Certain transactions undertaken by the Barclays Bank UK Group are not disclosed in the quantitative section (pages 51-54) as they do not fall under the regulatory securitisation framework (the new securitisation Regulation (EU) 2017/2402 (the Securitisation Regulation) and Regulation (EU) 2017/2401 (amendments to Capital Requirements Regulation or CRR)). These include funding transactions for the purposes of generating term liquidity, and certain government guaranteed transactions.

### Objectives of securitisation activities

In the course of its business, the Barclays Bank UK Group has undertaken securitisations of its own originated assets.

The Barclays Bank UK Group has securitised its own originated assets in order to manage the Barclays Bank UK Group's credit risk position and to generate term funding for the Barclays Bank UK Group balance sheet.

### The role and involvement of the Barclays Bank UK Group in securitisations in 2019

Barclays Bank UK Group adopts the following roles in the securitisation processes in which it is involved:

#### Originator of assets prior to securitisation

The Barclays Bank UK Group securitises assets originated in the ordinary course of business including residential mortgages and credit card receivables.

#### Purchaser of third party securitisations

The Barclays Bank UK Group may purchase third party securitisations. The Barclays Bank UK Group also funds on its own balance sheet securitisations.

#### Funding transactions to generate term liquidity

Secured funding forms one of the key components of the Barclays Bank UK Group's diversified funding sources providing access to the secured wholesale market and complementing the diversification of funding by maturity, currency and geography. The Barclays Bank UK Group issues ABS and covered bonds secured primarily by customer loans and advances.

The Barclays Bank UK Group currently manages three key, on-balance sheet asset backed funding programmes to obtain term financing for mortgage loans and credit card receivables. Retained issuances from these programmes also support Barclays Bank UK Group's to access central bank liquidity and funding. The UK regulated covered bond and the residential mortgage master trust securitisation programmes both utilise assets originated by the Barclays Bank UK Group's UK residential mortgage business. The third programme is a credit card master trust securitisation and uses receivables from the Barclays Bank UK Group's UK credit card business.

#### Other ancillary transaction roles to securitisation

The Barclays Bank UK Group remain as the servicer of the securitised assets, and in most cases, acting as the cash manager and account bank provider for its own secured funding programmes too.

The Barclays Bank UK Group also provides most of the derivative transactions to its own secured funding programmes.

### Securitisation risks, monitoring and hedging policies

Capital requirements against securitisation exposures are subject to a separate framework under CRR to account for the particular characteristics of this asset class. For risk management purposes, however, a securitisation is aligned to the risk type to which it gives rise.

#### Credit risks

In a securitisation structure, the payments are dependent upon the performance of a single exposure or pool of exposures. As these underlying exposures are usually credit instruments, the performance of the securitisation is exposed to credit risk.

Securitisation exposures are subject to the Barclays Bank UK Group credit risk policies and standards and business level procedures. This includes the requirement to review in detail each transaction at a minimum on an annual basis. As collateral risk is the primary driver the analysis places a particular focus on the underlying collateral performance, key risk drivers, servicer due diligence and cash flows, and the impact of these risks on the securitisation notes. The risk is addressed through the transaction structure and by setting an appropriate modelled tolerance level. Structural features incorporate wind-down triggers set against factors including, but not limited to, defaults/charge-offs, delinquencies, excess spread, dilution, payment rates and yield, all of which help to mitigate potential credit deterioration. Qualitative aspects such as counterparty risk and ancillary issues (operational and legal risk) are also considered. Changes to the credit risk profile of securitisation exposures will also be identified through ongoing transaction performance monitoring. In addition, periodic stress tests of the portfolio as part of ongoing risk management are conducted as well as in response to Barclays Bank UK Group-wide or regulatory requests.

The principal committee responsible for the monitoring of the credit risk arising from securitisations is BUK Wholesale Risk Management Committee (WRMC).

# Barclays' approach to managing risks

## Management of securitisation exposures

### Market and liquidity risks

Market risk for securitised products is measured, controlled and limited through a suite of VaR, non-VAR and stress metrics in accordance with the Barclays Bank UK Group's market risk policies and procedures. The key risks of securitisation structures are interest rate, credit, spread, prepayment and liquidity risk. Interest rate and spread risk are hedged with standard liquid interest rate instruments (including interest rate swaps, US Treasuries and US Treasury futures). The universe of hedging instruments for credit and prepayment risk is limited and relatively illiquid, resulting in basis risks.

### Hedging

Securitisation and re-securitisation exposures benefit from the relative seniority of the exposure in the capital structure. Due to lack of availability in the credit default swap market for individual asset backed securities, there are no material CDS hedge counterparties relating to the securitisation and re-securitisation population.

### Operational risks

Operational risks are incurred in all of the Barclays Bank UK Group's operations. In particular, all securitised (and re-securitised) assets are subject to a degree of risk associated with documentation and the collection of cash flows.

In providing warehouse financing, the Barclays Bank UK Group incurs potential contingent operational risks related to representations and warranties should there be a need to foreclose on the line and it later be discovered that the underlying loans were not underwritten to agency agreed criteria. Such risks are mitigated by daily collateral margining and ready agency bids. Market risk is also mitigated by employing forward trades.

The Operational Risk Review Forum oversees the management of operational risks for the entire range of the Barclays Bank UK Group's activities.

## Rating methodologies, ECAIs and RWA calculations

RWAs reported for securitised and re-securitised banking book and trading book assets at 31 December 2019 are calculated in line with CRR and UK PRA rules and guidance.

The Barclays Bank UK Group employs eligible ratings issued by nominated External Credit Assessment Institutions (ECAIs) to risk weight its securitisation and re-securitisation exposure where their use is permitted. Ratings are considered eligible for use based on their conformance with the internal rating standard which is compliant with both CRR and European Credit Rating Agency regulation. The ECAIs nominated by Barclays Bank UK Group for this purpose are Standard & Poor's, Moody's, Fitch, DBRS and Kroll.

As required by CRR, the Barclays Bank UK Group uses credit ratings issued by these ECAIs consistently for all exposures within the securitisation exposure class. For that reason, there is no systematic assignment of particular agencies to types of transactions within the securitisation exposure class.

## Summary of the accounting policies for securitisation activities

Certain Barclays Bank UK Group-sponsored entities have issued debt securities or have entered into funding arrangements with lenders in order to finance specific assets. An entity is consolidated by the Barclays Bank UK Group when the Barclays Bank UK Group has control over the entity. The Barclays Bank UK Group controls an entity if it has all of the three elements of control which are i) power over the entity; and ii) exposure, or rights, to variable returns from its involvement with the entity; iii) the ability to use its power over the entity to affect the amount of the Barclays Bank UK Group returns.

The consolidation treatment must be initially assessed at inception and is reassessed if facts and circumstances indicate that there are changes to one or more of the three elements of control.

Where the securitisation entity is consolidated by the Barclays Bank UK Group such that the balance sheet includes the assets held for securitisation prior to and post transfer to the securitisation entity, the assets will typically be part of a 'Hold to Collect' business model, and if the contractual cash flows characteristics are solely payments of principal and interest (SPPI), the assets will be measured at amortised cost. Otherwise assets will be measured at fair value where, for example, assets on initial recognition are expected to be securitised by a transfer to an unconsolidated Barclays Bank UK Group entity where derecognition will be met, or where the contractual cash flows characteristics of the asset are not SPPI. When securitised assets have been included on the Barclays Bank UK Group balance sheet it is necessary to consider whether those assets may be removed from the Barclays Bank UK Group balance sheet. Assets which have been transferred to third parties (i.e. an unconsolidated Barclays Bank UK Group entity), will remain on the Barclays Bank UK Group balance sheet, and treated as financings, unless the following criteria apply:

- substantially all the risks and rewards associated with the assets have been transferred, in which case, they are derecognised in full
- if a significant portion, but not all, of the risks and rewards have been transferred, the asset is derecognised entirely if the transferee has the ability to sell the financial asset, otherwise the asset continues to be recognised only to the extent of the Barclays Bank UK Group's continuing involvement.

Any financial support or contractual arrangements provided to unconsolidated entities, over securitised assets, would be recognised as a liability on balance sheet if it met the relevant IFRS criteria, or gave rise to a provision under IAS 37, and have to be disclosed (see Note 30 in the Barclays Bank UK PLC Annual Report 2019). Note, however, that the Barclays Bank UK Group has a Significant Risk Transfer policy that does not allow for any support to be provided to any transactions that fall under the securitisation framework.

Assets may be transferred to a third party through a legal sale or an arrangement that meets the 'pass-through' criteria where the substance of the arrangement is principally that the Barclays Bank UK Group is acting solely as a cash collection agent on behalf of the eventual recipients.

Where the transfer applies to a fully proportionate share of all or specifically identified cash flows, the relevant accounting treatment is applied to that proportion of the asset.

When the above criteria support the case that the securitisation should not be accounted for as financing, the transaction will result in sale treatment or partial continued recognition of the assets to the extent of the Barclays Bank UK Group's continuing involvement in those assets. Gains are recognised to the extent that proceeds that can be measured using observable market data exceed the assets derecognised.

# Barclays' approach to managing risks

## Management of securitisation exposures

Any retained interests, which will consist of loans and/or securities depending on the nature of the transaction, are valued in accordance with the Barclays Bank UK Group's accounting policies, as set out in the Barclays Bank UK PLC Annual Report 2019. To the extent that these interests are measured at fair value, they will be included within the fair value disclosures in the financial statements in the Annual Report. As outlined in these disclosures, key valuation assumptions for retained interests of this nature will include spreads to discount rates, default and recovery rates and prepayment rates that may be observable or unobservable.

In a synthetic securitisation transaction, the underlying assets are not sold into the relevant special purpose entity (SPE). Instead, their performance is transferred into the vehicle through a synthetic instrument such as a CDS, a credit linked note or a financial guarantee. The accounting policies outlined above will apply to synthetic securitisations.

# Barclays' approach to managing risks

## Management of treasury and capital risk

### Treasury and capital risk

**Liquidity risk:** The risk that the firm is unable to meet its contractual or contingent obligations or that it does not have the appropriate amount, tenor and composition of funding and liquidity to support its assets.

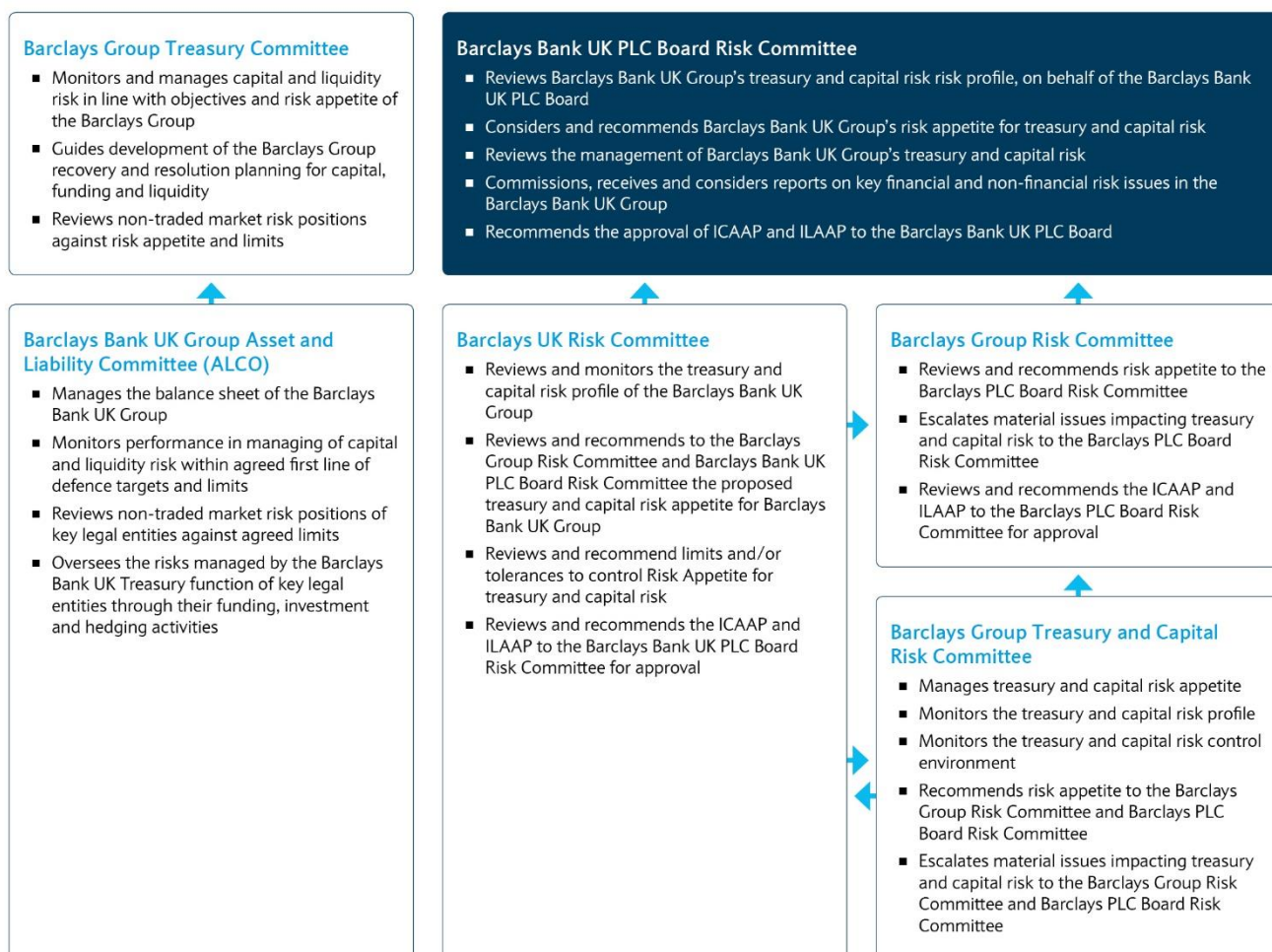
**Capital risk:** The risk that the firm has an insufficient level or composition of capital to support its normal business activities and to meet its regulatory capital requirements under normal operating environments or stressed conditions (both actual and as defined for internal planning or regulatory testing purposes). This also includes the risk from the firm's pension plans.

**Interest rate risk in the banking book:** The risk that the firm is exposed to capital or income volatility because of a mismatch between the interest rate exposures of its (non traded) assets and liabilities.

### Overview

Barclays Bank UK Group Treasury manages Treasury and Capital Risk exposure on a day-to-day basis with the Barclays Bank UK PLC Asset and Liability Committee (ALCO) acting as the principal management body. The Treasury and Capital Risk function is responsible for oversight and provide insight into key capital, liquidity and interest rate risk in the banking book (IRRBB) activities.

### Organisation and structure



### Liquidity risk management (audited)

#### Overview

The efficient management of liquidity is essential to Barclays Bank UK Group in order to retain the confidence of the financial markets and maintain the sustainability of the business. The liquidity risk control framework is used to manage all liquidity risk exposures under both BAU and stressed conditions. The framework is designed to maintain liquidity resources that are sufficient in amount, quality and funding tenor profile to support the liquidity risk appetite as expressed by the Barclays Bank UK PLC Board. The liquidity risk appetite is monitored against both internal and regulatory liquidity metrics.

#### Roles and responsibilities

The Treasury and Capital Risk function is responsible for the management and governance of the liquidity risk mandate, as defined by the Barclays Bank UK PLC Board. Treasury has the primary responsibility for managing liquidity risk within the set risk appetite. Both Risk and Treasury contribute to the production of the ILAAP.

The liquidity risk control framework is designed to deliver the appropriate term and structure of funding, consistent with the liquidity risk appetite set by the Board.



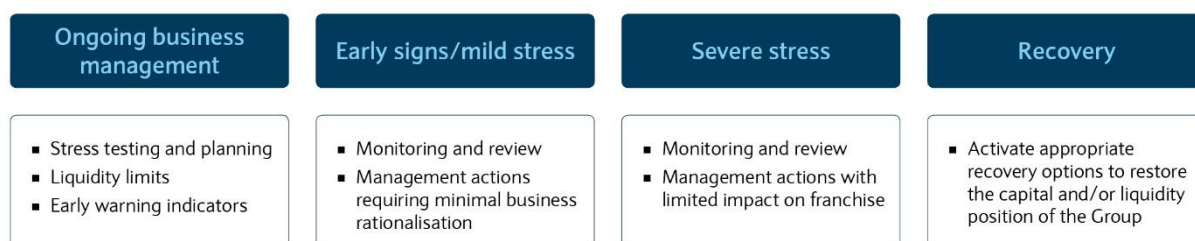
# Barclays' approach to managing risks

## Management of treasury and capital risk

The control framework incorporates a range of ongoing business management tools to monitor, limit and stress test Barclays Bank UK Group's balance sheet and contingent liabilities. Limit setting and transfer pricing are tools that are designed to control the level of liquidity risk taken and drive the appropriate mix of funds. In addition, Barclays Group maintains a Group Recovery Plan which includes application to Barclays Bank UK Group. Together, these tools reduce the likelihood that a liquidity stress event could lead to an inability to meet Barclays Bank UK Group's obligations as they fall due. The control framework is subject to internal conformance testing and internal audit review.

The Barclays Bank UK Board approves the Barclays Bank UK Group funding plan, internal stress tests, regulatory stress test results, and Barclays Bank UK contribution to the Barclays Group Recovery Plan. The Barclays Bank UK PLC Asset Liability Committee is responsible for monitoring and managing liquidity risk in line with Barclays Bank UK Group's funding management objectives, funding plan and risk framework. The Barclays UK Risk Committee monitors and reviews the liquidity risk profile and control environment, providing Second Line oversight of the management of liquidity risk. The Barclays Bank UK PLC Board Risk Committee reviews the risk profile, and annually reviews risk appetite and the impact of stress scenarios on the Barclays Bank UK Group funding plan/forecast in order to agree Barclays Bank UK Group's projected funding abilities.

Barclays Bank UK Group maintains a range of management actions for use in a liquidity stress. These are documented in the Barclays Group Recovery Plan. Since the precise nature of any stress event cannot be known in advance, the actions are designed to be flexible to the nature and severity of the stress event and provide a menu of options that can be drawn upon as required. The Barclays Group recovery plan also contains more severe recovery options to generate additional liquidity in order to facilitate recovery in a severe stress. Any stress event would be regularly monitored and reviewed using key management information by Treasury, Risk and business representatives.



### Risk Appetite and planning

Barclays has established a LRA stress test to represent the level of liquidity risk Barclays Bank UK Group chooses to take in pursuit of its business objectives and in meeting its regulatory obligations.

The key expression of the liquidity risk is through stress tests. It is measured with reference to the liquidity pool compared to anticipated net stressed outflows for each of five stress scenarios.

The BUK LRA stress test is approved by the Board. The LRA is monitored daily and is subject to formal review at least annually as part of the Individual Liquidity Adequacy Assessment Process (ILAAP).

Statement of Liquidity Risk Appetite: For 2019, the Board has approved that Barclays Bank UK Group will maintain an amount of available liquidity resources to meet modelled and prescribed regulatory liquidity stress outflows over a period of time (minimum buffer duration):

- 30 days in a Barclays specific stress
- 90 days in a market wide stress
- 30 days in a combined stress
- LCR 30 days minimum ratio 100% (Pillar 1 basis) and 100% (Pillar 2 basis)

The Barclays Bank UK Group LRA stress outflows are used to determine the minimum size of Barclays Bank UK Group Liquidity Pool. The Liquidity Pool represents those resources immediately available to meet outflows in a liquidity stress. In addition to the liquidity pool, the control framework and policy details available management actions that could be used to raise additional liquidity. Available management actions are assessed to determine their suitability, effectiveness and time to delivery.

### Liquidity limits

Barclays Bank UK Group manages limits on a variety of on and off-balance sheet exposures, a sample of which is shown in the table below. These limits serve to control the overall extent and composition of liquidity risk taken by managing exposure to each risk driver.

#### Examples of liquidity limits

FX Cashflow limits

Concentration limits

Minimum Cash Requirement

# Barclays' approach to managing risks

## Management of treasury and capital risk

### Early warning indicators

Barclays Treasury FLM monitor a range of market indicators for early signs of liquidity risk. Both market indicators and Barclays specific indicators are tracked, a sample of which is shown in the table below. These are designed to immediately identify the emergence of increased liquidity risk in order to maximise the time available to execute appropriate mitigating management actions. Early warning indicators are used as part of the assessment of whether to invoke the Barclays Group Recovery Plan, which provides a framework for how a liquidity stress would be managed.

#### Examples of early warning indicators

Change in composition of deposits	Deterioration in stress test surplus	Rising funding costs
Widening CDS spreads	Change in maturity profile	Stress in financial markets

### Recovery & resolution planning

Barclays maintains a Group Recovery Plan (GRP) designed to provide a framework to effectively manage a severe financial stress. The GRP is proportionate to the nature, scale and complexity of the business and is tested to ensure it is operationally robust. The GRP details the escalation and invocation process for the plan, including integration with i) BAU monitoring of capital and liquidity Early Warning Indicators (EWI) to detect signs of approaching financial stress, ii) existing processes within Barclays Treasury and Risk to respond to mild/moderate stress and iii) the governance process for formally invoking the GRP. The Plan would be formally invoked by Barclays Group Board and would be overseen and executed by the Barclays Crisis Leadership Team (BCLT), a flexible committee of senior management used to respond to all types of stress events. In invoking and executing the plan, the BCLT (in consultation with Barclays Group Board) would assess the likely impact of the stress event on Barclays Group and its subsidiaries and determine the appropriate response given the nature and severity of the stress. The GRP includes a range of recovery options to respond to financial stresses of varying severity and includes detailed information on financial and non-financial impacts of exercising the recovery options.

### Liquidity risk governance

The Barclays Bank UK Treasury function operates within the bounds of the liquidity risk control framework. The control framework describes liquidity risk management processes, associated policies, controls and how Barclays Group have implemented controls. This framework is used to manage liquidity risk within the Liquidity Risk Appetite. The framework is reviewed annually and supported by the internal architecture used to record and measure group wide liquidity metrics.

The Barclays Bank UK Board sets the Liquidity Risk Appetite based on the internal liquidity risk stress test (LRA) and external regulatory requirements, namely the Liquidity Coverage Ratio (LCR). The Liquidity Risk Appetite is represented as the level of risk Barclays Group chooses to take in pursuit of its business objectives and in meeting its regulatory obligations. The approved Liquidity Risk Appetite is implemented in line with the Enterprise Risk Management Framework.

### Capital risk management (audited)

#### Overview

Capital risk is managed through ongoing monitoring and management of the capital position, regular stress testing and a robust capital governance framework. The objectives of the framework are to maintain adequate capital for Barclays Bank UK Group to withstand the impact of the risks that may arise under normal and stressed conditions, and maintain adequate capital to cover current and forecast business needs and associated risks to provide a viable and sustainable business offering.

#### Organisation, roles and responsibilities

The management of capital risk is integral to Barclays Bank UK Group's approach to financial stability, and is embedded in the way Barclays Bank UK Group and its businesses operate. Treasury has the primary responsibility for managing and monitoring capital. The Barclays Bank UK Group Treasury and Capital Risk function provides oversight of capital risk and is an independent risk function that reports to the Barclays Bank UK Group CRO. Production of the Barclays Bank UK PLC ICAAP is the responsibility of Barclays Bank UK Group Treasury.

Capital risk management is underpinned by a control framework and policies. Capital plans reflect the capital management strategy and are implemented to deliver on Barclays Bank UK Group's objectives, which are aligned to those of Barclays Group. Barclays Bank UK Group-specific capital plans are developed in conformance with the Barclays Group control framework and policies for capital risk.

The Barclays Bank UK PLC Board approves the Barclays Bank UK Group capital plan, internal stress tests and results of regulatory stress tests. The Barclays Bank UK PLC Board also approves the recovery options documented in the Barclays Group recovery plan pertaining to Barclays Bank UK. The Barclays Bank UK PLC Asset and Liability Committee (ALCO) is responsible for monitoring and managing capital risk in line with Barclays Bank UK Group's capital management objectives, capital plan and risk frameworks. The Barclays UK Risk Committee monitors and reviews the capital risk profile and control environment, providing Second Line oversight of the management of capital risk. The Barclays Bank UK PLC Board Risk Committee reviews the risk profile, and annually reviews risk appetite and the impact of stress scenarios on the Barclays Bank UK Group capital plan/forecast in order to agree Barclays Bank UK Group's projected capital resources.

#### Capital risk management strategy

Barclays Bank UK Group's capital management strategy is driven by the strategic aims of Barclays Bank UK Group and the risk appetite set by the Barclays Bank UK PLC Board. Barclays Bank UK Group's objectives are achieved through well embedded capital management practices.

# Barclays' approach to managing risks

## Management of treasury and capital risk

### Capital planning and allocation

Barclays Bank UK Group assesses its capital requirements on multiple bases, with Barclays Bank UK Group's capital plan set in consideration of Barclays Bank UK Group's risk profile and appetite, strategic and performance objectives, regulatory requirements, international financial reporting standards (including IFRS 9), and market and internal factors, including the results of stress testing. The capital plan is managed on a top-down and bottom-up basis through both short-term and medium-term financial planning cycles, and is developed with the objective that Barclays Bank UK Group maintains an adequate level of capital to support its capital requirements. The planning process captures the impact of IFRS 9 to the capital plan, both including and excluding the impacts of transitional regulatory adjustments.

The PRA determines the regulatory capital requirements for the consolidated Barclays Bank UK Group. Under these regulatory frameworks, capital requirements are set in consideration of the level of risk that Barclays Bank UK Group is exposed to and the factors above, and are measured through both risk-based Risk Weighted Assets (RWAs) and leverage-based metrics. An internal assessment of Barclays Bank UK Group's capital adequacy is undertaken through the Internal Capital Adequacy Assessment Process (ICAAP) and is used to inform the capital requirements of Barclays Bank UK Group.

Barclays Bank UK Group expects to meet the minimum requirements for capital and leverage at all times and also holds an internal buffer sized according to Barclays Bank UK Group's assessment of capital risk.

### Monitoring and reporting

Capital is managed and monitored to maintain that Barclays Bank UK Group's capital plans remain appropriate and that risks to the plans are considered. Limits are set by Risk to control the level of capital risk within Barclays Bank UK Group. Barclays Bank UK Treasury are responsible for complying with these limits as the first line of defence for the management of capital risk. Limits are monitored through appropriately governed forums in the first and second line of defence.

To support compliance with risk limits, Barclays Bank UK Treasury monitor capital risks against firm-specific and macroeconomic early warning indicators and report on these to Barclays Bank UK PLC ALCO. This enables a consistent and objective approach to monitoring the capital outlook against the capital plan, and supports the early identification when outlooks deteriorate.

Capital management information is readily available to support Senior Management's strategic and day-to-day business decision making.

### Stress testing and risk mitigation

Internal group-wide stress testing is undertaken to quantify and understand the impact of sensitivities on the capital plan and capital ratios arising from stressed macroeconomic conditions. Recent economic, market and peer institution stresses are used to inform the assumptions developed for internal stress tests and to assess the effectiveness of mitigation strategies.

Barclays Bank UK Group will undertake stress tests prescribed by the BoE from 2020 onwards. These stress tests will inform decisions on the size and quality of the internal capital buffer required and the results will be incorporated into Barclays Bank UK Group capital plan to maintain adequacy of capital under normal and severe, but plausible stressed conditions.

Actions are identified as part of the stress tests that can be taken to mitigate the risks that may arise in the event of material adverse changes in the current economic and business outlook. As an additional layer of protection, Barclays Group Recovery Plan defines the actions and implementation strategies available to Barclays Bank UK Group to increase or preserve capital resources in the situation that a stress occurs that is more severe than anticipated.

### Capitalisation of legal entities

Barclays Bank UK Group and regulated legal entities are subject to prudential requirements from the PRA and/or local regulators. Sufficient capital needs to be available to meet these requirements both at a consolidated Group and individual legal entity level.

The capitalisation of legal entities is reviewed annually as part of the capital planning process and monitored on an ongoing basis.

### Transferability of capital

Surplus capital held in Barclays Bank UK Group entities is required to be repatriated to the immediate parent in the form of dividends and/or capital repatriation, subject to local regulatory requirements, exchange controls and tax implications. This approach provides optimal flexibility on the re-deployment of capital across legal entities. Capital is managed for Barclays Group as a whole as well as for its operating subsidiaries to allow fungibility and redeployment of capital while meeting relevant internal and regulatory targets at entity levels.

### Foreign exchange risk

Barclays Bank UK Group equity is held in Sterling. However, some capital resources (e.g. MREL) are denominated in foreign currencies. Changes in foreign currency exchange rates result in changes in the Sterling equivalent value of foreign currency denominated capital resources. As a result, some Barclays Bank UK Group's regulatory capital ratios are sensitive to foreign currency movements. Failure to appropriately manage Barclays Bank UK Group's balance sheet to take account of foreign currency movements could result in an adverse impact on regulatory capital.

### Pension risk

Barclays Bank UK PLC is a participating employer in the UK Retirement Fund (UKRF), whose assets and liabilities are currently held on the Barclays Bank PLC balance sheet. This participation is expected to cease in 2025. The nature of pension risk for Barclays Bank UK PLC is contingent, specifically on a Barclays Bank PLC default. Refer to Note 28 Staff Costs of the Barclays Bank UK PLC Annual Report 2019 for further detail.

All these risks are monitored and managed by the existing capital management framework as described above.



# Barclays' approach to managing risks

## Management of treasury and capital risk

### Interest rate risk in the banking book management

#### Overview

Interest rate risk in the banking book is driven by customer deposit taking and lending activities, investments in the liquid asset portfolio and funding activities. As per the Barclays Bank UK Group's policy to remain within the defined risk appetite, businesses and Treasury execute hedging strategies to mitigate the risks. However, the Barclays Bank UK Group remains susceptible to interest rate risk and other non-traded market risks from key sources:

- **interest rate and repricing risk:** the risk that net interest income could be adversely impacted by a change in interest rates, differences in the timing of interest rate changes between assets and liabilities, and other constraints on interest rate changes as per product terms and conditions.
- **customer behavioural risk:** the risk that net interest income could be adversely impacted by the discretion that customers and counterparties may have in respect of being able to vary their contractual obligations with the Barclays Bank UK Group. This risk is often referred to by industry regulators as 'embedded option risk'.
- **investment risks in the liquid asset portfolio:** the risk that the fair value of assets held in the liquid asset portfolio and associated risk management portfolios could be adversely impacted by market volatility, creating volatility in capital directly.

#### Organisation, roles and responsibilities

The Barclays Bank UK Group Asset and Liability Committee (ALCO), together with the Barclays Group Treasury Committee, are responsible for monitoring and managing IRRBB risk in line with the Barclays Bank UK Group's management objectives and risk frameworks. The Barclays UK Risk Committee and Treasury and Capital Risk Committee monitors and reviews the IRRBB risk profile and control environment, providing Second Line oversight of the management of IRRBB. The Barclays Bank UK PLC Board Risk Committee reviews the interest rate risk profile, including annual review of the risk appetite and the impact of stress scenarios on the interest rate risk of the Barclays Bank UK Group's banking books.

In addition, the Barclays Bank UK Group's IRRBB Policy sets out the processes and key controls required to identify all IRRBB risks arising from banking book operations, to monitor the risk exposures via a set of metrics with a frequency in line with the risk management horizon, and to manage these risks within agreed risk appetite and limits.

#### Management of IRRBB

The Barclays Bank UK Group executes hedging strategies to minimise IRRBB and maintain it within the agreed risk appetite, whilst actively managing the trade-off between return and associated risks in liquid asset portfolio. Therefore, the primary control for IRRBB is calculating the risk metrics described in the table below and monitoring risk exposure vs. defined limits. Limits are set at an aggregate business level and then cascaded down.

These measures of risk are typically dependent on an assumption of expected customer behaviour, to the extent that actual behaviour may vary from expectation this variation is measured using a supplementary set of behavioural stress measures.

#### Summary of measures for non-traded market risk

Measure	Definition
Earnings at risk (EaR)	A measure of the potential change in Net Interest Income (NII) due to an adverse interest rate movement over a predefined time horizon.
Economic value of equity (EVE)	A measure of the potential change in the present value of expected future cash flows due to an adverse interest rate movement, based on the existing balance sheet expected run-off profile.
Value at risk (VaR)	A measure of the potential loss of value arising from unfavourable market movements at a specific confidence level, if current non-traded positions were to be held unchanged for the predefined holding period.
Stress testing	A measure of the potential loss from an adverse shock to market variables

#### Annual Earnings at Risk (AEaR)

AEaR measures the sensitivity of net interest income over a one-year period. It is calculated as the difference between the estimated income using the expected rate forecast and the lowest estimated income following a parallel increase or decrease in interest rates.

The main model assumptions are:

- The balance sheet is kept at the current level, i.e. no growth is assumed, and run-off balances are reinvested to maintain a constant balance sheet
- Contractual positions are adjusted for an assumed behavioural profile, to align with the expected product life-cycle.

AEaR sensitivity is calculated on a monthly basis for the entire banking book, including the investments in liquid asset portfolio. The metric provides a measure of how interest rate risk may impact the Barclays Bank UK Group's earnings, providing a simple comparison between risk and returns. As AEaR provides a view on the next year's earnings impacts of interest rate risk, the Barclays Bank UK Group also monitors economic value metrics to complement the view as this captures the IRRBB impact of risk exposures beyond one year.

See page 17 for a review of AEaR in 2019.

#### Economic Value of Equity (EVE)

EVE calculates the change in the present value of the Barclays Bank UK Group's expected future cash-flows from a parallel upward or downward

# Barclays' approach to managing risks

## Management of treasury and capital risk

interest rate shock. Note that the EVE calculation measures sensitivity in terms of present value, while AEaR measures income sensitivity, and as such are complimentary.

The EVE measure is calculated on a monthly basis and is applied to the full life of transactions and hedges allowing the risk over the whole life of positions to be considered. It does not capture the impact of business growth or management actions, and is based on the expected balance sheet run-off profile.

### Value at Risk (VaR)

VaR is an estimate of the potential loss arising from unfavourable market movements if the current position were to be held unchanged for a set period. For internal market risk management purposes, a historical simulation methodology is used with a two-year equally weighted historical period, at a 95% confidence level.

Daily VaR is used to measure residual interest and foreign exchange risks within certain banking book portfolios.

Quarterly scaled VaR is used to measure risk in the liquid asset portfolio. The calculation uses a two-year historical period, a 95% confidence level and is scaled from daily to quarterly using a constant factor.

VaR is calculated on a daily basis and exposure is reported versus defined limits.

### Stress Loss

Securities in the buffer are subject to several market risk stresses designed to estimate potential losses in various scenarios. This includes, but is not limited to, an annual internal stress test, regulatory stress tests as well as various ad hoc exploratory exercises

# Barclays' approach to managing risks

## Management of operational risk

### Operational risk

The risk of loss to the firm from inadequate or failed processes or systems, human factors or due to external events (for example fraud) where the root cause is not due to credit or market risks.

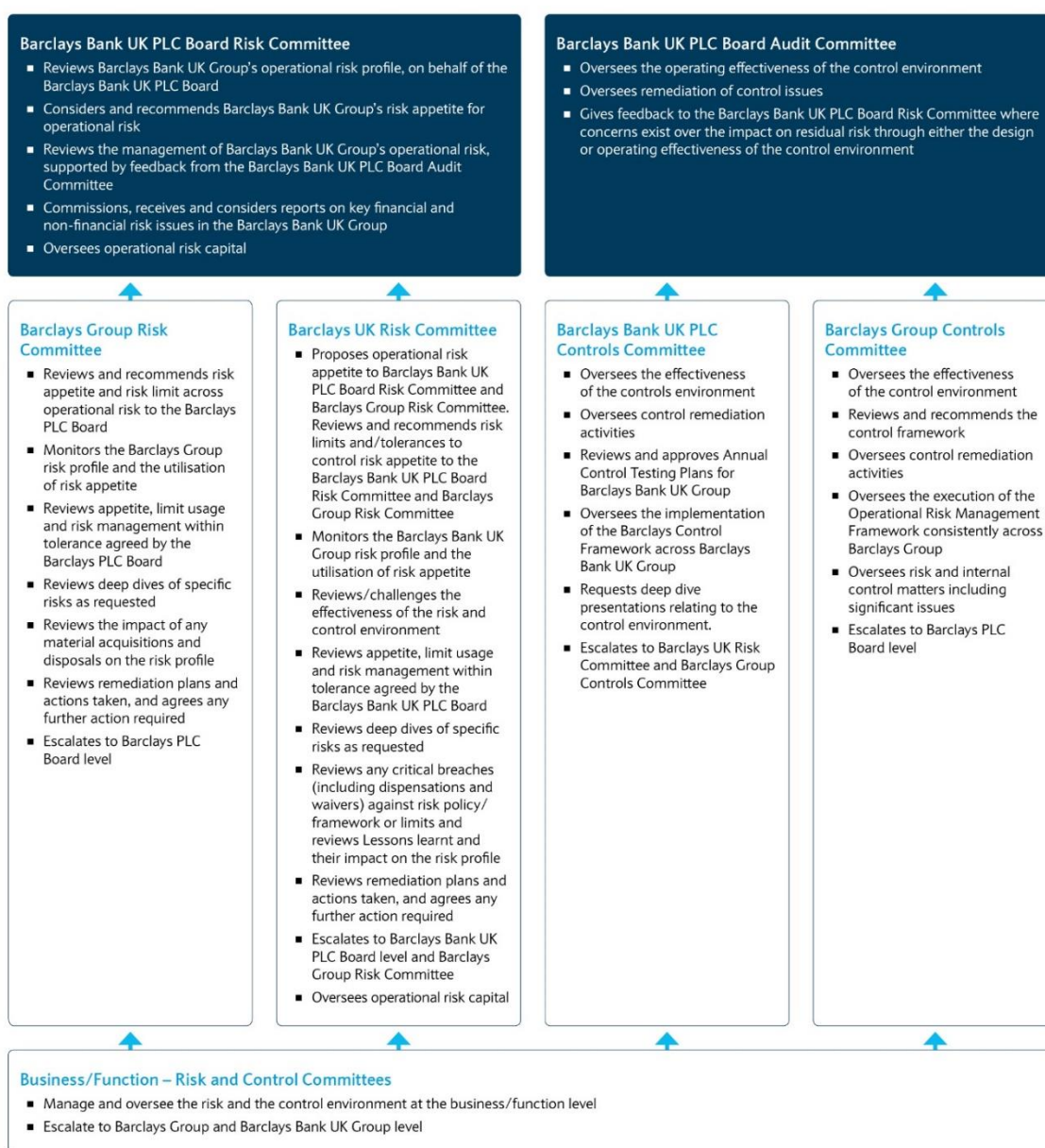
### Overview

The management of operational risk has three key objectives:

- Deliver an operational risk capability owned and used by business leaders
- Provide the frameworks and policies to enable management to meet their risk management responsibilities while the second line of defence provides robust, independent, and effective oversight and challenge.
- Deliver a consistent and aggregated measurement of operational risk that will provide clear and relevant insights, so that the right management actions can be taken to keep the operational risk profile consistent with Barclays Bank UK Group's strategy, the stated risk and stakeholder needs.

Barclays Bank UK Group is committed to operating within a strong system of internal controls that enables business to be transacted and risk taken without exposing Barclays Bank UK Group to unacceptable potential losses or reputational damages. Barclays Group has an overarching Enterprise Risk Management Framework (ERMF) that sets out the approach to internal governance which Barclays Bank UK Group has adopted.

### Organisation and structure



# Barclays' approach to managing risks

## Management of operational risk

### Operational risk categories

Operational risks are grouped into risk categories to support effective risk management, measurement and reporting. Operational risk comprises a number of specific risk categories. These operational risk categories are defined below defined as follow:

- **Data Management & Information Risk:** The risk that Barclays Bank UK Group's information is not captured, retained, used or protected in accordance with its value and legal and regulatory requirements.
- **Financial Reporting Risk:** The risk of a material misstatement or omission within Barclays Bank UK Group's external financial reporting, regulatory reporting or internal financial management reporting.
- **Fraud Risk:** The risk of financial loss when an internal or external party acts dishonestly with the intent to obtain an undue benefit, cause a loss to, or to expose either Barclays Bank UK Group or its customers and clients to a risk of loss.
- **Payments Process Risk:** The risk of payments being processed inaccurately, with delays or without appropriate authentication and authorisation. It includes payments processes from initiation through to external settlement, including any repairs or amendments.
- **People Risk:** The set of risks associated with employing and managing people, including compliance with regulations, appropriate resourcing for requirements, recruitment and development risks (excluding health and safety related risk).
- **Premises Risk:** The risk of business detriment or harm to people due to premises and infrastructure issues.
- **Physical Security Risk:** The risk of business detriment, financial loss or harm to people as a result of any physical security incident impacting Barclays Bank UK Group or a Barclays Bank UK Group employee - relating to harm to people, unauthorised access, intentional damage to premises or theft or intentional damage to moveable assets.
- **Supplier Risk:** The risk that is introduced as a consequence of obtaining services or goods from another legal entity, or entities, whether external or internal as a result of inadequate selection, inadequate management or inadequate exit management.
- **Tax Risk:** The risk of unexpected tax cost in relation to any tax for which Barclays Bank UK Group is liable, or of reputational damage on tax matters with key stakeholders such as tax authorities, regulators, shareholders or the public. Tax cost includes tax, interest or penalties levied by a taxing authority.
- **Technology Risk:** The risk of dependency on technological solutions and failure to develop, deploy and maintain technology solutions that are stable, reliable and deliver business needs.
- **Transaction Operations Risk:** The risk of customer/client or Barclays Bank UK Group detriment due to unintentional error and/or failure in the end-to-end process of initiation, processing and fulfilment of an interaction between a customer/client and Barclays Bank UK Group with an underlying financial instrument (e.g. mortgage, derivative product, trade product etc.) in consideration.
- **Execution:** The risk of failing to deliver and implement the agreed initiatives, priorities and business outcomes required to deliver Barclays Bank UK Group's Strategy within agreed timelines.

In addition to the above, operational risk encompasses risks associated with prudential regulation. This includes the risk of failing to: adhere to prudential regulatory requirements; provide regulatory submissions; or monitor and manage adherence to new prudential regulatory requirements

These risks may result in financial and/or non-financial impacts including legal/regulatory breaches or reputational damage.

### Enterprise risk themes

Barclays Bank UK Group also recognises that there are certain threats/risk drivers that are more thematic and have the potential to impact Barclays Bank UK Group's strategic objectives. These are Enterprise Risk Themes which require an overarching and integrated risk management approach. Including:

- **Cyber:** The potential loss or detriment to Barclays Bank UK Group caused by individuals or groups (threat actors) with the capabilities and intention to cause harm or to profit from attacks committed via network information systems against us, our suppliers, or customers/clients.
- **Data:** Aligned to the Data Strategy of the firm and encompassing Data risks to the firm from multiple risk categories, including Data Management, Data Architecture, Data Security & Protection, Data Resilience, Data Retention and Data Privacy.
- **Resilience:** The risk of the organisation's ability to survive and prosper in its commercial endeavours in the presence of adverse events, shocks and chronic or incremental changes.

### Roles and responsibilities

The prime responsibility for the management of operational risk and the compliance with control requirements rests with the business and functional units where the risk arises. The operational risk profile and control environment is reviewed by business management through business risk committee and control committees. Legal entities, businesses and functions are required to report their operational risks on both a regular and an event-driven basis. The reports include a profile of the material risks that may threaten the achievement of their objectives and the effectiveness of key controls, operational risk events and a review of scenarios.

The Barclays Group Head of Operational Risk is responsible for establishing, owning and maintaining an appropriate Barclays Group-wide Operational Risk Management Framework, meanwhile the Barclays Bank UK PLC Head of Operational Risk is responsible for overseeing the portfolio of operational risk across all businesses.

Operational Risk Management (ORM) acts in a Second Line of Defence capacity, and is responsible for defining and overseeing the implementation of the framework and monitoring Barclays Bank UK Group's operational risk profile. ORM alerts management when risk levels exceed acceptable tolerance in order to drive timely decision making and actions by the first line of defence. Operational risk issues escalated from these meetings are considered through the second line of defence review meetings. Depending on their nature, the outputs of these meetings are presented to the Barclays UK Risk Committee, the Barclays Bank UK PLC Board Risk Committee or the Barclays Bank UK PLC Board Audit Committee. In addition, specific reports are prepared by the business and Barclays Bank UK Group Operational Risk on a regular basis for the Barclays UK Risk Committee, and the Barclays Bank UK PLC Board Risk Committee.

### Operational risk framework

The Operational Risk Framework comprises a number of elements which allow Barclays Bank UK Group to manage and measure its operational risk

# Barclays' approach to managing risks

## Management of operational risk

profile and to calculate the amount of operational risk capital that Barclays Bank UK Group needs to hold to absorb potential losses. The minimum, mandatory requirements for each of these elements are set out in the Operational Risk Framework and supporting policies. This framework is implemented across Barclays Bank UK Group with all legal entities, businesses and functions required to implement and operate an Operational Risk Framework that meets, as a minimum, the requirements detailed in the operational risk policies.

The Operational Risk Framework is a key component of the ERMF and has been designed to improve risk management and meet a number of external governance requirements including the Basel Capital Accord, the Capital Requirements Directive and Turnbull guidance as an evaluation framework for the purposes of Section 404(a) of the Sarbanes-Oxley Act. It also supports the Sarbanes-Oxley requirements.

The Operational Risk Framework includes the following elements:

### Risk and control self-assessments

Risk and control self-assessments (RCSAs) are the way in which Barclays Bank UK Group identifies and assesses the risks which are inherent in the material processes operated by Barclays Bank UK Group. Managers in the business use the RCSA approach to evaluate the controls in place to mitigate those risks and assess the residual risk exposure to Barclays Bank UK Group. The businesses / functions are then able to make decisions on what action, if any, is required to reduce the level of residual risk to Barclays Bank UK Group. These risk assessments are monitored on a regular basis to maintain that each business understands the risks it faces.

### Risk events

An operational risk event is any circumstance where, through the lack or failure of a control, Barclays Bank UK Group has actually, or could have, made a loss. The definition includes situations in which Barclays Bank UK Group could have made a loss, but in fact made a gain, as well as incidents resulting in reputational damage or regulatory impact only.

A standard threshold is used across Barclays Bank UK Group for reporting risk events and part of the analysis includes the identification of improvements to processes or controls, to reduce the recurrence and/or magnitude of risk events. For significant events, both financial and non-financial, this analysis includes the completion of a formal lessons learnt report.

Barclays Bank UK Group also maintains a record of external risk events which are publicly available and is a member of the Operational Riskdata eXchange (ORX), a not-for-profit association of international banks formed to share anonymous loss data information. This external loss information is used to support and inform risk identification, assessment and measurement.

### Operational Risk Appetite

The Barclays Bank UK PLC Board approves an Operational Risk Appetite Statement on an annual basis, establishing the level of operational risk that is acceptable in pursuit of Barclays Bank UK Group's strategic objectives.

Operational risks are assessed and monitored against the Board approved Operational Risk Appetite, with Risk Reduction Plans established for any risks that are above the acceptable level.

The Operational Risk Profile is monitored through Risk Committees and Board level in the context of Operational Risk Appetite.

### Key indicators

Key indicators (KIs) are metrics which allow the Operational Risk Profile to be measured and monitored against Management's Risk Appetite. KIs include defined thresholds and performance is reported regularly to Management to drive action when risk exceeds acceptable limits.

### Risk scenarios

Risk scenarios are a summary of the extreme potential risk exposures for Barclays Bank UK Group covering the complete range of risks. The scenarios include an assessment of the key drivers for the exposure, occurrence and impact of the scenario and a review of the corresponding control environment. The risk scenario assessments are a key input to the calculation and benchmarking of economic capital requirements (see following section on operational risk measurement). The assessment considers analysis of internal and external loss experience, Key Risk Indicators, Risk and Control Self-Assessments and other relevant information. The businesses and functions analyse potential extreme scenarios, considering the:

- circumstances and contributing factors that could lead to an extreme event;
- potential financial impacts;
- controls that seek to limit the likelihood of such an event occurring; and
- the mitigating actions that would be taken if the event were to occur (for example crisis management procedures, business continuity or disaster recovery plans).

Management then determine whether the potential risk exposure is acceptable or whether changes in risk management control or business strategy are required.

The risk scenarios are regularly re-assessed, taking into account trends in risk factors.

### Reporting

The ongoing monitoring and reporting of operational risk is a key component of the Operational Risk Framework. Reports and management information are used by the Operational Risk function and by legal entity and business management to understand, monitor, manage and control operational risks and losses.

The operational risk profile is reviewed by senior management at legal entity Risk Committee meetings as well as the Operational Risk Profile Forum and BRC, BAC and the Board.

### Operational risk measurement

Barclays Bank UK Group assesses its Operational Risk Capital requirements using the Standardised Approach (TSA). Barclays Bank UK Group also maintains a voluntary floor for the Regulatory Capital. The floor is based on the Capital calculated by Barclays Bank UK Group under the previous AMA regime.

### Insurance

As part of its risk management approach, Barclays Bank UK Group also uses insurance to mitigate the impact of some operational risks.



# Barclays' approach to managing risks

## Management of model risk

### Model risk

The risk of the potential adverse consequences from financial assessments or decisions based on incorrect or misused model outputs and reports.

### Overview

Barclays Bank UK Group uses models to support a broad range of activities, including informing business decisions and strategies, measuring and limiting risk, valuing exposures, conducting stress testing, assessing capital adequacy, managing client assets, and meeting reporting requirements.

Since models are imperfect and incomplete representations of reality, they may be subject to errors affecting the accuracy of their output. Model errors can result in inappropriate business decisions being made, financial loss, regulatory risk, reputational risk and/or inadequate capital reporting. Models may also be misused, for instance applied to products that they were not intended for, or not adjusted, where fundamental changes to their environment would justify re-evaluating their core assumptions. Errors and misuse are the primary sources of model risk.

Robust model risk management is crucial to assessing and managing model risk within a defined risk appetite. Strong model risk culture, appropriate technology environment, and adequate focus on understanding and resolving model limitations are crucial components.

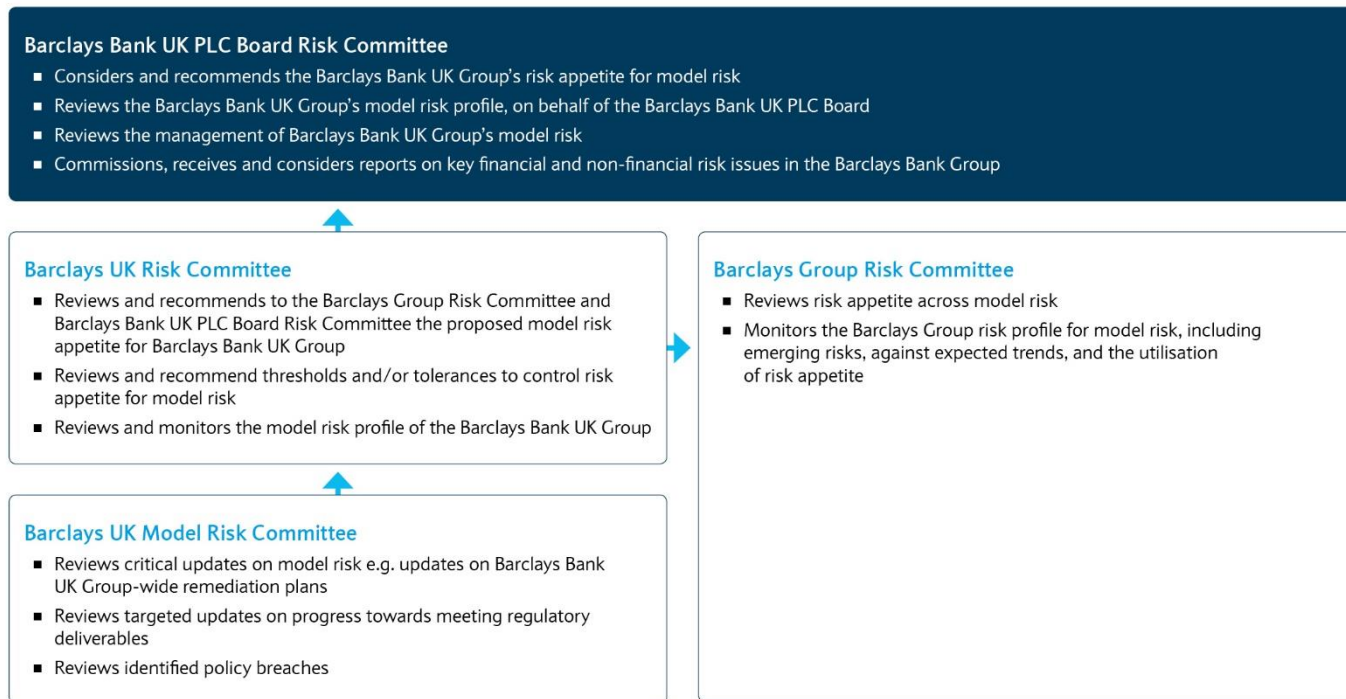
### Organisation and structure

Barclays allocates substantial resources to identify and record models and their usage, document and monitor the performance of models, validate models and adequately address model limitations. Barclays manages model risk as an enterprise level risk similar to other Principal Risks.

Barclays Group has a dedicated Model Risk Management (MRM) function that consists of two main units: the Independent Validation Unit (IVU), responsible for model validation and approval, and Model Governance and Controls (MGC), covering model risk governance, controls and reporting, including ownership of model risk policy and the model inventory.

The model risk management framework consists of the model risk policy and standards. The policy prescribes group-wide, end-to-end requirements for the identification, measurement and management of model risk, covering model documentation, development, implementation, monitoring, annual review, independent validation and approval, change and reporting processes. The policy is supported by global standards covering model inventory, documentation, validation, complexity and materiality, testing and monitoring, overlays, risk appetite, as well as vendor models and stress testing challenger models.

The function reports to the Barclays Group CRO and operates a global framework. Implementation of best practice standards is a central objective of Barclays Group. Model risk reporting flows to senior management as depicted below.



# Barclays' approach to managing risks

## Management of model risk

### Roles and responsibilities

The key model risk management activities include:

- Correctly identifying models across all relevant areas of Barclays Bank UK Group, and recording models in the Barclays Group Models Database (GMD), the Barclays Group-wide model inventory. The heads of the relevant model ownership areas (typically, the Barclays Bank UK PLC Chief Risk Officer, Chief Executive Officer, Chief Financial Officer, Treasurer etc.) annually attest to the completeness and accuracy of the model inventory. MGC undertakes regular conformance reviews on the model inventory.
- Enforcing that every model has a model owner who is accountable for the model. The model owner must sign off models prior to submission to IVU for validation. The model owner works with the relevant technical teams (model developers, implementation, monitoring, data services, regulatory) to maintain that the model presented to IVU is and remains fit for purpose.
- Overseeing that every model is subject to validation and approval by IVU, prior to being implemented and on a continual basis. While all models are reviewed and re-approved for continued use each year, the validation frequency and the level of review and challenge applied by IVU is tailored to the materiality and complexity of each model. Validation includes a review of the model assumptions, conceptual soundness, data, design, performance testing, compliance with external requirements if applicable, as well as any limitations, proposed remediation and overlays with supporting rationale. Material model changes are subject to prioritised validation and approval.
- Defining model risk appetite in terms of risk tolerance, and qualitative metrics which are used to track and report model risk.
- Maintaining specific standards that cover model risk management activities relating to stress testing challenger models, model overlays, vendor models, and model complexity and materiality.

# Barclays' approach to managing risks

## Management of conduct risk

### Conduct risk

The risk of detriment to customers, clients, market integrity, effective competition or Barclays from the inappropriate supply of financial services, including instances of wilful or negligent misconduct.

### Overview

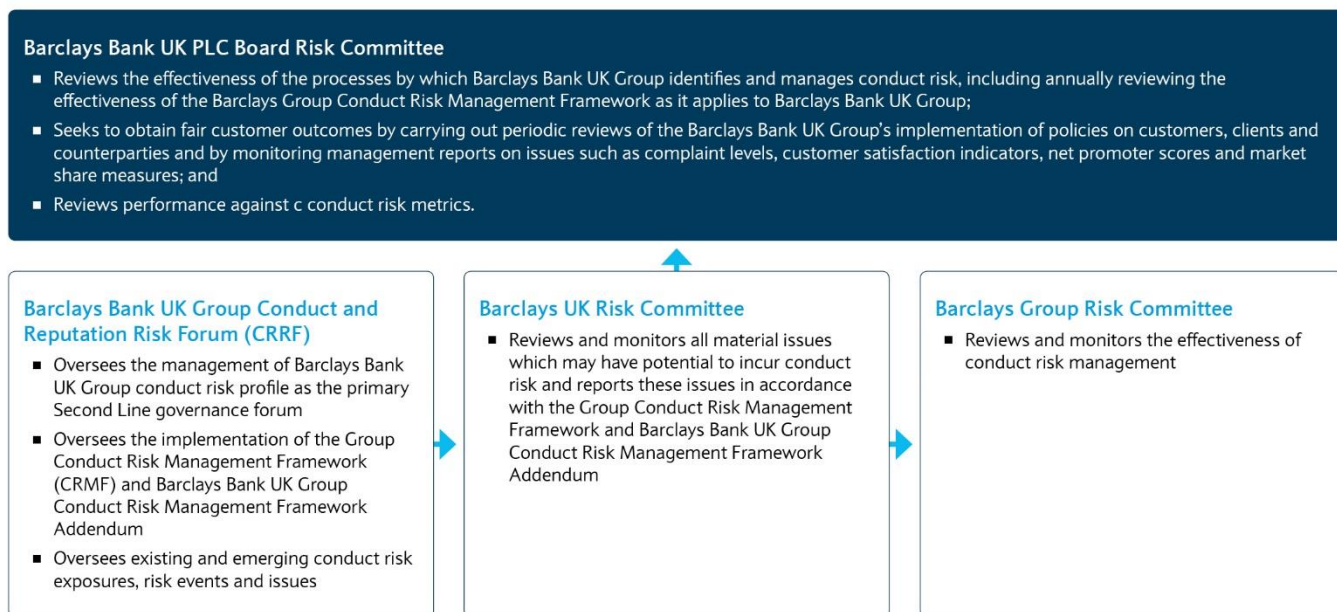
The Barclays Bank UK Group defines, manages and mitigates conduct risk with the objective of providing good customer and client outcomes, protecting market integrity and promoting effective competition. This includes taking reasonable steps to assure that: (i) the Barclays Bank UK Group culture and strategy are appropriately aligned to these goals; (ii) its products and services are reasonably designed and delivered to meet the needs of customers and clients; (iii) the fair and orderly operation of the markets in which the Barclays Bank UK Group does business is promoted; and (iv) the Barclays Bank UK Group does not commit or facilitate money laundering, terrorist financing, bribery and corruption or breaches of economic sanctions.

Product Lifecycle, Culture and Strategy and Financial Crime are the risk categories within the Barclays Group definition of conduct risk.

### Organisation and structure

The governance of conduct risk within the Barclays Bank UK Group is fulfilled through management committees and forums operated by the first and second lines of defence, with clear escalation and reporting lines to the Barclays Bank UK PLC Board Risk Committee.

The Barclays UK Risk Committee is the most senior executive body responsible for reviewing and monitoring the effectiveness of the Barclays Bank UK Group's management of conduct risk.



### Roles and responsibilities

The Conduct Risk Management Framework (CRMF) comprises a number of elements that allow the Barclays Bank UK Group to manage and measure its conduct risk profile.

Senior managers have accountability for managing conduct risk in their areas of responsibility. This is included in their Statement of Responsibilities which identifies the activities and areas for which they are accountable. The primary responsibility for managing conduct risk sits with the business where the risk arises. The first line business control committees provide oversight of controls relating to conduct risk.

The Barclays Bank UK PLC Chief Compliance Officer is responsible for providing effective oversight, management and escalation of conduct risk in line with the CRMF. This includes defining and owning the relevant conduct risk policies and oversight of the implementation of controls to manage and escalate the risk.

Business areas are required to report their conduct risks on both a quarterly and an event-driven basis. The quarterly dashboards detail conduct risks inherent within the business strategy and include forward looking horizon scanning analysis as well as backward looking evidence-based indicators from both internal and external sources.

The Barclays UK Risk Committee is the primary second line governance committee for oversight of the conduct risk profile for the Barclays Bank UK Group and implementation of the CRMF. The responsibilities of the Barclays UK Risk Committee include adoption of the conduct risk tolerance and business defined key indicators. Additional responsibilities include the identification and discussion of any emerging conduct risks exposures that have been identified.



# Barclays' approach to managing risks

## Management of reputation risk

### Reputation risk

Reputation Risk is the risk that an action, transaction, investment, event, decision, or business relationship will reduce trust in the firm's integrity and/or competence

### Overview

A reduction of trust in the Barclays Bank UK Group's integrity and competence may reduce the attractiveness of Barclays Bank UK Group to customers and clients and other stakeholders and could lead to negative publicity, loss of revenue, regulatory or legislative action, loss of existing and potential client business, reduced workforce morale and difficulties in recruiting talent. Ultimately it may destroy shareholder value.

### Organisation and structure

The Barclays UK Risk Committee is the most senior executive body responsible for reviewing and monitoring the effectiveness of the Group's management of reputation risk.

#### Barclays Bank UK PLC Board

- Reviews the effectiveness of the processes by which the Barclays Bank UK Group identifies and manages reputation risk;
- Considers and evaluates regular reports on the Barclays Bank UK Group's reputation risk issues and exposures; and
- Considers whether significant business decisions will compromise the Barclays Bank UK Group's ethical policies or core business beliefs and values.



#### Barclays UK Risk Committee

- Reviews the monitoring processes utilised by Compliance and Corporate Relations to ensure they are proportionate given the level of risk identified in the businesses
- Reports reputation issues in accordance with the Barclays Group's Reputation Risk Management Framework for all material issues which may have the potential to incur reputation risk for the Barclays Bank UK Group



#### Barclays Bank UK Group Business Risk Committees/Forums

- Review and escalate reputation risks in accordance with the Barclays Group's Reputation Risk Management Framework

### Roles and responsibilities

The Barclays Bank UK Group Chief Compliance Officer is accountable for developing the Reputation Risk Management Framework, and the Head of Corporate Relations is responsible for developing a reputation risk policy and associated standards, including tolerances against which data is monitored, reported on and escalated, as required. Reputation risk is by nature pervasive and can be difficult to quantify, requiring more subjective judgement than many other risks. The Reputation Risk Management Framework sets out what is required to manage reputation risk across the Barclays Bank UK Group.

The primary responsibility for identifying and managing reputation risk and adherence to the control requirements sits with the business and support functions where the risk arises.

The Barclays Bank Group and the Barclays Bank UK Group are required to operate within established reputation risk appetite, and their component businesses prepare reports highlighting their most significant current and potential reputation risks and issues and how they are being managed. These reports are a key internal source of information for the quarterly reputation risk reports which are prepared for the Barclays UK Risk Committee and Barclays Bank UK PLC Board.

# Barclays' approach to managing risks

## Management of legal risk

### Legal risk

The risk of loss or imposition of penalties, damages or fines from the failure of the firm to meet its legal obligations including regulatory or contractual requirements.

### Overview

The Barclays Bank UK Group has no tolerance for wilful breaches of laws, regulations or other legal obligations. However, the multitude of laws and regulations are highly dynamic and their application to particular circumstances is often unclear; this results in a level of inherent legal risk, for which the Barclays Bank UK Group has limited tolerance.

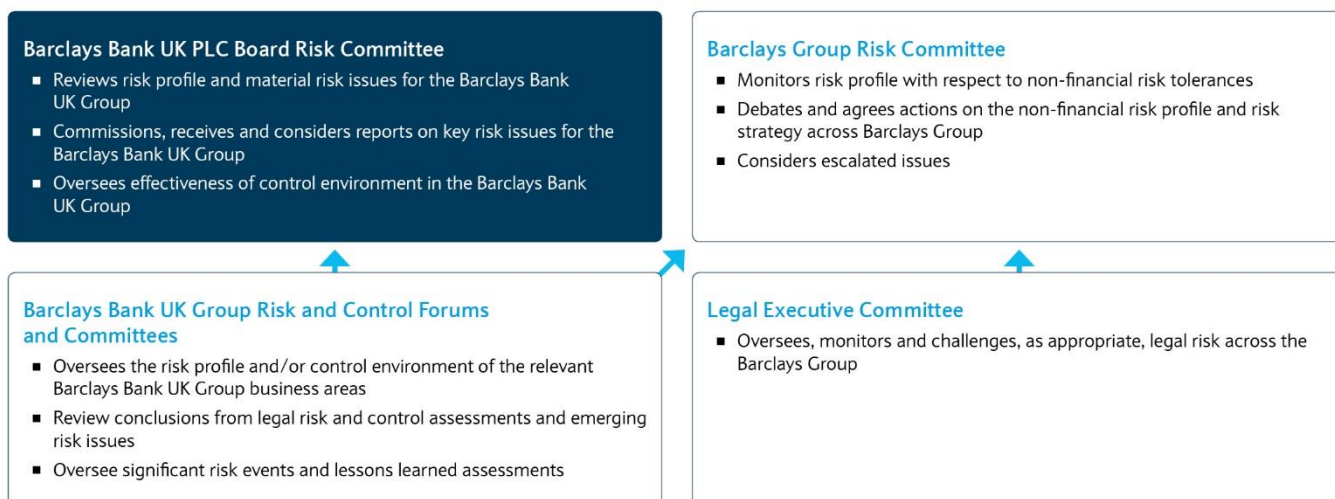
### Organisation, roles and responsibilities

The Barclays Bank UK Group's businesses and functions have primary responsibility for identifying, managing and escalating legal risk in their area as well as responsibility for adherence to minimum control requirements.

The Legal Function organisation and coverage model aligns expertise to businesses, functions, products, activities and geographic locations so that the Barclays Bank UK Group receives legal support from appropriate legal professionals. The senior management of the Legal Function oversees, monitors and challenges legal risk across the Group. The Legal Function does not sit in any of the Three Lines of Defence but supports them all.

The Group General Counsel is responsible for maintaining an appropriate Group-wide legal risk management framework. This includes defining the relevant legal risk policies and oversight of the implementation of controls to manage and escalate legal risk.

The legal risk profile and control environment is reviewed by management through business risk committees and control committees. The Barclays Bank UK PLC Board Risk Committee is the most senior body responsible for reviewing and monitoring the effectiveness of risk management across the Barclays Bank UK Group. Escalation paths from this committee exist to the Barclays Group Risk Committee.



# Appendices

## Appendix A – PD, LGD, RWA and Exposures by country

The following tables show total IRB RWA and exposures by country and asset classes.

Table 65: PD, LGD, RWA and exposure values by country for IRB - all asset classes

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	3.61%	25.3%	54,329	217,018

Table 65a: PD, LGD, RWA and exposure values by country for IRB - central governments and central banks

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	-	-	-	-

Table 65b: PD, LGD, RWA and exposure values by country for IRB – institutions

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	14.12%	32.4%	33	34

Table 65c: PD, LGD, RWA and exposure values by country for IRB - corporates

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	5.30%	16.5%	8,779	17,713

Table 65d: PD, LGD, RWA and exposure values by country for IRB - SME retail

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	11.92%	39.3%	3,863	8,873

Table 65e: PD, LGD, RWA and exposure values by country for IRB - secured retail

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	2.38%	11.1%	19,866	148,025

Table 65f: PD, LGD, RWA and Exposure values by country for IRB - revolving retail

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	4.86%	75.2%	16,315	36,297

Table 65g: PD, LGD, RWA and exposure values by country for IRB - other retail exposures

Country	PD %	LGD %	RWA £m	Exposure £m
United Kingdom	8.77%	76.5%	5,473	6,076

# Appendices

## Appendix B – Analysis of impairment

### IFRS Impairment

The following tables are presented using the IFRS consolidation rather than the regulatory consolidation basis. See pages 68-70 for background on impairment, and Table 3 explaining the scope of regulatory consolidation.

**Table 66: Analysis of impaired and past due exposures and allowance for impairment by exposure type**

This table shows total gross loans and advances analysed by balances past due and not past due. It also shows gross exposure assessed for impairment in accordance with IFRS9 and the resulting allowance for impairment.

	Not past due £m	Past due £m	Total	Gross exposure assessed for impairment £m	Allowance for Impairment £m
<b>As at 31 December 2019</b>					
Traded loans	-	-	-	-	-
Financial assets designated at fair value through the income statement	3,535	33	3,568	-	-
Financial assets designated at fair value through other comprehensive income	-	-	-	-	-
Cash collateral and settlement balances	4,331	-	4,331	4,331	-
<b>Gross loans and advances at amortised cost:</b>			-		
Home Loans	140,020	3,557	143,577	143,577	85
Credit cards, unsecured and other retail lending	22,696	1,364	24,060	24,060	2,267
Corporate loans	31,147	1,396	32,543	32,543	259
<b>Total Gross loans and advances at amortised cost</b>	<b>193,863</b>	<b>6,317</b>	<b>200,180</b>	<b>200,180</b>	<b>2,611</b>
<b>Total<sup>a</sup></b>	<b>201,729</b>	<b>6,350</b>	<b>208,079</b>	<b>204,511</b>	<b>2,611</b>

Note:

<sup>a</sup> Other financial assets subject to impairment not included in the Loans and Advances table above include financial assets at fair value through other comprehensive income and other assets. These have a total gross exposure of £20.2bn and impairment allowance of £1m.

# Appendices

## Appendix B – Analysis of impairment

Table 67: Geographic analysis of impaired and past due exposures and allowance for impairment

This table shows total gross loans and advances analysed by balances past due and not past due, and gross exposures assessed for impairment in accordance with IFRS9 and the resulting impairment allowance, split by geographic location of the counterparty.

	Not past due	Past due	Total	Gross exposure assessed for impairment	Allowance for Impairment
	£m	£m	£m	£m	£m
<b>As at 31 December 2019</b>					
UK	199,395	6,246	205,641	202,074	2,600
Europe	1,133	23	1,156	1,156	5
Americas	489	45	534	534	3
Africa and Middle East	324	17	341	340	1
Asia	388	19	407	407	2
<b>Total</b>	<b>201,729</b>	<b>6,350</b>	<b>208,079</b>	<b>204,511</b>	<b>2,611</b>

# Appendices

## Appendix C – Countercyclical Capital Buffer

Table 68: Countercyclical capital buffer

The below table shows the geographical distribution of credit exposures relevant to the calculation of the countercyclical buffer in line with CRR Article 440.

Note that exposures in the below table are prepared in accordance with CRD, Article 140. Hence exclude exposures to central governments/banks, regional governments, local authorities, public sector entities, multilateral development banks, international organisations and institutions and as such the exposure values differ to those found in the Analysis of credit risk section.

Barclays Bank UK Group	General Credit Exposures		Trading book exposures		Securitisation exposures		Own Funds requirements			Counter-cyclical capital buffer rate %		
	Exposure Value for SA £m	Exposure Value for IRB £m	Sum of long and short trading book exposures for SA £m	Value of trading book exposures for internal models £m	Exposure Value for SA £m	Exposure Value for IRB £m	Of which: General credit exposures £m	Of which: Trading book exposures £m	Of which: Securitisation exposures £m		Total £m	Own Funds Requirements weights %
<b>Breakdown by Country</b>												
France (FR)	492	-	-	-	-	-	5	-	-	5	0.11%	0.25%
Bulgaria (BG)	-	-	-	-	-	-	-	-	-	-	-	0.50%
Denmark (DK)	57	-	-	-	-	-	-	-	-	-	0.01%	1.00%
Ireland (IE)	-	-	-	-	-	-	-	-	-	-	-	1.00%
Lithuania (LT)	-	-	-	-	-	-	-	-	-	-	-	1.00%
United Kingdom (GB)	7,871	216,986	-	-	-	1,352	4,598	-	10	4,608	99.54%	1.00%
Czech Republic (CZ)	-	-	-	-	-	-	-	-	-	-	-	1.50%
Slovakia (SK)	-	-	-	-	-	-	-	-	-	-	-	1.50%
Iceland (IC)	-	-	-	-	-	-	-	-	-	-	-	1.75%
Hong Kong (HK)	-	-	-	-	-	-	-	-	-	-	-	2.00%
Norway (NO)	197	-	-	-	-	-	2	-	-	2	0.04%	2.50%
Sweden (SE)	218	-	-	-	-	-	3	-	-	3	0.06%	2.50%
<b>Total (countries with existing CCyB rate)</b>	<b>8,835</b>	<b>216,986</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,352</b>	<b>4,608</b>	<b>-</b>	<b>10</b>	<b>4,618</b>	<b>99.76%</b>	
<b>Total (rest of the world less than 1% requirement)</b>	<b>485</b>	<b>70</b>	<b>40</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>1</b>	<b>-</b>	<b>11</b>	<b>0.24%</b>	<b>n/a</b>
<b>Total</b>	<b>9,320</b>	<b>217,056</b>	<b>40</b>	<b>-</b>	<b>-</b>	<b>1,352</b>	<b>4,618</b>	<b>1</b>	<b>10</b>	<b>4,629</b>	<b>100%</b>	
<b>Amount of institution-specific countercyclical capital buffer</b>												
Total risk weighted assets							£75,010m					
Institution specific countercyclical buffer rate							1.00%					
Institution specific countercyclical buffer requirement							£750m					

## Appendices

### Appendix D – Disclosure on asset encumbrance

Asset encumbrance arises from collateral pledged against secured funding and other collateralised obligations. Barclays Bank UK Group funds a portion of trading portfolio assets and other securities via repurchase agreements and other similar borrowing and pledges a portion of customer loans and advances as collateral in securitisation, covered bond and other similar structures. Barclays Bank UK Group monitors the mix of secured and unsecured funding sources within the Group's funding plan and seeks to efficiently utilise available collateral to raise secured funding and meet other collateral requirements. The encumbered assets below will not agree to those disclosed in the Barclays Bank UK Group Annual Report (page 160). The reported values represent the median of the values reported to the regulator via supervisory returns over the period 31 December 2018 to 31 December 2019. The Barclays Bank UK Group Annual Report disclosure is reported as at year end.

#### Template A - Assets

	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of non-encumbered assets	Fair value of non-encumbered assets
	010	040	060	090
	£bn	£bn	£bn	£bn
010 Assets of the institution	37.5	-	218.2	-
030 Equity instruments	-	-	-	-
040 Debt securities	4.7	4.7	15.4	15.4
120 Other assets	-	-	6.1	-

#### Template B - Collateral received

	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
	010	040
	£bn	£bn
130 Collateral received by the institution	1.8	0.5
150 Equity instruments	-	-
160 Debt securities	1.8	0.5
230 Other collateral received	-	-
Own debt securities issued other than own covered bonds or ABSs	-	-

#### Template C - Encumbered assets/collateral received and associated liabilities

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
	010	030
	£bn	£bn
Carrying amount of selected		
010 financial liabilities	25.5	35.5

# Appendices

## Appendix E – Disclosures on remuneration

### Barclays Bank UK PLC remuneration

The following disclosures are made in accordance with Article 450 of the Capital Requirements Regulation, the Basel Committee on Banking Supervision (BCBS) Pillar 3 disclosure requirements standard (December 2018) and the EBA Guidelines on sound remuneration policies.

#### Remuneration Governance

The composition and mandate of the Barclays Bank UK PLC Board Remuneration Committee (the 'Committee') are included in the 2019 Barclays Bank UK PLC Annual Report. No external consultants provide services to the Committee.

The Committee held four scheduled meetings during 2019 and all members were present at each meeting:

Member	Eligible meeting (excluding ad hoc meetings)
Michael Jary (Chair)	4/4
Avid Larizadeh Duggan	4/4
Sir John Timpson	4/4

There was one additional meeting during 2019. The Committee met in March 2019 to consider the remuneration of the Barclays Bank UK PLC Chief Executive.

The Committee has adopted the over-arching principles and parameters of the remuneration policy set by the Barclays PLC Remuneration Committee, as disclosed in the Barclays PLC Pillar 3 disclosure, save as set out below.

#### Performance and remuneration

Barclays' remuneration philosophy, below, has been adopted by the Committee and links remuneration to achieving sustained high performance and creating long-term value. The remuneration philosophy applies to all employees (including those identified as material risk takers ('MRTs')) within Barclays UK and aims to reinforce our belief that effective performance management is critical to enabling the delivery of our business strategy in line with our Values. Employees who adhere to the Barclays' Values and contribute to Barclays' success are rewarded accordingly.

This is achieved by basing performance assessment on clear standards of delivery and behaviour, and starts with employees aligning their objectives ('what' they will deliver) to business and team goals in order to support the delivery of the business strategy and good client/customer outcomes. Behavioural expectations ('how' people will achieve their objectives) are set in the context of our Values.

Performance is assessed against both financial and non-financial criteria. Other factors are also taken into consideration within the overall performance assessment, including core job responsibilities, behaviours towards risk and control, colleague and stakeholder feedback as well as input from the Risk and Compliance functions, where appropriate.

Through our approach to performance, the equal importance of both 'what' an individual has delivered as well as 'how' the individual has achieved this is emphasised, encouraging balanced consideration of each dimension. Both of these elements are assessed and rated independently of each other. There is no requirement to have an overall rating. This allows for more robust and reflective conversations between managers and team members on the individual components of performance.

#### Barclays' remuneration philosophy

Attract and retain talent needed to deliver Barclays' strategy	Long-term success depends on the talent of our employees. This means attracting and retaining an appropriate range of talent to deliver against our strategy, and paying the right amount for that talent
Align pay with investor and other stakeholder interests	Remuneration should be designed with appropriate consideration of the views, rights and interests of stakeholders. This means listening to our shareholders, other investors, regulators, government, customers and employees and ensuring their views are appropriately considered in remuneration decision-making
Reward sustainable performance	Sustainable performance means making a positive contribution to stakeholders, in both the short and longer term, playing a valuable role in society
Support Barclays' Values and culture	Results must be achieved in a manner consistent with our Values. Our Values and culture should drive the way that business is conducted
Align with risk appetite, risk exposure and conduct expectations	Designed to reward employees for achieving results in line with the Bank's risk appetite and conduct expectations
Be fair, transparent and as simple as possible	We are committed to ensuring pay is fair, simple and transparent for all our stakeholders. This means all employees and stakeholders should understand how we reward our employees and fairness should be a lens through which we make remuneration decisions



# Appendices

## Appendix E – Disclosures on remuneration

### Risk adjustment

Another key feature of our remuneration philosophy is the alignment of remuneration with our risk appetite and with the conduct expectations of Barclays, our regulators and other stakeholders. The Committee takes risk and conduct events very seriously and ensures that there are appropriate adjustments to individual remuneration and, where necessary, the incentive pool.

The work of the Remuneration Review Panel (the “Panel”) supports the Committee in this process. The Panel is chaired by the Group HR Director and includes the Group Heads of Risk, Compliance, Legal and Internal Audit as well as the CEO of Barclays Bank UK and the President of Barclays Bank PLC. It applies Barclays’ policies and processes for assessing compensation adjustments for risk and conduct events.

We have robust processes for considering risk and conduct as part of individual performance management processes with outcomes reflected in individual remuneration decisions. Line managers have primary accountability for ensuring that risk and conduct issues are considered when assessing performance and making remuneration decisions. In addition, there is a secondary review by the control functions for individuals involved in significant failures of risk management, conduct issues, regulatory actions or other major incidents which impact either the Group or business to ensure these issues are also considered. When considering individual responsibility, a variety of factors are taken into account such as whether an individual was directly responsible or whether the individual, by virtue of seniority, could be deemed indirectly responsible, including staff who drive Barclays Bank UK PLC’s culture and set its strategy.

Actions which may be taken where risk management and conduct falls below required standards include:

Adjustment	Current year annual bonuses may be adjusted downwards where individuals are found to be involved (either directly or indirectly) in a risk or misconduct event.
Malus	Deferred unvested bonuses from prior years are subject to malus provisions which enable the Committee to reduce the vesting level of deferred bonuses (including to nil) at its discretion. Events which may lead the Committee to do this include, but are not limited to, employee misconduct or a material failure of risk management.
Clawback	Clawback applies to any variable remuneration awarded to a MRT on or after 1 January 2015 in respect of years for which they are a MRT. Barclays may apply clawback if, at any time during the seven-year period from the date on which variable remuneration is awarded to a MRT: (i) there is reasonable evidence of employee misbehaviour or material error, and/or (ii) the firm or the business unit suffers a material failure of risk management, in each case taking account of the individual’s proximity to and responsibility for that incident.  Clawback may be extended to 10 years for PRA Senior Managers where there are outstanding internal or regulatory investigations at the end of the seven-year clawback period.

In addition to reductions to individuals’ bonuses, the Committee considers collective adjustments to the incentive pool for specific risk and conduct events. Adjustments to the incentive pool also take account of an assessment of a wide range of future risks including conduct, non-financial factors that can support the delivery of a strong risk management, control and conduct culture and other factors including reputation, impact on customers, markets and other stakeholders. The Committee is supported in its consideration of this adjustment by the Barclays Bank UK PLC Board Risk Committee.

### Remuneration structure

Employees receive salary, pension and other benefits and are eligible to be considered for an annual bonus. Some MRTs also receive Role Based Pay (RBP). Remuneration of MRTs is subject to the 2:1 maximum ratio of variable to fixed remuneration.

The remuneration of employees engaged in control functions is set independently from the business and for certain senior employees is approved by the Committee. Remuneration for control function employees is less weighted towards variable remuneration compared to front-office employees and variable remuneration is typically limited to one times fixed remuneration.

### Fixed remuneration

Salary	Salaries reflect individuals’ skills and experience and are reviewed annually.  They are increased where justified by role change, increased responsibility or a change in the appropriate market rate. Salaries may also be increased in line with local statutory requirements and in line with union and works council commitments.
Role Based Pay (RBP)	Some MRTs receive a class of fixed pay called RBP to recognise the seniority, scale and complexity of their role.  They are adjusted where justified by a role or responsibility change or a change in the appropriate market rate.
Pension and benefits	The provision of a competitive package of benefits is important to attracting and retaining the talented staff needed to deliver Barclays’ strategy. Employees have access to a range of country-specific company-funded benefits, including

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pension schemes, healthcare, life assurance and Barclays' share plans as well as other voluntary employee funded benefits. The cost of providing these benefits is defined and controlled.

### Variable remuneration

**Annual bonus** Annual bonuses incentivise and reward the achievement of Group, business and individual objectives, and reward employees for demonstrating individual behaviours in line with Barclays' Values.

The ability to recognise performance through variable remuneration enables the Group and Barclays Bank UK PLC to control their cost base flexibly and to react to events and market circumstances. Bonuses remain a key feature of remuneration practice in the highly competitive and mobile market for talent in the financial services sector. The Committee is careful to control the proportion of variable to fixed remuneration paid to individuals and also to ensure an appropriate amount is deferred to future years.

The typical deferral structures are:

For MRTs:	
Incentive award	Amount deferred
< £500,000	40% of total award
£500,000 to £1,000,000	60% of total award
≥ £1,000,000	60% up to £1,000,000 100% above £1,000,000

For de minimis MRTs/non-MRTs	
Incentive award	Amount deferred
Up to £65,000	0%
> £65,000	Graduated level of deferral

Deferred bonuses are generally delivered in equal portions as deferred cash and deferred shares subject to the rules of the deferred cash and share plans (as amended from time to time) and continued service. Deferred bonuses are subject to either a 3, 5 or 7-year deferral period in line with regulatory requirements.

Where dividend equivalents cannot be delivered on deferred bonus shares, the number of deferred bonus shares awarded will be calculated using a share price discounted to reflect the absence of dividend equivalents during the vesting period.

**Share plans** Alignment of MRTs with shareholders is achieved through deferral of incentive pay. Additional shareholding is encouraged through the all-employee share plans.

### Total Remuneration for the financial year

	All Employees
Number of individuals	25,401
Fixed remuneration (£m)	934
Variable remuneration (£m)	117
Total remuneration (£m)	1,051

### MRTs

On 15 November 2018, the Board of Barclays PLC as shareholder of Barclays Bank UK PLC approved the resolution that Barclays Bank UK PLC and any of its current and future subsidiaries be authorised to apply a ratio of fixed to variable components of total remuneration of their MRTs that exceeds 1:1, provided the ratio does not exceed 1:2.

MRTs are members of the Barclays Bank UK PLC Board and Barclays Bank UK PLC's employees whose professional activities could have a material impact on Barclays Bank UK PLC's risk profile. A total of 123 individuals were MRTs in 2019 (2018: 118). 'Senior management' means members of the Barclays Bank UK PLC Board (Executive Directors and Non-Executive Directors) and members of the Barclays Bank UK PLC Executive Committee in accordance with Article 3(9) of CRDIV.

Barclays Bank UK PLC's major business areas are Personal Banking, Business Banking and Barclaycard Consumer UK. 'Barclays Bank UK PLC Other' includes internal control functions and corporate functions.

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## Appendix E – Disclosures on remuneration

The following set of tables set out the remuneration disclosures for individuals identified as MRTs for Barclays Bank UK PLC.

Remuneration for the financial year					
	Senior management <sup>a</sup>	Other MRTs			
		Personal Banking	Barclaycard Consumer UK	Business Banking	Barclays Bank UK PLC Other
<b>Fixed remuneration<sup>b</sup></b>					
Number of individuals	26	20	3	10	64
Total fixed remuneration (£m)	16.6	5.1	1.3	1.7	14.8
Fixed cash remuneration (£m) <sup>c</sup>	15.3	5.1	1.3	1.7	14.8
Fixed remuneration in shares (£m)	1.3	-	-	-	-
of which subject to holding period (£m)	1.3	-	-	-	-
<b>Variable remuneration<sup>b</sup></b>					
Number of individuals	17	17	2	9	58
Total variable remuneration (£m)	13.8	2.9	0.8	0.8	6.1
Total cash bonus (£m)	6.9	1.6	0.4	0.5	4.2
of which deferred (£m)	4.6	0.6	0.2	0.1	0.8
Total share bonus (£m)	6.9	1.3	0.4	0.3	1.9
of which deferred or subject to holding period (£m)	6.9	1.3	0.4	0.3	1.9
<b>Total remuneration (£m)</b>	<b>30.4</b>	<b>8.0</b>	<b>2.1</b>	<b>2.5</b>	<b>20.9</b>

**Notes:**

- a As senior management are comprised of members of the Barclays Bank UK PLC Board and members of the Barclays Bank UK PLC Executive Committee, it is not appropriate to separate by business area.
- b Fixed remuneration takes the form of cash and/or shares and pensions and benefits in line with policy. Variable remuneration takes the form of cash and/or shares and there are no other forms of variable remuneration.
- c Fixed cash remuneration includes an estimate for pensions and benefits during the year. Fixed cash remuneration is not subject to holding periods.

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Deferred remuneration - Senior management			
All figures in £m	Total	Cash	Shares
<b>Balance as at 1 January 2019</b>	17.9	8.8	9.1
Awarded in year	14.1	5.0	9.1
Adjusted through			
ex post explicit adjustments <sup>a</sup>	-	-	-
ex post implicit adjustments <sup>b</sup>	3.3	-	3.3
Forfeited	-	-	-
Paid in year	(7.7)	(2.3)	(5.4)
<b>Balance as at 31 December 2019 <sup>c</sup></b>	<b>27.6</b>	<b>11.5</b>	<b>16.1</b>
of which vested	2.8	-	2.8
of which unvested	24.8	11.5	13.3

Deferred Remuneration - Other MRTs			
All figures in £m	Personal Banking		
	Total	Cash	Shares
<b>Balance as at 1 January 2019</b>	2.3	1.2	1.1
Awarded in year	2.4	0.8	1.6
Adjusted through			
ex post explicit adjustments <sup>a</sup>	-	-	-
ex post implicit adjustments <sup>b</sup>	0.4	-	0.4
Forfeited	(0.1)	(0.1)	-
Paid in year	(1.5)	(0.5)	(1.0)
<b>Balance as at 31 December 2019 <sup>c</sup></b>	<b>3.5</b>	<b>1.4</b>	<b>2.1</b>
of which vested	0.5	-	0.5
of which unvested	3.0	1.4	1.6

Deferred Remuneration - Other MRTs			
All figures in £m	Barclaycard Consumer UK		
	Total	Cash	Shares
<b>Balance as at 1 January 2019</b>	0.06	0.03	0.03
Awarded in year	0.10	0.05	0.05
Adjusted through			
ex post explicit adjustments <sup>a</sup>	-	-	-
ex post implicit adjustments <sup>b</sup>	0.01	-	0.01
Forfeited	-	-	-
Paid in year	(0.04)	(0.02)	(0.02)
<b>Balance as at 31 December 2019 <sup>c</sup></b>	<b>0.13</b>	<b>0.06</b>	<b>0.07</b>
of which vested	-	-	-
of which unvested	0.13	0.06	0.07

Deferred Remuneration - Other MRTs			
All figures in £m	Business Banking		
	Total	Cash	Shares
<b>Balance as at 1 January 2019</b>	0.5	0.3	0.2
Awarded in year	0.5	0.1	0.4
Adjusted through			
ex post explicit adjustments <sup>a</sup>	-	-	-
ex post implicit adjustments <sup>b</sup>	0.1	-	0.1
Forfeited	-	-	-
Paid in year	(0.3)	(0.1)	(0.2)
<b>Balance as at 31 December 2019 <sup>c</sup></b>	<b>0.8</b>	<b>0.3</b>	<b>0.5</b>
of which vested	0.2	-	0.2
of which unvested	0.6	0.3	0.3

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## Appendix E – Disclosures on remuneration

Deferred Remuneration - Other MRTs	Barclays Bank UK PLC Other		
	Total	Cash	Shares
All figures in £m			
<b>Balance as at 1 January 2019</b>	4.3	1.9	2.4
Awarded in year	3.8	1.2	2.6
Adjusted through			
ex post explicit adjustments <sup>a</sup>	-	-	-
ex post implicit adjustments <sup>b</sup>	0.7	-	0.7
Forfeited	-	-	-
Paid in year	(3.1)	(0.9)	(2.2)
<b>Balance as at 31 December 2019 <sup>c</sup></b>	<b>5.7</b>	<b>2.2</b>	<b>3.5</b>
of which vested	0.9	-	0.9
of which unvested	4.8	2.2	2.6

Notes:

- a Total reduction due to direct adjustments such as malus and clawback.  
b Total change in remuneration due to movements in share price or exchange rate during the year.  
c All outstanding awards are exposed to ex post explicit and/or implicit adjustment.

Joining and Severance Payments	Senior management	Other MRTs			
		Personal Banking	Barclaycard Consumer UK	Business Banking	Barclays Bank UK PLC Other
<b>Sign-on awards</b>					
Number of beneficiaries	-	-	-	-	-
Made during the year (£m)	-	-	-	-	-
<b>Buy-out awards</b>					
Number of beneficiaries	1	1	1	-	2
Made during the year (£m)	0.6	0.3	2.6	-	0.3
<b>Severance awards <sup>a</sup></b>					
Number of beneficiaries	1	1	-	-	2
Made during the year (£m)	0.2	0.2	-	-	0.3
of which paid during the year (£m)	0.2	0.2	-	-	0.3
of which deferred (£m)	-	-	-	-	-
Highest individual award (£m)	0.2	0.2	-	-	0.2

Notes:

- a Any severance awards that fall outside of paragraph 154 (a) – (c) of the EBA Guidelines are counted for the purposes of the 2:1 pay ratio for the year in which they are paid.

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## Appendix E – Disclosures on remuneration

Number of MRTs by band <sup>a</sup>	
Remuneration band	2019
	Number of MRTs
€1,000,001 to €1,500,000	8
€1,500,001 to €2,000,000	4
€2,000,001 to €2,500,000	3
€2,500,001 to €3,000,000	1
€3,000,001 to €3,500,000	-
€3,500,001 to €4,000,000	-
€4,000,001 to €4,500,000	-
€4,500,001 to €5,000,000	-
€5,000,001 to €6,000,000	2

Notes:

<sup>a</sup> The table is prepared in Euros in accordance with Article 450 of the Capital Requirements Regulation. Data has been converted into euros using the rates published by the European Commission for financial programming and budget for December of the reported year.

## Forward-looking statements

This document contains certain forward-looking statements within the meaning of Section 21E of the US Securities Exchange Act of 1934, as amended, and Section 27A of the US Securities Act of 1933, as amended, with respect to the Group. Barclays cautions readers that no forward-looking statement is a guarantee of future performance and that actual results or other financial condition or performance measures could differ materially from those contained in the forward-looking statements. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements sometimes use words such as 'may', 'will', 'seek', 'continue', 'aim', 'anticipate', 'target', 'projected', 'expect', 'estimate', 'intend', 'plan', 'goal', 'believe', 'achieve' or other words of similar meaning. Forward-looking statements can be made in writing but also may be made verbally by members of the management of the Group (including, without limitation, during management presentations to financial analysts) in connection with this document. Examples of forward-looking statements include, among others, statements or guidance regarding or relating to the Group's future financial position, income growth, assets, impairment charges, provisions, business strategy, capital, leverage and other regulatory ratios, payment of dividends (including dividend payout ratios and expected payment strategies), projected levels of growth in the banking and financial markets, projected costs or savings, any commitments and targets, estimates of capital expenditures, plans and objectives for future operations, projected employee numbers, IFRS impacts and other statements that are not historical fact. By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances. The forward-looking statements speak only as at the date on which they are made and such statements may be affected by changes in legislation, the development of standards and interpretations under IFRS, including evolving practices with regard to the interpretation and application of accounting and regulatory standards, the outcome of current and future legal proceedings and regulatory investigations, future levels of conduct provisions, the policies and actions of governmental and regulatory authorities, geopolitical risks and the impact of competition. In addition, factors including (but not limited to) the following may have an effect: capital, leverage and other regulatory rules applicable to past, current and future periods; UK, US, Eurozone and global macroeconomic and business conditions; the effects of any volatility in credit markets; market related risks such as changes in interest rates and foreign exchange rates; effects of changes in valuation of credit market exposures; changes in valuation of issued securities; volatility in capital markets; changes in credit ratings of any entity within the Group or any securities issued by such entities; the potential for one or more countries exiting the Eurozone; instability as a result of the exit by the UK from the European Union and the disruption that may subsequently result in the UK and globally; and the success of future acquisitions, disposals and other strategic transactions. A number of these influences and factors are beyond the Group's control. As a result, the Group's actual financial position, future results, dividend payments, capital, leverage or other regulatory ratios or other financial and non-financial metrics or performance measures may differ materially from the statements or guidance set forth in the Group's forward-looking statements. Additional risks and factors which may impact the Group's future financial condition and performance are identified in our filings with the SEC (including, without limitation, our Annual Report on Form 20-F for the fiscal year ended 31 December 2019), which are available on the SEC's website at [www.sec.gov](http://www.sec.gov).

Subject to our obligations under the applicable laws and regulations of any relevant jurisdiction, (including, without limitation, the UK and the US), in relation to disclosure and ongoing information, we undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise.