# Citigroup Global Markets Limited

# Pillar 3 Disclosures

30 June 2019

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# 1. Introduction

This document contains the Pillar 3 disclosures for the half year to 30 June 2019 for Citigroup Global Markets Limited (CGML), Citi's principal UK operating subsidiary.

The disclosures are made in accordance with Part 8 of the Capital Requirements Regulation (CRR) within the Capital Requirements Directive (CRD IV) package and the European Banking Authority (EBA) revised Pillar 3 disclosures guidelines (EBA/GL/2016/11). The disclosures are published in the Investor Relations section of Citi's website.

In accordance with the EBA guidelines, this report is produced and published quarterly, with increased disclosures in the semi-annual and annual publications. These disclosures were verified and approved internally in line with Citi's internal EU Pillar 3 Standard which outlines the principles and minimum standards to be applied when developing a set of Pillar 3 disclosures for legal entities within the EU.

CGML is Citi's international broker dealer, providing products and services for institutional clients. It is a market maker in equity, fixed income and commodity products across cash, over-the-counter (OTC) derivatives and exchange traded markets, as well as a provider of investment banking capital markets and advisory services.

These disclosures do not constitute any form of financial statement and must not be relied upon in making any investment in or judgement on the group or any entity within the group.

CGML maintains regulatory capital which is comfortably above its minimum regulatory capital requirements.

**Transitional arrangements for the adoption of IFRS 9**

CGML has decided not to apply the transitional arrangements introduced by regulation (EU) 2017/2395 for mitigating the impact of IFRS 9 on own funds and the treatment of certain large exposures. CGML has concluded that the impact of IFRS 9 adoption is immaterial, and therefore the reported own funds, capital and leverage ratios would not be impacted.

This decision reflects the nature of CGML's business and, in particular, the absence of a loan book on CGML.

**Table 1**: **Key Metrics for CGML**

| | **Available capital (amounts)** | **Jun-19 $ million** | **Mar-19 $ million** | **Dec-18 $ million** | **Sep-18 $ million** |
|---|---|---|---|---|---|
| 1 | Common Equity Tier 1 (CET1) | 14,501 | 13,966 | 13,959 | 14,021 |
| 2 | Tier 1 | 16,801 | 16,266 | 16,259 | 16,321 |
| 3 | Total capital | 21,401 | 20,866 | 20,859 | 20,922 |
| | **Risk-weighted assets (amounts)** | | | | |
| 4 | Total risk-weighted assets (RWA) | 146,596 | 143,406 | 131,022 | 144,934 |
| | **Risk-based capital ratios as a percentage of RWA** | | | | |
| 5 | Common Equity Tier 1 ratio (%) | 9.89% | 9.74% | 10.65% | 9.67% |
| 6 | Tier 1 ratio (%) | 11.46% | 11.34% | 12.41% | 11.26% |
| 7 | Total capital ratio (%) | 14.60% | 14.55% | 15.92% | 14.44% |
| | **Additional CET1 buffer requirements as a percentage of RWA** | | | | |
| 8 | Capital conservation buffer requirement (2.5% from 2019) (%) | 2.50% | 2.50% | 1.88% | 1.88% |
| 9 | Countercyclical buffer requirement (%) | 0.41% | 0.43% | 0.42% | 0.26% |
| 10 | Bank G-SIB additional requirements (%) | 0.00% | 0.00% | 0.00% | 0.00% |
| 11 | Total of bank CET1 specific buffer requirements (%) (row 8 + row 9+ row 10) | 2.91% | 2.93% | 2.29% | 2.14% |
| 12 | CET1 available after meeting the bank's minimum capital requirements (%) [1] | 1.29% | 1.15% | 2.38% | 1.38% |
| | **Basel III Leverage Ratio** [2] | | | | |
| 13 | Total Basel III leverage ratio measure | 412,256 | 438,607 | 418,231 | 483,059 |
| 14 | Basel III leverage ratio (%) (row 2/row 13) | 4.08% | 3.71% | 3.89% | 3.38% |
| | **Liquidity Coverage Ratio** [3] | | | | |
| 15 | Total HQLA | 21,260 | 18,862 | 19,832 | 18,209 |
| 16 | Total net cash outflow | 11,944 | 11,438 | 12,392 | 10,637 |
| 17 | LCR ratio (%) | 178.00% | 164.91% | 160.04% | 171.18% |

1. The CET1 available after meeting minimum capital requirements for September 2018 and December 2018 has been amended to reflect the availability of Tier 2 capital to meet certain capital requirements.
2. Leverage ratio exposure is disclosed on a fully phased-in basis in accordance with the EU delegated act.
3. Please note that LCR daily average is calculated for CGML solo entity as consolidated LCR is not monitored on a daily basis (only monthly).

In line with the requirements of CRD IV, the Capital Conservation Buffer rose to 2.5% from 1 January 2019.

# 2. Own Funds and Capital Adequacy

CGML complies with the CRD IV minimum capital requirements to ensure that sufficient capital is maintained to cover all relevant risks and exposures. For this purpose, the firm calculates capital requirements for market risk, counterparty risk and operational risk based upon a number of internal models and standardised approaches, as well as recognising a number of credit risk mitigation techniques in calculating the requirements for credit and counterparty risk.

To assess the adequacy of capital to support current and expected future activities, the firm produces regular capital forecasts for CGML, taking into account both normal business conditions and a variety of stressed scenarios. On at least an annual basis, CGML prepares an Internal Capital Adequacy Assessment Process (ICAAP) document that sets out its risk appetite, capital requirements and associated policies and procedures.

## 2.1. Own Funds

This disclosure has been prepared using the format set out in Annex IV of the final 'Implementing technical standards with regard to disclosure of own funds requirements for institutions' (Commission implementing regulation - EU 1423/2013).

The following table shows the components of regulatory capital as at 30 June 2019.

## Table 2: Own funds disclosure

| | | Jun-19<br>$ million | Dec-18<br>$ million |
|---|---|---|---|
| **Common Equity Tier 1 (CET1) capital: Instruments and reserves** | | | |
| 1 | Capital Instruments and the related share premiumm accounts | 1,500 | 1,500 |
| 2 | Retained earnings | 1,852 | 1,563 |
| 3 | Accumulated other comprehensive instruments (and other reserves) | 12,315 | 12,043 |
| 5a | Independently reviewed interim profits net of any foreseeablecharge or dividend | - | - |
| 6 | **Common Equity Tier 1 (CET1) capital before regulatory adjustments** | **15,667** | **15,105** |
| **Common Equity Tier 1 (CET1) capital: regulatory adjustments** | | | |
| 7 | Additonal value adjustments (negative value) | (565) | (555) |
| 8 | Intangible assets (net of related tax liabilities) (negative amount) | (198) | (193) |
| 15 | Defined-benefit pension fund assets (negative amounts) | (341) | (330) |
| 20a | Exposure amount of the following items which qualify for a RW of 1250 %, where the institution opts for the deduction alternative | **(62)** | **(66)** |
| 20c | of which: securitisation positions (negative amount) | (53) | (51) |
| 20d | of which: free deliveries (negative amount) | (9) | (14) |
| 24 | CET1 capital elements or deductions - other | - | (2) |
| 28 | **Total regulatory adjustments to Common Equity Tier 1 (CET1)** | **(1,165)** | **(1,146)** |
| 29 | **Common Equity Tier 1 (CET1) capital** | **14,501** | **13,959** |
| **Additional Tier 1 (AT1) capital: instruments** | | | |
| 30 | Capital instruments and the related share premium accounts | 2,300 | 2,300 |
| 31 | of which: classified as equity under applicable accounting standards | 2,300 | 2,300 |
| 36 | **Additional Tier 1 (AT1) capital before regulatory adjustments** | **2,300** | **2,300** |
| **Additional Tier 1 (AT1) capital: regulatory adjustments** | | | |
| 43 | **Total Regulatory Adjustments to Additional Tier 1 (AT1) Capital** | - | - |
| 44 | **Additional Tier 1 (AT1) capital** | **2,300** | **2,300** |
| 45 | **Tier 1 capital (T1 = CET1 + AT1)** | **16,801** | **16,259** |
| **Tier 2 (T2) capital: instruments and provisions** | | | |
| 46 | Capital instruments and the related share premium accounts | 4,600 | 4,600 |
| 51 | Tier 2 (T2) capital before regulatory adjustments | 4,600 | 4,600 |
| 57 | Total regulatory adjustments to Tier 2 (T2) capital | - | - |
| 58 | **Tier 2 (T2) capital** | **4,600** | **4,600** |
| 59 | **Total capital (TC = T1 + T2)** | **21,401** | **20,859** |
| 60 | **Total risk weighted assets** | **146,596** | **131,022** |
| **Capital ratios and buffers** | | | |
| 61 | Common Equity Tier 1 (as a percentage of total risk exposure amount) | 9.89% | 10.65% |
| 62 | Tier 1 (as a percentage of total risk exposure amount) | 11.46% | 12.41% |
| 63 | Total capital (as a percentage of total risk exposure amount) | 14.60% | 15.92% |
| 64 | Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer expressed as a percentage of risk exposure amount) | 7.41% | 6.79% |
| 65 | of which: capital conservation buffer requirement | 2.50% | 1.88% |
| 66 | of which: countercyclical buffer requirement | 0.41% | 0.42% |
| 67 | of which: systemic risk buffer requirement | 0.00% | 0.00% |
| 67a | of which: Global Systemically Important Institution (G-811) or Other Systemically Important Institution (0-811) buffer | 0.00% | 0.00% |
| 68 | Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount) | 1.29% | 2.07% |
| **Amounts below the thresholds for deduction (before risk weighting)** | | | |
| 72 | Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions) [1] | 1,055 | 839 |
| 73 | Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10 % threshold and net of eligible short positions) [1] | 1,431 | 769 |
| 75 | Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) | 221 | 227 |

1. The comparative figures as at 31 December 2018 for rows 72 and 73 in the above table have been amended to reflect applicable holdings in financial sector entities.

Notes:

CGML's CET1 capital increased by $542 million due to the inclusion of 2018 audited retained earnings and other equity reserves.

## 2.2. Capital Adequacy

The following table sets out CGML's Pillar 1 minimum capital requirements and Risk Weighted Assets (RWAs).

**Table 3: OV1 - Overview of RWAs**

This table provides an overview of total RWAs forming the denominator of the risk-based capital requirements calculated in accordance with Article 92 of the CRR.

| | | RWAs Jun-19 $ million | RWAs Dec-18 $ million | Minimum capital requirements Jun-19 $ million |
|---|---|---|---|---|
| 1 | Credit risk (excluding CCR) | 3,186 | 2,735 | 255 |
| 2 | Of which the standardised approach | 3,186 | 2,735 | 255 |
| 6 | CCR | 79,736 | 75,868 | 6,379 |
| 7 | Of which mark to market | 61,132 | 57,077 | 4,891 |
| 10 | Of which internal model method (IMM) | 8,898 | 9,141 | 712 |
| 11 | Of which risk exposure amount for contributions to the default fund of a CCP | 347 | 210 | 28 |
| 12 | Of which CVA | 9,360 | 9,440 | 749 |
| 13 | Settlement risk | 102 | 105 | 8 |
| 14 | Securitisation exposures in the banking book (after the cap) | 102 | 65 | 8 |
| 18 | Of which standardised approach | 102 | 65 | 8 |
| 19 | Market risk | 40,085 | 32,986 | 3,207 |
| 20 | Of which the standardised approach | 28,436 | 18,650 | 2,275 |
| 21 | Of which IMA | 11,649 | 14,336 | 932 |
| 22 | Large exposures | 4,115 | - | 329 |
| 23 | Operational risk | 19,270 | 19,263 | 1,542 |
| 25 | Of which standardised approach | 520 | 513 | 42 |
| 26 | Of which advanced measurement approach | 18,750 | 18,750 | 1,500 |
| 29 | **Total** | 146,596 | 131,022 | 11,728 |

Notes:

The Risk Weighted Assets (RWAs) increased by $15,574 million, primarily driven by;

- An increase of $4,055 million in mark to market CCR arising mainly from increased derivatives exposure, particularly Over the Counter (OTC);
- An increase of $7,099 million in Market risk, reflecting a rise of $9,786 million under the standardised method partly offset by a decrease of $2,687 million under the IMA; and
- An increase of $4,115 million in Larges Exposures risk arising from intercompany exposures on trading activity and cash balances, coupled with a capital injection to CGML's subsidiary CGME.

# 3. Leverage

CGML's leverage ratio was calculated in accordance with CRD IV, by dividing fully loaded Tier 1 capital by the total of the entity's on and off-balance sheet exposures. The disclosures are prepared in the format set out in EBA's Implementing Technical Standards (ITS) (EU) 2016⁄200).

CGML manages the risk of excessive leverage continually through various internal tools which are monitored and controlled through the monthly UK ALCO process. CGML's leverage exposures and capital are measured against internal triggers set to ensure that the entity holds a sufficient capital excess to permit timely management decisions in case of short term stresses. The UK ALCO is the primary governance committee for the management of CGML's balance sheet. Amongst the responsibilities of the UK ALCO are the provision of balance sheet oversight of trends and business mix, ensuring prudent legal entity balance sheet management and overseeing the local regulatory requirements related to the balance sheet. The UK ALCO and CGML Board of Directors are also responsible for reviewing CGML's liquidity position on a daily basis.

The following table sets out CGML's leverage ratio at 30 June 2019.

### Table 4: Summary reconciliation of accounting assets and leverage ratio exposures

This table summarises the total leverage exposure, comprising the total assets in the statutory financial statement and other regulatory adjustments for leverage purposes.

| | | Jun-19 | Dec-18 |
|---|---|---|---|
| | | $ million | $ million |
| 1 | Total assets as per published financial statements | 451,359 | 404,907 |
| 2 | Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation | - | - |
| 3 | (Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with Article 429(13) of Regulation (EU) No 575/2013) | - | - |
| 4 | Adjustments for derivative financial instruments | (58,286) | (6,847) |
| 5 | Adjustment for securities financing transactions (SFTs) | 35,333 | 36,667 |
| 6 | Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures) | - | - |
| EU-6a | (Adjustment for intragroup exposures excluded from the leverage ratio total exposure measure in accordance with Article 429(7) of Regulation (EU) No 575/2013) | - | - |
| EU-6b | (Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with Article 429(14) of Regulation (EU) No 575/2013) | - | - |
| 7 | Other adjustments - differences in Statutory and Regulatory consolidation | (16,150) | (16,497) |
| 8 | **Leverage ratio total exposure measure** | 412,256 | 418,231 |

The total assets as per the balance sheet for CGML are on a solo basis, as the group does not publish financial statements at the consolidated level.

**Table 5: Leverage ratio common disclosure**

This table shows the breakdown of the Leverage exposure disclosed in Table 4 - Summary reconciliation of accounting assets and leverage ratio exposures and the leverage ratio.

| | | Jun-19 $ million | Dec-18 $ million |
|---|---|---|---|
| **On-balance sheet exposures (excluding derivatives and SFTs)** | | | |
| 1 | On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral) | 109,014 | 74,972 |
| 2 | (Asset amounts deducted in determining Tier 1 capital) | (601) | (591) |
| **3** | **Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)** | 108,413 | 74,381 |
| **Derivative exposures** | | | |
| 4 | Replacement cost associated with *all* derivatives transactions (ie net of eligible cash variation margin) | 24,741 | 18,008 |
| 5 | Add-on amounts for PFE associated with *all* derivatives transactions (mark- to-market method) | 131,872 | 121,556 |
| 7 | (Deductions of receivables assets for cash variation margin provided in derivatives transactions) | (14,512) | (10,853) |
| 8 | (Exempted CCP leg of client-cleared trade exposures) | (12,396) | (6,609) |
| 9 | Adjusted effective notional amount of written credit derivatives | 811,160 | 732,366 |
| 10 | (Adjusted effective notional offsets and add-on deductions for written credit derivatives) | (784,765) | (704,324) |
| **11** | **Total derivatives exposures (sum of lines 4 to 10)** | 156,099 | 150,144 |
| **SFT exposures** | | | |
| 12 | Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions [1] | 185,692 | 189,635 |
| 13 | (Netted amounts of cash payables and cash receivables of gross SFT assets) [1] | (63,857) | (23,999) |
| 14 | Counterparty credit risk exposure for SFT assets | 25,909 | 28,070 |
| | Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429b(4) and 222 of Regulation (EU) No 575/2013 | - | - |
| 15 | Agent transaction exposures | - | - |
| | (Exempted CCP leg of client-cleared SFT exposure) | - | - |
| **16** | **Total securities financing transaction exposures (sum of lines 12 to 15a)** | 147,744 | 193,706 |
| **Other off-balance sheet exposures** | | | |
| 17 | Off-balance sheet exposures at gross notional amount | - | - |
| 18 | (Adjustments for conversion to credit equivalent amounts) | - | - |
| **19** | **Other off-balance sheet exposures (sum of lines 17 and 18)** | - | - |
| **Capital and total exposure measure** | | | |
| 20 | **Tier 1 capital** | 16,801 | 16,259 |
| 21 | **Leverage ratio total exposure measure** (sum of lines 3, 11, 16, 19, EU-19a and EU-19b) | 412,256 | 418,231 |
| **Leverage ratio** | | | |
| 22 | **Leverage ratio** | 4.08% | 3.89% |
| **Choice on transitional arrangements and amount of derecognised fiduciary items** | | | |
| EU-23 | Choice on transitional arrangements for the definition of the capital measure | Fully phased in | |

1. The comparative figures as at 31 December 2018 for gross and netted SFT figures have been amended to incorporate the impact of netting.

Notes:

CGML's leverage ratio rose slightly to 4.08% in June 2019. Tier 1 capital increased by $542 million, and the decrease of $5,975 million in leverage exposure was largely attributed to the below.

- A decrease in Securities Financing Transactions (SFTs) of $45,962 million due to increased netting benefits, partly offset by;
- An increase of $34,032 million in on-balance sheet exposures; and
- An increase in PFE of $10,316 million for derivative exposures.

**Table 6: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)**

| | | CRR leverage ratio exposures | |
|---|---|---|---|
| | | **Jun-19** | **Dec-18** |
| | | $ miliion | $ miliion |
| EU-1 | Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of w hich: | 109,014 | 74,972 |
| EU-2 | Trading book exposures | 103,468 | 70,794 |
| EU-3 | Banking book exposures, of w hich: | 5,545 | 4,178 |
| EU-4 | Covered bonds | - | - |
| EU-5 | Exposures treated as sovereigns | 780 | 211 |
| EU-6 | Exposures to regional governments, MDB, international organisations and PSE **not** treated as sovereigns | - | - |
| EU-7 | Institutions | 562 | 17 |
| EU-8 | Secured by mortgages of immovable properties | - | - |
| EU-9 | Retail exposures | - | - |
| EU-10 | Corporate | 1,661 | 362 |
| EU-11 | Exposures in default | - | - |
| EU-12 | Other exposures (eg equity, securitisations, and other non-credit obligation assets) | 2,543 | 3,589 |

# 4. Credit Risk

As CGMLs exposures are primarily generated as a result of trading book activity, the following tables in this section have not been completed:

- CR1-D: Ageing of past-due exposures;
- CR1-E: Non-performing and forborne exposures;
- CR2-A: Changes in the stock of general and specific credit risk adjustments; and
- CR2-B: Changes in the stock of defaulted and impaired loans and debt securities.

**Table 7: CR1-A - Credit quality of exposures by exposure class and instrument**

| | As at 30 June 2019 | Gross carrying values of Defaulted exposures | Non-defaulted exposures | Specific credit risk adjustment | General credit risk adjustment | Accumulated write-offs | Credit risk adjustment charges of the period | Net values |
|---|---|---|---|---|---|---|---|---|
| | | $ million | $ million | $ million | $ million | $ million | $ million | $ million |
| | ***Standardised approach*** | | | | | | | |
| 16 | Central governments or central banks | - | 780 | - | - | - | - | 780 |
| 17 | Regional governments or local authorities | - | - | - | - | - | - | - |
| 18 | Public sector entities | - | - | - | - | - | - | - |
| 19 | Multilateral development banks | - | - | - | - | - | - | - |
| 20 | International organisations | - | - | - | - | - | - | - |
| 21 | Institutions | - | 562 | - | - | - | - | 562 |
| 22 | Corporates | - | 1,661 | - | - | - | - | 1,661 |
| 23 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 24 | Retail | - | - | - | - | - | - | - |
| 25 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 26 | Secured by mortgages on immovable property | - | - | - | - | - | - | - |
| 27 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 28 | Exposures in default | - | - | - | - | - | - | - |
| 29 | Items associated with particularly high risk | - | - | - | - | - | - | - |
| 30 | Covered bonds | - | - | - | - | - | - | - |
| 31 | Claims on institutions and corporates with a short- term credit assessment | - | 1,651 | - | - | - | - | 1,651 |
| 32 | Collective investments undertakings | - | - | - | - | - | - | - |
| 33 | Equity exposures | - | 68 | - | - | - | - | 68 |
| 34 | Other exposures | - | 223 | - | - | - | - | 223 |
| 35 | ***Total standardised approach*** | **-** | **4,945** | **-** | **-** | **-** | **-** | **4,945** |
| 36 | ***Total*** | | | | | | | - |
| 37 | Of which: Loans & Receivables | - | 2,816 | - | - | - | - | 2,816 |
| 38 | Of which: Debt Securities | - | 68 | - | - | - | - | 68 |
| 39 | Of which: Off-balance sheet exposures | - | - | - | - | - | - | - |

## Table 7: CR1-A - Credit quality of exposures by exposure class and instrument (continued)

| As at 31 December 2018 | | Gross carrying values of | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Defaulted exposures | Non-defaulted exposures | Specific credit risk adjustment | General credit risk adjustment | Accumulated write-offs | Credit risk adjustment charges of the period | Net values |
| | | $ million | $ million | $ million | $ million | $ million | $ million | $ million |
| | ***Standardised approach*** | | | | | | | |
| 16 | Central governments or central banks | - | 848 | - | - | - | - | 848 |
| 17 | Regional governments or local authorities | - | - | - | - | - | - | - |
| 18 | Public sector entities [1] | - | - | - | - | - | - | - |
| 19 | Multilateral development banks | - | - | - | - | - | - | - |
| 20 | International organisations | - | - | - | - | - | - | - |
| 21 | Institutions | - | 205 | - | - | - | - | 205 |
| 22 | Corporates | - | 1,046 | - | - | - | - | 1,046 |
| 23 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 24 | Retail | - | - | - | - | - | - | - |
| 25 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 26 | Secured by mortgages on immovable property | - | - | - | - | - | - | - |
| 27 | *Of which: SMEs* | - | - | - | - | - | - | - |
| 28 | Exposures in default | - | - | - | - | - | - | - |
| 29 | Items associated with particularly high risk | - | - | - | - | - | - | - |
| 30 | Covered bonds | - | - | - | - | - | - | - |
| 31 | Claims on institutions and corporates with a short- term credit assessment | - | 1,877 | - | - | - | - | 1,877 |
| 32 | Collective investments undertakings | - | - | - | - | - | - | - |
| 33 | Equity exposures | - | 59 | - | - | - | - | 59 |
| 34 | Other exposures [1] | - | 228 | - | - | - | - | 228 |
| 35 | ***Total standardised approach*** | - | **4,263** | - | - | - | - | **4,263** |
| 36 | ***Total*** | | | | | | | - |
| 37 | Of which: Loans & Receivables | - | 2,712 | - | - | - | - | 2,712 |
| 38 | Of which: Debt Securities | - | 59 | - | - | - | - | 59 |
| 39 | Of which: Off-balance sheet exposures | - | - | - | - | - | - | - |

1. The comparative figures as at 31 December 2018 for non material items have been re-aligned to be consistent with the current period's presentation.

Note:

- CGML's non-defaulted exposure rose by $681 million to $4,945 million at June 2019. This is mainly due to increased Corporates and Institutions, partially offset by Claims on institutions and corporates with a short- term credit assessment.

## Table 8: CR1-B: Credit quality of exposures by industry or counterparty types

| As at 30 June 2019 | Gross carrying values of Defaulted exposures $m | Gross carrying values of Non-defaulted exposures $m | Specific credit risk adjustment $m | General credit risk adjustment $m | Accumulated write-offs $m | Credit risk adjustment charges $m | Net values $m |
|---|---|---|---|---|---|---|---|
| Electricity, gas, steam and air conditioning supply | - | - | - | - | - | - | - |
| Information and communication | - | - | - | - | - | - | - |
| Financial and insurance activities | - | 4,780 | - | - | - | - | 4,780 |
| Real estate activities | - | 23 | - | - | - | - | 23 |
| Professional, scientific and technical activities | - | - | - | - | - | - | - |
| Administrative and support service activities | - | - | - | - | - | - | - |
| Public administration and defence, compulsory social security | - | 142 | - | - | - | - | 142 |
| Other services | - | - | - | - | - | - | - |
| Total | - | **4,945** | - | - | - | - | **4,945** |

| As at 31 December 2018 | $m | $m | $m | $m | $m | $m | $m |
|---|---|---|---|---|---|---|---|
| Electricity, gas, steam and air conditioning supply | - | - | - | - | - | - | - |
| Information and communication | - | - | - | - | - | - | - |
| Financial and insurance activities [1] | - | 4,006 | - | - | - | - | 4,006 |
| Real estate activities | - | 17 | - | - | - | - | 17 |
| Professional, scientific and technical activities | - | 29 | - | - | - | - | 29 |
| Administrative and support service activities | - | - | - | - | - | - | - |
| Public administration and defence, compulsory social security | - | 211 | - | - | - | - | 211 |
| Other services [1] | - | - | - | - | - | - | - |
| Total | - | **4,263** | - | - | - | - | **4,263** |

1. The comparative figures as at 31 December 2018 for Financial and insurance activities have been aligned with the current period’s presentation to incorporate exposures previously categorised as Other.

Note:

- Exposures to Financial and insurance activities increased by $774 million to $4,780 million at June 2019.

## Table 9: CR1-C - Credit quality of exposures by geography

| Gross carrying values of:<br>As at 30 June 2019 | Defaulted exposures<br>$ million | Non-defaulted exposures<br>$ million | Specific credit risk adjustment<br>$ million | General credit risk adjustment<br>$ million | Accumulated write-offs<br>$ million | Credit risk adjustment charges<br>$ million | Net values<br>$ million |
|---|---|---|---|---|---|---|---|
| **EU** | - | **4,190** | - | - | - | - | **4,190** |
| United Kingdom | - | 3,503 | - | - | - | - | 3,503 |
| Belgium | - | 280 | - | - | - | - | 280 |
| Luxembourg | - | 141 | - | - | - | - | 141 |
| Denmark | - | 89 | - | - | - | - | 89 |
| France | - | 49 | - | - | - | - | 49 |
| Other countries | - | 128 | - | - | - | - | 128 |
| **APAC** | - | **145** | - | - | - | - | **145** |
| Taiwan | - | 51 | - | - | - | - | 51 |
| Hong Kong | - | 33 | - | - | - | - | 33 |
| Viet Nam | - | 15 | - | - | - | - | 15 |
| Singapore | - | 13 | - | - | - | - | 13 |
| Other countries | - | 33 | - | - | - | - | 33 |
| **Americas** | - | **427** | - | - | - | - | **427** |
| United States | - | 365 | - | - | - | - | 365 |
| Canada | - | 62 | - | - | - | - | 62 |
| **EMEA** | - | **145** | - | - | - | - | **145** |
| Nigeria | - | 47 | - | - | - | - | 47 |
| Russian Federation | - | 27 | - | - | - | - | 27 |
| Other countries | - | 71 | - | - | - | - | 71 |
| **LATAM** | - | **38** | - | - | - | - | 38 |
| Bahamas | - | 30 | - | - | - | - | 30 |
| Other countries | - | 8 | - | - | - | - | 8 |
| Total | - | **4,945** | - | - | - | - | **4,945** |
| **As at 31 December 2018** | **$ million** | **$ million** | **$ million** | **$ million** | **$ million** | **$ million** | **$ million** |
| **EU** | - | **3,359** | - | - | - | - | **3,359** |
| United Kingdom | - | 2,867 | - | - | - | - | 2,867 |
| Belgium | - | 325 | - | - | - | - | 325 |
| Portugal | - | 55 | - | - | - | - | 55 |
| Hungary | - | 26 | - | - | - | - | 26 |
| Other countries | - | 86 | - | - | - | - | 86 |
| **APAC** | - | **454** | - | - | - | - | **454** |
| Taiwan | - | 137 | - | - | - | - | 137 |
| South Korea | - | 101 | - | - | - | - | 101 |
| Japan | - | 82 | - | - | - | - | 82 |
| Hong Kong | - | 50 | - | - | - | - | 50 |
| Australia | | 24 | - | - | - | - | 24 |
| Other countries | - | 60 | - | - | - | - | 58 |
| **Americas** | - | **289** | - | - | - | - | **289** |
| United States | - | 286 | - | - | - | - | 286 |
| Canada | - | 3 | - | - | - | - | 4 |
| **EMEA** | - | **111** | - | - | - | - | **111** |
| United Arab Emirates | - | 22 | - | - | - | - | 22 |
| Nigeria | - | 18 | - | - | - | - | 18 |
| Other countries | - | 71 | - | - | - | - | 70 |
| **LATAM** | - | **50** | - | - | - | - | **50** |
| Bahamas | - | 30 | - | - | - | - | **30** |
| Other countries | - | 20 | - | - | - | - | **21** |
| Total | - | **4,263** | - | - | - | - | **4,263** |

Note:

– Exposures to the European Union (EU) increased by $831 million and to the Americas by $138 million, partially offset by a decrease of $309 million towards Asia, due to changes in composition of trade activities.

### Table 10: CR3 - CRM techniques – Overview

| As at 30 June 2019 | Exposures unsecured – Carrying amount $ million | Exposures to be secured $ million | Exposures secured by collateral $ million | Exposures secured by financial guarantees $ million | Exposures secured by credit derivatives $ million |
|---|---|---|---|---|---|
| Total loans | 2,816 | - | - | - | - |
| Total debt securities | 68 | - | - | - | - |
| **Total exposures** | 2,884 | - | - | - | - |
| Of which defaulted | - | - | - | - | - |

| As at 31 December 2018 | $ million | $ million | $ million | $ million | $ million |
|---|---|---|---|---|---|
| Total loans | 2,712 | - | - | - | - |
| Total debt securities | 59 | - | - | - | - |
| **Total exposures** | 2,771 | - | - | - | - |
| Of which defaulted | - | - | - | - | - |

Note;

– Total loans increased by $104 million, mainly driven by an increase of $305 million due to third parties partly offset by a decrease of $201 million due to other group undertakings.

### Table 11: CR4 - Standardised approach – Credit risk exposure and CRM effects

| Exposure classes | Exposures before CCF and CRM | | Exposures post CCF and CRM | | RWAs and RWA density | |
|---|---|---|---|---|---|---|
| As at 30 June 2019 | On-balance-sheet amount $ million | Off-balance-sheet amount $ million | On-balance-sheet amount $ million | Off-balance-sheet amount $ million | RWAs $ million | RWA density $ million |
| **Exposure classes** | | | | | | |
| Central governments or central banks | 780 | - | 780 | - | 354 | 45% |
| Regional government or local authorities | - | - | - | - | - | - |
| Public sector entities | - | - | - | - | - | - |
| Multilateral development banks | - | - | - | - | - | - |
| International organisations | - | - | - | - | - | - |
| Institutions | 562 | - | 562 | - | 211 | 38% |
| Corporates | 1,661 | - | 1,661 | - | 1,660 | 100% |
| Retail | - | - | - | - | - | - |
| Secured by mortgages on immovable property | - | - | - | - | - | - |
| Exposures in default | | | - | - | | - |
| Exposures associated with particularly high risk | - | - | - | - | - | - |
| Covered bonds | - | - | - | - | - | - |
| Institutions and corporates with a short-term credit assessment | 1,651 | - | 1,651 | - | 550 | 33% |
| Collective investment undertakings | - | - | - | - | - | - |
| Equity | 68 | - | 68 | - | 68 | 100% |
| Other exposures | 223 | - | 223 | - | 343 | 154% |
| **Total** | **4,945** | **-** | **4,944** | **-** | **3,186** | **64%** |

## Table 11: CR4 – Standardised approach – Credit risk exposure and CRM effects (continued)

| Exposure classes<br>As at 31 December 2018 | Exposures before CCF and CRM<br>On-balance-sheet amount<br>$ million | Exposures before CCF and CRM<br>Off-balance-sheet amount<br>$ million | Exposures post CCF and CRM<br>On-balance-sheet amount<br>$ million | Exposures post CCF and CRM<br>Off-balance-sheet amount<br>$ million | RWAs and RWA density<br>RWAs<br>$ million | RWAs and RWA density<br>RWA density<br>$ million |
|---|---|---|---|---|---|---|
| **Exposure classes** | | | | | | |
| Central governments or central banks | 848 | - | 848 | - | 527 | 62% |
| Regional government or local authorities | - | - | - | - | - | - |
| Public sector entities [1] | - | - | - | - | - | - |
| Multilateral development banks | - | - | - | - | - | - |
| International organisations | - | - | - | - | - | - |
| Institutions | 205 | - | 205 | - | 99 | 48% |
| Corporates | 1,046 | - | 1,046 | - | 1,044 | 100% |
| Retail | - | - | - | - | - | - |
| Secured by mortgages on immovable property | - | - | - | - | - | - |
| Exposures in default | | | - | | | - |
| Exposures associated with particularly high risk | | - | - | - | - | - |
| Covered bonds | - | - | - | - | - | - |
| Institutions and corporates with a short-term credit assessment | 1,877 | - | 1,877 | - | 705 | 38% |
| Collective investment undertakings | - | - | - | - | - | - |
| Equity | 59 | - | 59 | - | 59 | 100% |
| Other exposures [1] | 228 | - | 228 | - | 301 | 132% |
| **Total** | **4,263** | **-** | **4,263** | **-** | **2,735** | **64%** |

1. The comparative figures as at 31 December 2018 for non material items have been re-aligned to be consistent with the current period's presentation.

Notes:

- The RWA density is defined as the total risk-weighted exposures divided by exposures post CCF and post CRM.
- The increases are primarily driven by exposures to Corporates and Institutions, partly offset by Claims on institutions and corporates with a short-term credit assessment, as noted in Table 7: CR1-A.
- Non material items have been restated to align with the current period's presentation.

Table 12: CR5 - Standardised approach - Risk Weighted

| | Risk weight | | | | | | | | | | | | | | | | | Of which |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0% | 2% | 4% | 10% | 20% | 35% | 50% | 70% | 75% | 100% | 150% | 250% | 370% | 1250% | Others | Deducted | Total | unrated |
| **As at 30 June 2019** | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m |
| Exposure classes | | | | | | | | | | | | | | | | | | |
| Central governments or central banks | 638 | - | - | - | - | - | - | - | - | - | - | 142 | - | - | - | - | **780** | 142 |
| Regional government or local authorities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Public sector entities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Multilateral development banks | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| International organisations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Institutions | - | - | - | - | 240 | - | 318 | - | - | 4 | - | - | - | - | - | - | **562** | 244 |
| Corporates | - | - | - | - | - | - | 3 | - | - | 1,658 | - | - | - | - | - | - | **1,661** | 1,570 |
| Retail | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Secured by mortgages on immovable property | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Exposures in default | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Exposures associated with particularly high risk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Covered bonds | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Institutions and corporates with a short-term credit assessment | - | - | - | - | 979 | - | 634 | - | - | 37 | - | - | - | - | - | - | **1,650** | - |
| Collective investment undertakings | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Equity | - | - | - | - | - | - | - | - | - | 68 | - | - | - | - | - | - | **68** | 68 |
| Other items | - | - | - | - | - | - | - | - | - | 144 | - | 80 | - | - | - | - | **224** | 224 |
| Total | **638** | **-** | **-** | **-** | **1,219** | **-** | **955** | **-** | **-** | **1,911** | **-** | **222** | **-** | **-** | **-** | **-** | **4,945** | **2,248** |
| **As at 31 December 2018** | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m | $m |
| Exposure classes | | | | | | | | | | | | | | | | | | |
| Central governments or central banks | 637 | - | - | - | - | - | - | - | - | - | - | 211 | - | - | - | - | **848** | 211 |
| Regional government or local authorities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Public sector entities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Multilateral development banks | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| International organisations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Institutions | - | - | - | - | 19 | - | 181 | - | - | 4 | - | - | - | - | - | - | **204** | 20 |
| Corporates | - | - | - | - | - | - | 3 | - | - | 1,043 | - | - | - | - | - | - | **1,046** | 1,011 |
| Retail | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Secured by mortgages on immovable property | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Exposures in default | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Exposures associated with particularly high risk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Covered bonds | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Institutions and corporates with a short-term credit assessment | - | - | - | - | 796 | - | 1,070 | - | - | 11 | - | - | - | - | - | - | **1,877** | 166 |
| Collective investment undertakings | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | - |
| Equity | - | - | - | - | - | - | - | - | - | 59 | - | - | - | - | - | - | **59** | 59 |
| Other items | - | - | - | - | - | - | - | - | - | 181 | - | 48 | - | - | - | - | **229** | 229 |
| Total | **637** | **-** | **-** | **-** | **815** | **-** | **1,254** | **-** | **-** | **1,298** | **-** | **259** | **-** | **-** | **-** | **-** | **4,263** | **1,696** |

# 5. Counterparty Credit Risk

For UK regulatory reporting purposes, CGML uses the standardised approach in determining counterparty credit risk capital requirements, based on External Credit Assessment Institution (ECAI) ratings for calculating RWAs. The measures of Exposure at Default (EAD) used to determine these requirements are described below.

For Over-The-Counter (OTC) derivatives, CGML uses two approaches: Internal Model Method (IMM) and Current Exposure Method (CEM). For IMM, the firm uses a constant covariance Monte Carlo simulation of potential future exposure to determine an expected positive exposure (EPE) measure as an input to Citi's EAD calculation. The model is calibrated with historical volatilities subject to a set of independent internal validation and statistical back-testing standards. The model utilises a standard supervisory alpha multiplication factor of 1.4. For those positions which fall outside of the scope of the firm's IMM model permission, CGML uses the CEM approach. This method assigns to each transaction a regulatory stipulated exposure based on the mark-to-market value and a measure of potential future exposure which is a percentage of notional driven by residual maturity and the type of contract, i.e. interest rate, equities etc.

### Table 13: CCR1: Analysis of CCR exposure by approach

This table provide a comprehensive view of the methods used by CGML to calculate Counterparty Credit Risk (CCR) regulatory requirements and the main parameters used within each method. This excludes CVA charges or exposures cleared through a CCP.

| | As at 30 June 2019 | Notional $ million | Replacement cost/current market value $ million | Potential future credit exposure $ million | EEPE $ million | Multiplier $ million | EAD post CRM $ million | RWAs $ million |
|---|---|---|---|---|---|---|---|---|
| 1 | Mark to market | | 8,225 | 35,091 | | | 30,059 | 19,902 |
| 4 | IMM (for derivatives and SFTs) | | | | 18,478 | 1.4 | 13,199 | 8,742 |
| 5 | Of which securities financing transactions | | | | - | - | - | - |
| 6 | Of which derivatives and long settlement transactions | | | | 18,478 | 1.4 | 13,199 | 8,742 |
| 7 | Of which from contractual cross- product netting | | | | - | - | - | - |
| 8 | Financial collateral simple method (for SFTs) | | | | | | - | - |
| 9 | Financial collateral comprehensive method (for SFTs) | | | | | | 52,282 | 40,643 |
| 10 | VaR for SFTs | | | | | | - | - |
| 11 | **Total** | | | | | | | **69,286** |

| | As at 31 December 2018 | Notional $ million | Replacement cost/current market value $ million | Potential future credit exposure $ million | EEPE $ million | Multiplier $ million | EAD post CRM $ million | RWAs $ million |
|---|---|---|---|---|---|---|---|---|
| 1 | Mark to market | | 11,440 | 24,503 | | | 24,926 | 17,061 |
| 4 | IMM (for derivatives and SFTs) | | | | 19,872 | 1.4 | 14,194 | 9,083 |
| 5 | Of which securities financing transactions | | | | - | - | - | - |
| 6 | Of which derivatives and long settlement transactions | | | | 19,872 | 1.4 | 14,194 | 9,083 |
| 7 | Of which from contractual cross- product netting | | | | - | - | - | - |
| 8 | Financial collateral simple method (for SFTs) | | | | | | - | - |
| 9 | Financial collateral comprehensive method (for SFTs) | | | | | | 52,548 | 39,390 |
| 10 | VaR for SFTs | | | | | | - | - |
| 11 | **Total** | | | | | | | **65,533** |

Notes:

The counterparty credit risk RWA increased by $3,753 million to $69,286 million at June 2019 due to the following;

- Increase in Mark to Market (MtM) of $2,841 million whilst Internal Model methods (IMM) remained broadly flat;
- Financial collateral comprehensive method (FCCM) for SFTs increased by $1,253 million.

**Table 14: CCR2 - Credit valuation adjustment (CVA) capital charge**

This table provides the regulatory calculations for CVA under the standardised and advanced method approaches.

| | | As at 30 June 2019 | | As at 31 December 2018 | |
|---|---|---|---|---|---|
| | | Exposure value $ million | RWAs $ million | Exposure value $ million | RWAs $ million |
| 1 | Total portfolios subject to the advanced method | 9,341 | 2,700 | 9,369 | 3,184 |
| 2 | (i) VaR component (including the 3× multiplier) | | 885 | | 1,137 |
| 3 | (ii) SVaR component (including the 3× multiplier) | | 1,815 | | 2,047 |
| 4 | All portfolios subject to the standardised method | 17,739 | 6,660 | 14,065 | 6,256 |
| **5** | **Total subject to the CVA capital charge** | **27,080** | **9,360** | **23,434** | **9,440** |

Note:

- CVA RWA was broadly flat to the prior period, with a slight decrease of $80 million.

**Table 15: CCR8 - Exposures to CCPs**

This table provides a comprehensive picture of the institution's exposures to CCPs. In particular, the template includes all types of exposures (due to operations, margins, and contributions to default funds) and related capital requirements.

| | As at 30 June 2019 | | As at 31 December 2018 | |
|---|---|---|---|---|
| | EAD post CRM | RWAs | EAD post CRM | RWAs |
| | $ million | $ million | $ million | $ million |
| **Exposures to QCCPs (total)** | | **1,090** | | **895** |
| Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which | 18,073 | 743 | 17,553 | 685 |
| (i) OTC derivatives | 5,307 | 242 | 4,479 | 153 |
| (ii) Exchange-traded derivatives | 8,418 | 378 | 7,427 | 394 |
| (iii) SFTs | 2,032 | 77 | 3,172 | 89 |
| (iv) Netting sets where cross-product netting has been approved | - | - | - | - |
| Segregated initial margin | - | | - | |
| Non-segregated initial margin | 2,314 | 46 | 2,475 | 49 |
| Prefunded default fund contributions | 597 | 347 | 670 | 210 |
| Alternative calculation of own funds requirements for exposures | | - | | - |

CRR II introduces a new framework for identifying QCCPs. If a third-country CCP has applied for recognition in accordance with EMIR, a new transitional provision permits firms to consider that third-country CCP as a QCCP for a period of time. The time period depends on the date of application of the CCP for recognition as a QCCP and/or the date of the EU implementing act in relation to the country in which the CCP is established, so it may have commenced prior to the introduction of CRR II.

**Table 16: CCR3 Standardised approach – CCR exposures by regulatory portfolio and risk**

This table provides a breakdown of Counterparty Credit Risk exposures and risk-weighted by portfolio (type of counterparties) and by risk weight (riskiness attributed according to the standardised approach).

| | | Risk weight | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exposure classes | 0% | 2% | 4% | 20% | 50% | 100% | 150% | Others | Total | Of which unrated |
| **As at 30 June 2019** | | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million |
| 1 | Central governments or central banks | 3,230 | - | - | 1,189 | 15 | 10,172 | - | - | 14,606 | 10,058 |
| 2 | Regional government or local authorities | 55 | - | - | 633 | - | 2 | - | - | 690 | - |
| 3 | Public sector entities | - | - | - | 206 | - | 1,385 | - | - | 1,591 | 1,385 |
| 4 | Multilateral development banks | - | - | - | - | - | - | - | - | - | - |
| 5 | International organisations | - | - | - | - | - | - | - | - | - | - |
| 6 | Institutions | - | 11,927 | 4,532 | 8,407 | 28,784 | 628 | - | - | 54,278 | 12,849 |
| 7 | Corporates | - | - | - | 664 | 2,001 | 36,677 | 392 | - | 39,734 | 35,366 |
| 8 | Retail | - | - | - | - | - | - | - | - | - | - |
| 9 | Institutions and corporates with a short-term credit assessment | - | - | - | 82 | 1,249 | 353 | 391 | - | 2,075 | - |
| 10 | Other items | - | - | - | - | - | - | 639 | - | 639 | 154 |
| 11 | Total | **3,285** | **11,927** | **4,532** | **11,181** | **32,049** | **49,217** | **1,422** | **-** | **113,613** | **59,812** |
| **As at 31 December 2018** | | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million | $ million |
| 1 | Central governments or central banks | 4,619 | - | - | 985 | 1 | 12,410 | - | - | 18,015 | 12,802 |
| 2 | Regional government or local authorities | - | - | - | 566 | - | 11 | 4 | - | 581 | 4 |
| 3 | Public sector entities | - | - | - | 212 | - | 787 | - | - | 999 | 742 |
| 4 | Multilateral development banks | - | - | - | - | - | - | - | - | - | - |
| 5 | International organisations | - | - | - | - | - | - | - | - | - | - |
| 6 | Institutions | - | 13,707 | 4,110 | 6,816 | 28,818 | 487 | 1,384 | - | 55,322 | 11,092 |
| 7 | Corporates | - | - | - | 480 | 1,794 | 40,313 | 903 | - | 43,490 | 39,551 |
| 8 | Retail | - | - | - | - | - | - | - | - | - | - |
| 9 | Institutions and corporates with a short-term credit assessment | - | - | - | 207 | 3,053 | 99 | 436 | - | 3,795 | - |
| 10 | Other items | - | - | - | - | - | - | - | - | - | - |
| 11 | Total | **4,619** | **13,707** | **4,110** | **9,266** | **33,666** | **54,107** | **2,727** | **-** | **122,202** | **64,191** |

**Table 17: CCR7- RWA flow statements of CCR exposures under the IMM**

This table presents a flow statement explaining changes in the CCR RWAs determined under the IMM for CCR (derivatives) in accordance with Part Three, Title II, Chapter 6 of the CRR.

| | | Jun-19 | | Mar-19 | |
|---|---|---|---|---|---|
| | | RWA amounts | Capital requirements | RWA amounts | Capital requirements |
| | | $ million | $ million | $ million | $ million |
| **1** | **RWAs as at the end of the previous reporting period** | **9,452** | **756** | **9,141** | **731** |
| 2 | Asset size | (540) | (43) | 325 | 26 |
| 3 | Credit quality of counterparties | (14) | (1) | (14) | (1) |
| 4 | Model updates (IMM only) | - | - | - | - |
| 5 | Methodology and policy (IMM only) | - | - | - | - |
| 6 | Acquisitions and disposals | - | - | - | - |
| 7 | Foreign exchange movements | - | - | - | - |
| 8 | Other | - | - | - | - |
| **9** | **RWAs as at the end of the current reporting period** | **8,898** | **712** | **9,452** | **756** |

Notes:
Counterparty credit risk RWAs fell by $243 million driven primarily by a decrease in exposures valued under the IMM.

### Table 18: CCR5-A - Impact of netting and collateral held on exposure values

The table provides an overview of the impact of netting and collateral held on exposures for SFT and derivatives, including exposures arising from transactions cleared through a CCP.

| | | Gross positive fair value or net carrying amount | Netting benefits | Netted current credit exposure | Collateral held | Net credit exposure |
|---|---|---|---|---|---|---|
| As at 30 June 2019 | | $ million | $ million | $ million | $ million | $ million |
| 1 | Derivatives | 445,613 | 369,147 | 76,466 | 34,798 | 41,668 |
| 2 | SFTs | 429,616 | - | 429,616 | 396,954 | 32,662 |
| 3 | Non-eligible collateral under the CRR11 | | | | 108,653 | |
| **4** | **Total** | **875,229** | **369,147** | **506,082** | **540,404** | **74,330** |
| As at 31 December 2018 | | $ million | $ million | $ million | $ million | $ million |
| 1 | Derivatives | 362,613 | 295,249 | 67,363 | 32,004 | 35,360 |
| 2 | SFTs | 417,432 | - | 417,432 | 390,563 | 41,294 |
| 3 | Non-eligible collateral under the CRR11 | | | | 69,608 | |
| **4** | **Total** | **780,045** | **295,249** | **484,795** | **492,175** | **76,653** |

Netted current credit exposure increased for both derivatives and SFTs due to rise in trading activities.

### Table 19: CCR5-B - Composition of collateral for exposures to CCR

This table shows the breakdown of all types of collateral posted or received by CGML to support or reduce Counterparty Credit Risk exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP.

| | 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 | | |
| As at 30 June 2019 | $ million | $ million | $ million | $ million | $ million | $ million |
| Cash | - | 21,621 | - | 28,066 | 166,969 | 248,541 |
| Sovereign Debt | 1,460 | 4,692 | - | 3,284 | 136,283 | 68,805 |
| Corporate Bond | 122 | 3,817 | - | 6,397 | 9,914 | 49,653 |
| Equities | 110 | - | - | - | 39,531 | 20,148 |
| Other | - | 2,975 | - | 56 | 44,257 | 33,459 |
| **Total** | **1,692** | **33,106** | **-** | **37,804** | **396,954** | **420,605** |
| As at 31 December 2018 | $ million | $ million | $ million | $ million | $ million | $ million |
| Cash | - | 19,149 | - | 19,766 | 11,890 | 10,920 |
| Sovereign Debt | 1,102 | 5,715 | - | 2,278 | 252,484 | 265,304 |
| Corporate Bond | 208 | 3,639 | - | 5,628 | 28,990 | 33,524 |
| Equities | 79 | - | - | - | 66,326 | 68,728 |
| Other | - | 2,110 | - | 109 | 30,872 | 37,216 |
| **Total** | **1,390** | **30,614** | **-** | **27,781** | **390,562** | **415,692** |

Unsegregated derivatives collateral increased due to a rise in trading activities.

**Table 20: CCR6: Credit derivatives exposures**

The table below illustrate the extent of CGML's exposures to credit derivative transactions broken down between derivatives bought or sold.

| | Credit derivative hedges | | Other credit derivatives | |
|---|---|---|---|---|
| | Protection bought | Protection sold | Protection bought | Protection sold |
| As at 30 June 2019 | $ million | $ million | $ million | $ million |
| **Notionals** | | | | |
| Single-name credit default swaps | 666 | 395 | 264,160 | 260,667 |
| Index credit default swaps | 1,083 | 911 | 484,050 | 484,712 |
| Total return swaps | - | - | 2,990 | 87,406 |
| Credit options | - | - | 16,084 | 16,084 |
| Other credit derivatives | - | - | 1,095 | 1,095 |
| **Total notionals** | **1,750** | **1,306** | **768,378** | **849,963** |
| **Fair values** | | | | |
| *Positive fair value (asset)* | 14 | - | 4,138 | 18,646 |
| *Negative fair value (liability)* | - | (21) | (17,742) | (4,305) |
| As at 31 December 2018 | $m | $m | $m | $m |
| **Notionals** | | | | |
| Single-name credit default swaps | 678 | 403 | 268,556 | 266,163 |
| Index credit default swaps | 959 | 806 | 428,532 | 429,024 |
| Total return swaps | - | - | 487 | 395 |
| Credit options | - | - | 41,781 | 41,724 |
| Other credit derivatives | - | - | 1,562 | 3,020 |
| **Total notionals** | **1,637** | **1,209** | 740,918 | 740,326 |
| **Fair values** | | | | |
| *Positive fair value (asset)* | 13 | - | 3,861 | 9,665 |
| *Negative fair value (liability)* | - | (20) | (9,586) | (4,043) |

# 6. Market Risk

CGML uses a Value at Risk (VaR) model to calculate market risk capital requirements for the majority of its trading portfolio under an Internal Models Approach (IMA) permission granted by the PRA. The permission covers general market risk and issuer specific risk for a number of Fixed Income, Equities and Commodities businesses. In addition to VaR based capital requirements, CGML is required to set aside capital in respect of Stressed VaR (SVaR) and the Incremental Risk Charge (IRC).

Non-proprietary details of the scope of CGML's IMA permission are available in the Financial Services Register on the FCA website.

## 6.1. IMA Approach

**Table 21: MR2-A - Market risk under the IMA**

This table display the components of the own funds requirements under the IMA for market risk.

| | | As at 30 June 2019 | | As at 31 December 2018 | |
|---|---|---|---|---|---|
| | | RWAs<br>$ million | Capital requirements<br>$ million | RWAs<br>$ million | Capital requirements<br>$ million |
| **1** | **VaR (higher of values a and b)** | 3,103 | 248 | 4,039.66 | 323 |
| (a) | Previous day's VaR (Article 365(1) of the CRR (VaRt-1)) | | 99 | | 100 |
| (b) | Average of the daily VaR (Article 365(1)) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR | | 248 | | 323 |
| **2** | **SVaR (higher of values a and b)** | 5,315 | 425 | 7,563.40 | 605 |
| (a) | Latest SVaR (Article 365(2) of the CRR (SVaRt-1)) | | 195 | | 189 |
| (b) | Average of the SVaR (Article 365(2) of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366 of the CRR) | | 425 | | 605 |
| **3** | **IRC (higher of values a and b)** | 3,231 | 258 | 2,732.62 | 219 |
| (a) | Most recent IRC value (incremental default and migration risks calculated in accordance with Article 370 and Article 371 of the CRR) | | 258 | | 196 |
| (b) | Average of the IRC number over the preceding 12 weeks | | 220 | | 219 |
| **4** | **Comprehensive risk measure (higher of values a, b and c)** | - | - | - | - |
| (a) | Most recent risk number for the correlation trading portfolio (Article 377 of the CRR) | | - | | - |
| (b) | Average of the risk number for the correlation trading portfolio over the preceding 12 weeks | | - | | - |
| (c) | 8% of the own funds requirement in the standardised approach on the most recent risk number for the correlation trading portfolio (Article 338(4) of the CRR) | | - | | - |
| **5** | **Other** | - | - | - | - |
| **6** | **Total** | 11,649 | 932 | 14,336 | 1,147 |

### Table 22: MR2-B - RWA flow statements of market risk exposures under the IMA

The table presents a flow statement explaining variations in the market RWAs.

| | | VaR<br>$ million | SVaR<br>$ million | IRC<br>$ million | Compre-hensive risk measure<br>$ million | Other<br>$ million | Total RWAs<br>$ million | Total capital requirements<br>$ million |
|---|---|---|---|---|---|---|---|---|
| **1** | **RWAs at 31 March 2019** | **3,574** | **6,633** | **2,418** | **-** | **-** | **12,625** | **1,010** |
| 1a | *Regulatory adjustment* | (1,414) | (1,348) | - | - | - | (2,761) | (221) |
| *1b* | *RWAs at the previous quarter-end (end of the day)* | 2,161 | 5,285 | 2,418 | - | - | 9,864 | 789 |
| *2* | Movement in risk levels | 28 | (705) | 812 | - | - | 135 | 11 |
| 3 | Model updates/changes | (59) | 110 | - | - | - | 51 | 4 |
| 4 | Methodology and policy | - | - | - | - | - | - | - |
| 5 | Acquisitions and disposals | - | - | - | - | - | - | - |
| 6 | Foreign exchange movements | - | - | - | - | - | - | - |
| 7 | Other | - | - | - | - | - | - | - |
| 8a | *RWAs at the end of the reporting period (end of the day)* | 2,129 | 4,691 | 3,231 | - | - | 10,051 | 804 |
| *8b* | *Regulatory adjustment* | 974 | 624 | 0 | - | - | 1,598 | 128 |
| ***8*** | **RWAs at 30 June 2019** | **3,103** | **5,315** | **3,231** | **-** | **-** | **11,649** | **932** |

| | | VaR<br>$ million | SVaR<br>$ million | IRC<br>$ million | Compre-hensive risk measure<br>$ million | Other<br>$ million | Total RWAs<br>$ million | Total capital requirements<br>$ million |
|---|---|---|---|---|---|---|---|---|
| **1** | **RWAs at 31 December 2018** | **4,040** | **7,563** | **2,733** | **-** | **-** | **14,336** | **1,147** |
| 1a | *Regulatory adjustment* | (1,392) | (1,450) | (278) | - | - | (3,120) | (250) |
| *1b* | *RWAs at the previous quarter-end (end of the day)* | 2,648 | 6,113 | 2,455 | - | - | 11,216 | 897 |
| *2* | Movement in risk levels | (392) | (772) | (37) | - | - | (1,201) | (96) |
| 3 | Model updates/changes | (95) | (56) | - | - | - | (151) | (12) |
| 4 | Methodology and policy | - | - | - | - | - | - | - |
| 5 | Acquisitions and disposals | - | - | - | - | - | - | - |
| 6 | Foreign exchange movements | - | - | - | - | - | - | - |
| 7 | Other | - | - | - | - | - | - | - |
| 8a | *RWAs at the end of the reporting period (end of the day)* | 2,161 | 5,285 | 2,418 | - | - | 9,864 | 789 |
| *8b* | *Regulatory adjustment* | 1,413 | 1,348 | - | - | - | 2,761 | 221 |
| ***8*** | **RWAs at 31 March 2019** | **3,574** | **6,633** | **2,418** | **-** | **-** | **12,625** | **1,010** |

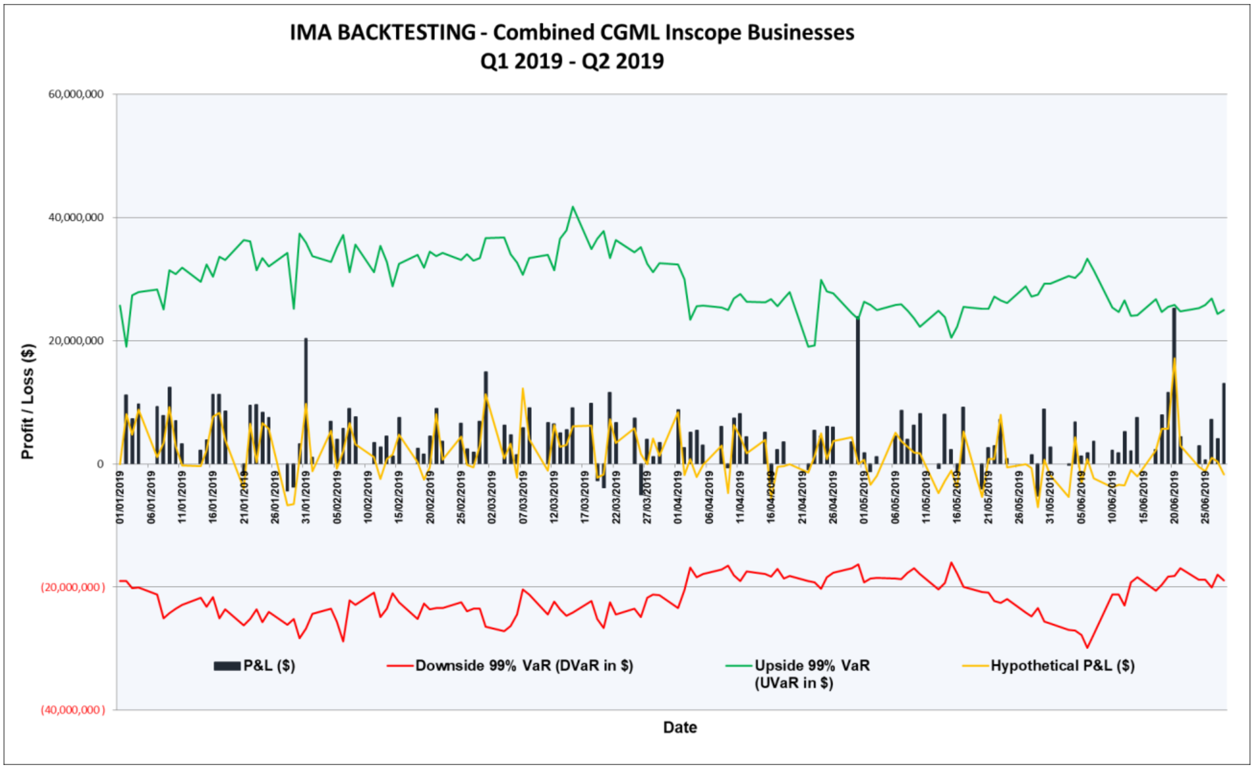
**Table 23: MR3 - IMA values for trading portfolios**

This table display the values (maximum, minimum, average and the ending for the reporting period) resulting from the different types of models approved to be used for computing the regulatory capital charge at the group level, before any additional capital charge is applied on the value in accordance with Article 365 in Part Three, Title V, Chapter 5 of the CRR.

| | 30 June 2019<br>$ million | 31 December 2018<br>$ million |
|---|---|---|
| **VaR (10 day 99%)** | | |
| Maximum value | 86 | 151 |
| Average value | 51 | 56 |
| Minimum value | 32 | 31 |
| Period end | 64 | 44 |
| **SVaR (10 day 99%)** | | |
| Maximum value | 105 | 210 |
| Average value | 48 | 73 |
| Minimum value | 3 | 7 |
| Period end | 92 | 40 |
| **IRC (99.9%)** | | |
| Maximum value | 357 | 336 |
| Average value | 168 | 306 |
| Minimum value | 98 | 255 |
| Period end | 219 | 324 |
| **Comprehensive risk capital charge (99.9%)** | | |
| Maximum value | - | - |
| Average value | - | - |
| Minimum value | - | - |
| Period end | - | - |

**Table 24: MR4 - Comparison of VaR estimates with gains/losses**

The table presents a comparison of the results of estimates from the regulatory VaR model approved with both hypothetical and actual trading outcomes, in order to highlight the frequency and the extent of the backtesting exceptions and to give an analysis of the main outliers in backtested results.




There was one upside exception during the year, on 30 April 2019, which was driven by volatility on derivative transactions.

## 6.2. Standardised Approach

Although CGML uses the standardised approach to calculate regulatory capital requirements for only a small proportion of the trading portfolio, nonetheless, this generates a larger number in terms of RWAs and capital that the firm needs to be hold against these assets.

**Table 25: MR1 - Market risk under the standardised approach**

The table display the components of own funds requirements under the standardised approach for market risk.

| | | As at 30 June 2019 | | As at 31 December 2018 | |
|---|---|---|---|---|---|
| | | RWAs<br>$ million | Capital requirements<br>$ million | RWAs<br>$ million | Capital requirements<br>$ million |
| | **Outright products** | | | | |
| 1 | Interest rate risk (general and specific) | 10,807 | 865 | 8,718 | 697 |
| 2 | Equity risk (general and specific) | 13,294 | 1,064 | 5,714 | 457 |
| 3 | Foreign exchange risk | 2,278 | 182 | 2,311 | 185 |
| 4 | Commodity risk | 781 | 62 | 1,056 | 85 |
| | **Options** | | | | |
| 5 | Simplified approach | - | - | - | - |
| 6 | Delta-plus method | - | - | 30 | 2 |
| 7 | Scenario approach | 1,154 | 92 | 616 | 49 |
| 8 | Securitisation (specific risk) | 123 | 10 | 204 | 16 |
| **9** | **Total** | **28,436** | **2,275** | **18,649** | **1,491** |

Notes:

Market risk under standardised approach increased by $9,787 million, driven by;

- An increase in Equity risk of $7,580 million; and
- An increase in Interest rate risk of $2,089 million driven by increase in specific risk on bonds.