



safeguarding integrity

Basel III: Strategic and Operational Impacts

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Passion to Perform



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Purpose and Scope of Basel III



Purpose of Basel III

- The Basel Accord offers standards to establish minimum capital requirements for internationally active banking organisations prepared by the Basel Committee on Banking Supervision (BCBS).
- Basel III strengthens the quality and quantity of capital and risk coverage provisions of Basel II, issued in November 2005, and introduces liquidity requirements, the leverage ratio, capital buffers and further capital requirements for global and domestic systemically important institutions.
- Basel III rules have been implemented in the European Union (EU) from beginning of 2014 with a new directive (CRD IV) and a regulation (CRR) that replace the existing requirements and address also non-Basel III policy items like remuneration policies and corporate governance requirements.

Purpose of Basel III

The Basel capital framework is founded upon three so-called 'pillars': minimum capital requirements (Pillar One), supervisory review process (Pillar Two) and compulsory market disclosure (Pillar Three).

- Pillar One involves the allocation of percentage capital requirements for individual asset items.
- Pillar Two looks at the internal control procedures of the institution and is based on an assessment of the supervisory functions within the institution concerned.
- Pillar Three enforces a compulsory disclosure regime and is based on the principle that the share market price is a useful tool for supervision, if financial markets are given sufficient information.

Basel III supplements the three pillars of Basel II with requirements for various capital buffers, other than introducing quantitative liquidity and leverage requirements.

Capital and RWA – Capital Features



Capital

- Quantitative regulatory capital under Pillar One has at its core a simple equation: a firm shall maintain at all times financial resources equal to or greater than a percentage of its risk-weighted assets.
- Capital is equity or equity-like instruments (including subordinated debt and instruments with features of equity) that provide a cushion against losses. Capital is split into two categories (Tier I and Tier II) depending on their characteristics and quality of financial resources. Certain assets or exposures are required to be deducted from the financial resources constituting the capital.
- Basel III abolishes Tier III capital, a feature of Basel II, and makes various reforms to the quality of financial resources required to qualify as capital, the proportion of higher quality capital required, the quantum of capital required as a percentage of risk-weighted assets and the treatment of deductions.

Risk Weighted Assets (RWA)

- Assets or exposures that are not components of, or deducted from, capital shall be risk weighted.
- Risk weighted assets may fall into the banking book (also known as non-trading book) or into the trading book. In broad terms, the trading book includes assets held with short-term trading intent (or to hedge such assets). Other assets fall within the banking book.
- The core requirement of Pillar One remains that an institution's capital must exceed 8% of its risk weighted assets. The purpose of risk weighting is to ensure that the regulatory capital required for any specific asset is in line with the actual risk profile of that asset.

Capital and RWA – Capital Adequacy



Key Changes

Basel III and the CRD IV made significant changes to the requirements as to the quality and quantum of capital, and also to the international consistency of the treatment of deductions. Key changes include:

- changes to the definition of capital, with a tightening of the eligibility requirements for items to be included as regulatory capital, and the abolition of Tier 3 capital;
- increase in the total amount of capital required to be held by institutions, to include various 'buffers', and change to the required composition of the capital base, with more emphasis on CET 1 capital;
- harmonisation of the 'prudential filters' (items that varies from their accounting treatment), of the items to be deducted from the capital base, and of the way in which capital is deducted;
- changes to the treatment of capital raised by subsidiaries and increased Pillar Three disclosure.

To smooth the impact of the changes, the new rules are subject to various transitional provisions.

Capital Structure

- Under the CRD IV, a bank shall maintain minimum capital levels calculated in relation to its RWA, i.e. total capital of at least 8% of RWA; Tier 1 capital of at least 6%; and CET 1 capital of at least 4.5%.
- Further, banks are required to hold 2.5% of RWA in CET 1 capital to meet the capital conservation buffer requirement, and, further, up to 2.5% of RWA to meet a countercyclical buffer requirement.
- In addition, banks which are considered to be systemically important banks, either globally (known as GSIs) or domestically (known as D-SIs) may be required to meet even higher CET 1 levels.

Capital and RWA



Tier 1

Tier 1 capital consists of the highest quality capital, displaying permanence, deep subordination and discretionary and mandatory cancellation of distributions. Tier 1 can be sub-divided into CET 1 and AT1.

- *Common Equity Tier 1 (CET 1)*: comprises ordinary shares, retained earnings and reserves that do not bear any redemption costs or mandatory payments. On a winding-up, ordinary shareholders can claim only for surplus assets once the bank's depositors and other creditors have been paid in full.
- *Additional Tier (AT1)*: consists of instruments without fixed maturity. These instruments may contain a call option, exercisable at the sole discretion of the bank, and only with regulatory approval, no earlier than the fifth anniversary of the issue date. The call must not be coupled with an incentive to redeem (e.g. a coupon step-up). Distributions can be cancelled at bank's discretion and are non-cumulative. All AT1 instruments must either convert into ordinary shares or be written down (on a permanent or temporary basis) if the ratio of the bank's CET 1 to its total RWA falls below 5.125%.

Tier 2

Tier 2 consists of hybrid instruments with a maturity of not less than five years. They will tend to have a longer maturity, however, as regulatory amortisation will apply in the final five years to maturity.

Tier 2 instruments are typically in bond format but can be in loan form or issued as preference shares. They carry a cumulative cost and their distribution shall be structured as non-deferrable and cumulative

The issuer may call the instrument after five years from its issue date, in its sole discretion and with regulatory consent. The capital treatment progressively decays over the last five years of its life.

Pillars of Basel III – Pillar One



Banking Book Credit Risk

In line with Basel II, non-trading book credit assets may be risk weighted according to three different approaches: i) Standardised Approach; ii) Foundation Internal Ratings Based (IRB) Approach; or iii) Advanced IRB Approach. Each institution is required to adopt one of these three approaches.

Credit Risk Mitigants

Credit risk mitigants are assets, such as collateral, guarantees and credit derivatives, which may be used to mitigate the credit risk of an exposure. Basel III introduces certain changes to the assets that qualify as credit risk mitigants and extends opinion requirements applicable to credit risk mitigants.

Counterparty Credit Risk

Basel III introduces new rules to risk weight the exposures to central counterparties, and strengthens the requirements on counterparty credit risk and collateral management. Further, Basel III introduces a credit valuation adjustment (CVA) charge for the risk of mark-to-market losses resulting from the deterioration in the credit quality of counterparties under over-the-counter (OTC) derivatives.

Securitisation

Basel II already introduced new rules to assess the risk weighted assets arising from securitisations and synthetic securitisations. These rules seek to avoid securitisations being used as a means to arbitrage regulatory capital, and to identify the concentration of credit risk through tranching.

Basel III introduces additional requirements for securitisation, including enhanced due diligence and retention requirements ('skin in the game') as well as additional capital charges for re-securitisations.

Pillars of Basel III – Pillar One



Trading Book Market Risk

- Basel II established capital requirements for position risk, counterparty risk and currency risk by reference to the risk of movements in the market price of the items classified in the trading book.
- Basel III brings various technical changes to the calculation of capital to be held against such items.

Operational Risk

- Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk. In line with Basel II, the capital requirement for operational risk may be calculated according to three different approaches: i) Basic Indicator Approach (BIA); ii) Standardised Approach (SA); or iii) Advanced Measurement Approach (AMA).
- While the BIA and SA use percentages of net income associated with the relevant business as a proxy for operational risk, the AMA uses quantitative models based on internal and external data.

Capital Buffers

Basel III introduces capital buffers that must be met using Core Equity Tier 1 (CET 1) capital.

- The capital conservation buffer requires institutions to hold a buffer of CET 1 capital equal to 2.5% of RWA. Its aim is to limit the distribution of earnings in periods of stress. If the CET 1 capital falls below 7% of the RWA, the ability to distribute earnings is limited by incrementally increasing percentages.
- The countercyclical buffer is set by national authorities and may range between 0% and 2.5% of RWA. Its aim is to build up a capital buffer in periods of growth, to be relied upon in downturns. The ability to distributed earnings is constrained until countercyclical buffer requirements are met.

Pillars of Basel III – Pillars Two and Three



Pillar Two

Pillar Two effectively comprises two elements, both of which have been retained by Basel III:

- Institutions shall regularly assess their own capital needs, and monitor the adequacy of their capital base against those needs, by means of the Internal Capital Adequacy Assessment Process (ICAAP).
- Regulators shall actively engage in the review of the institutions' capital requirements, as well as of the supporting systems and controls, through the Supervisory Review Evaluation Process (SREP). As outcome of the SREP, the regulators may discretionally impose additional capital requirements.

Pillar Three

- Pillar Three aims at providing sufficient transparency for investors, so as to ensure that the price which institutions pay to raise capital in the market reflects the level of risk undertaken by them.
- Pillar Three constitutes a compulsory disclosure regime that complements the disclosure mandated by the accounting standards. In general, the Pillar Three disclosure shall be made annually and is not required to be made as part of the financial accounts published by the institution.
- Pillar Three requires to disclose a number of separate risk headings, including: i) capital structure; ii) capital adequacy; iii) credit risk; iv) equities in the non-trading book; v) credit risk mitigation tools; vi) securitisation; vii) market risk; viii) operational risk; and ix) interest rate risk in the banking book.
- Basel III requires to disclose additional information in respect of capital buffers, unencumbered assets, own funds, leverage ratios and Global Systemically Important Institutions (G-SIIs), other than with regard to their risk management policies and objectives and their governance arrangements.

Liquidity and Leverage Ratios



Liquidity Coverage Ratio

- The Liquidity Coverage Ratio (LCR) aims at addressing short term liquidity needs. Starting from 1 January 2015, institutions are required to hold a buffer of unencumbered high quality liquid assets (HQLAs) to meet net cash outflows under a 30 days idiosyncratic and market-wide stress scenario.
- The LCR will be phased in with institutions obliged to hold 60% of their LCR in 2015 with incremental increases on a year on year basis until 2018, at which point institutions will be expected to maintain an LCR of at least 100%. Institutions are expected to maintain an LCR of at least 100%.

Net Stable Funding Ratio

- The Net Stable Funding Ratio (NSFR) aims at addressing long term mismatches and incentivising the use of stable funding sources. The EU Commission targets to introduce the NSFR on 1 January 2018.
- The NSFR measures those types and amounts of equity and liability financing that are expected to be reliable sources of funds, under conditions of extended stress, against the required amount of stable funding over a one year period. This amount is measured based on the broad features of the liquidity risk profiles of an institution's assets, off-balance sheet exposures and other selected activities.

Leverage Ratio

- The leverage ratio is a non-risk based measure that aims at ensuring that the assets of the institution are in line with its capital, and is defined as an institution's Tier 1 capital divided by its average total consolidated assets (i.e. non-risk weighted assets and off-balance sheet exposures).
- The leverage ratio shall be disclosed since 1 January 2015 and will go live on 1 January 2018.

EU Additions to Basel III



Corporate Governance, Systems and Controls

- The corporate governance provisions found within CRD IV and the CRR build upon work already undertaken by the EU Commission and are designed to further reduce excess risk taking by firms.
- CRD IV contains additional requirements on the nature and composition of management bodies and risk management arrangements, whereas the CRR requires increased Pillar Three disclosures.

Remuneration

- The CRD IV required firms to implement remuneration policies and practices that did not encourage or reward excessive risk taking. In addition, the CRR requires the firms to disclose: i) the number of individuals being remunerated €1mn or more per financial year, broken down into bands of €0.5mn; and ii) upon request, the remuneration of each management body and senior management member.
- The CRR also introduces new provisions regarding the relationship between the variable (or bonus) component of remuneration and the fixed component (salary). The basic fixed to variable ratio is 1:1; this ratio can be raised to a maximum of 2:1, upon approval from the shareholders.
- A notional discount factor up to 25% of the total variable remuneration is applied to calculate the fixed-to-variable ratio, provided that the variable pay is deferred for more than five years. Moreover, up to 100% of the total variable pay must be subject to malus or clawback.

Recovery and Resolution Planning

- The CRD IV requires the generation of recovery and resolution plans based on the proportionality principle. Recovery plans fall to the firm: resolution plans to the competent authorities.

EU Additions to Basel III



Reliance on External Credit Ratings

- CRD IV provides that competent authorities must encourage 'significant firms' to use the IRBA, rather than the SA when they have a relevant number of credit risk exposures or counterparties in a single portfolio. A similar requirement concerns the debt instruments in the trading book.
- Competent authorities are also required to monitor that firms do not rely 'solely or mechanistically' on external ratings for assessing the creditworthiness of an entity or a financial instrument.

Credit Risk Adjustments

- A Credit Risk Adjustment (CRA) is the amount of specific and general loan loss provision recognised in the financial statements of the institution in accordance with the applicable accounting framework.
- The CRR sets out how firms should treat CRAs. In July 2013, the EBA issued the Regulatory Technical Standards (RTS) to calculate credit adjustments and determine if they are specific or general.

Supervisory Reporting

- From 1 January 2014, the CRR introduces common standards in relation to capital (COREP) and financial reporting (FINREP). While COREP obligations apply to all firms, FINREP obligations apply only to consolidated accounts. EU member states may retain some local reporting requirements.
- On end 2013, the EBA issued the RTS (originally due by 1 January 2012) that details the definitions, frequencies, cut-off dates, formats and IT solutions to be applied for COREP and FINREP reporting.
- In January 2014, the EU Commission published the implementing technical standards for the supervisory reporting of institutions under the CRR.

Strategic and Operational Impacts



From Basel II to Basel III: rule-based vs. principle-based regulatory framework

Risk-based approach and leverage ratio: synergies and contradictions

Basel II (IRBA, AMA, VaR) becomes a must to optimize the Bank's RWA absorption

Consolidation beneficial to avoid capital and liquidity requirements on a LE basis

Impact of capital and liquidity requirements on transformation projects

Need of granular and historical data for internal models and regulatory reporting

Example: EUDA Assessment



Control Type	Expected Controls	Proposed Testing Strategy
MONITORING	<p>EUDA Policy & Procedures</p> <p>Documented and approved EUDA policy and procedures have been implemented and communicated to users</p>	<p>Consider the following:</p> <p>Appropriateness of EUDA Definition Definition of EUDA includes any form of application developed by the business used in supporting critical business processes with financial, regulatory, or operational control impacts and not supported by GTO.</p> <p>Effectiveness of Risk Assessment Rationale EUDA risk assessment rationale and classifications have been defined and approved by senior management.</p> <p>Defined Minimum Standard of Controls The policy includes a definition of required controls for respective EUDA depending on criticality assigned.</p> <hr/> <p>Consider the following:</p> <p>KeyOps Key Operating Procedures explaining how the policy will be applied in the business line have been defined, approved and communicated to relevant stakeholders.</p> <p>Roles and Responsibilities Roles and responsibilities have been defined in the EUDA policy.</p> <p>Training Training has been conducted to raise awareness for relevant stakeholders.</p>

Example: EUDA Assessment



Control Type	Expected Controls	Proposed Testing Strategy
MONITORING	<p>EUDA Inventory & Risk Assessment</p> <p>EUDA Inventory is maintained and kept up to date.</p> <p>EUDAs are risk assessed to define criticality and remediation strategy.</p>	<p>Consider the following:</p> <p>EUDA Capture Process Effectiveness of the process used by management to capture population of relevant EUDAs (e.g. automated scanning tools, questionnaires, interviews, workshops).</p> <p>EUDA Inventory Structure The inventory should contain the following as a minimum:</p> <ul style="list-style-type: none"> • unique identifier • EUDA name • owner/creator • description of purpose and function of EUDA • significance of EUDA (e.g. dollar value of transactions) • EUDA criticality rating • sensitivity of the data within the EUDA • volume of transactions processed • review and risk assessment history <p>EUDA Risk Assessment Process</p> <ul style="list-style-type: none"> • Effectiveness of the risk assessment process and the assignment of EUDA classifications. • Completion of the risk assessment in line with relevant EUDA policy with results captured in EUDA inventory. • Risk Assessment completed for all EUDAs. <p>Action Plans</p> <ul style="list-style-type: none"> • Remediation plans are defined in line with relevant EUDA policy depending on EUDA criticality. For example, actions could include implementation of tactical control enhancements to the EUDA, or definition of decommissioning plan, etc. • Remediation plans are approved by relevant stakeholders and plans are funded.

Example: EUDA Assessment



Control Type	Expected Controls	Proposed Testing Strategy
PROCESSING	<p>Design and Implementation</p> <p>EUDA meets business objectives and the design incorporates relevant controls.</p>	<p>Consider the following:</p> <p>Design</p> <ul style="list-style-type: none"> • Documentation is in place and in line with the EUDA policy. Typical documentation could include the following: <ul style="list-style-type: none"> ○ functional documentation or specifications ○ sign-off of key design documents by stakeholders • Inconsistent or overwritten formulae within a column or row . • Numbers or assumptions hard coded into formulae. • Degree of manual user interaction within the EUDA which may result in increased likelihood of error. • Relevant data integrity checks are in place (e.g. using row counts and checksums to ensure source data. • matches imported data in a spreadsheet, check cells recalculate and reconcile input, calculation and output data). <p>Implementation</p> <ul style="list-style-type: none"> • Training material documented. • Documentation of operating procedures (including technical support and user instructions). • Testing documentation completed (e.g. test plans and results) for each release. • UAT sign-off by key stakeholders. <p><i>Note: if a higher degree of assurance is required over EUDA processing, the auditor could consider performing code reviews, or re-performance tests.</i></p>

Example: EUDA Assessment



Control Type	Expected Controls	Proposed Testing Strategy
PROCESSING	<p>Change Management</p> <p>Changes to EUDAs are authorised, reviewed and tested before release for wider use</p>	<p>Consider the following (post implementation of the EUDA in production):</p> <p>Change Authorisation</p> <ul style="list-style-type: none"> • Change management process is applied in line with relevant EUDA Policy. • Effectiveness of change authorisation process. <p>Audit Trail for Changes</p> <ul style="list-style-type: none"> • Details of change history are logged (e.g. description of changes, change date, versioning and links to detailed change documentation). • EUDAs are version controlled. <p>Change Testing</p> <ul style="list-style-type: none"> • Test scripts for the UAT confirming actual results match expected results are documented and retained. • Test scripts cover key business logic and are approved by relevant stakeholders. • Non functional requirements (e.g. capacity, latency) are tested.

Example: EUDA Assessment



Control Type

Expected Controls

Proposed Testing Strategy

PROCESSING

Access Controls

Access to the EUDA is restricted to appropriate individuals. Sensitive data and formulae are locked to prevent them being accidentally overwritten.

Consider the following:

User Access

- Appropriateness of users with access to the EUDA storage location (for example, network folder where the EUDA is stored).
- EUDA output is secure and data may not be overwritten by unauthorised individuals.
- EUDA access is password protected and password is protected (e.g. not documented in clear text in technical support notes).
- Roles based enforcement of segregation of key tasks. (supports principle of minimum required access).

Critical Formulae

- Access to critical formulae and sensitive data driving key EUDA outputs is restricted. For example, formulae cells are locked, access to change codes/macros is restricted, etc.

Example: EUDA Assessment



Control Type	Expected Controls	Proposed Testing Strategy
PROCESSING	Backup and Recovery EUDAs are regularly backed up and archived to ensure continuity and availability of data	<p>Consider the following:</p> <p>Backup Strategy</p> <ul style="list-style-type: none">• Depending on the EUDA criticality rating, appropriate backup strategy is in place and it is in line with relevant EUDA policy.• Validate the back up strategy (e.g. confirm that file share is subject to daily GTO backup process).• Confirm when recovery strategy has been tested in line with relevant EUDA policy.

Questions and Answers



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