



Capital Analytics in DROP

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Basel II

Overview

1. Purpose of the Basel Accords: **Basel II** is the second of the Basel accords – now extended and superseded by Basel III – which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision (Wikipedia (2018)).
2. International Banks' Capital Requirement Standards: The Basel II Accord was published initially in June 2004 and was intended to amend international banking standards that controlled how much capital banks were required to hold to guard against financial and operational risks banks face.
3. Safeguarding Bank Solvency and Stability: These regulations aimed to ensure that the more significant the risk that the bank is exposed to, the greater the amount of capital a bank needs to hold to safeguard its solvency and its overall economic stability.
4. Adequacy Requirements for Bank Capital: Basel II attempted to achieve this establishing risk and capital management requirements to ensure that the bank has adequate capital for the risk that the bank exposes itself through its lending, investment, and trading activities.
5. Preventing the Race to Bottom: One focus was to maintain sufficient consistency of regulations so as to limit competitive inequality among internationally active banks.
6. Impact due to Financial Crisis: Basel II was implemented in the years prior to 2008, and was only to be implemented in early 2008 in most countries (Office of the Comptroller of the Currency (2007), Council of Mortgage Lenders (2011)); that years' financial crisis intervened before Basel II could become fully effective.



7. Enhancement from Basel II to III: As Basel III was negotiated, the crisis was on the top of mind and accordingly more stringent standards were contemplated and adopted in key countries including in the US and Europe.

Objective

1. Aims of the Accord: The final version aims at:
 - a. Ensuring that the capital allocation is more risk sensitive
 - b. Enhance the disclosure requirements which would allow the market participants to assess the capital adequacy of an institution
 - c. Ensuring that credit risk, market risk, and operational risk are quantified based on data and formal techniques
 - d. Attempt to align economic and regulatory capital more closely to reduce in scope for regulatory arbitrage
2. Divergence between Regulatory and Economic Capital: While the final accord has addressed the regulatory arbitrage issue at large, there are still where the regulatory capital requirements will diverge from economic capital.

The Accord in Operation: Three Pillars

1. Pillars of Basel II: Basel II uses a *three-pillar* concept:
 - a. Minimum Capital Requirements (addressing risk)
 - b. Supervisory Review



c. Market Discipline

2. Shortcoming of Basel I: The Basel I accord dealt with only parts of each of these pillars. For example, with respect to the first Basel II pillar, only one risk, credit risk, was dealt with in a simple manner while the market risk was an after-thought; operational risk was not dealt with at all.

The First Pillar: Minimum Capital Requirements

1. Components of the First Pillar: The first pillar deals with the maintenance of the regulatory capital calculated for three major components of risk that a bank faces; credit risk, regulatory risk, and market risk. Other risks are not considered quantifiable at this stage.
2. Credit Risk Component Capital Pillar: The credit risk component can be calculated in three different ways of varying degrees of sophistication, namely Standardized Risk Approach, Foundation IRB, Advanced IRB, and General IB2 Restriction. IRB stands for “Internal Ratings Based” Approach.
3. Operational Risk Component Capital Requirements: For operational risk, there are three different approaches – Basic Indicator Approach or BIA, Standardized Approach or TSA, and the Internal Measurement Approach (an advanced form of which is the Advanced Measurement Approach or AMA).
4. Market Risk Component Capital Requirements: For the market risk component, the preferred approach is VaR.
5. Migration from Standardized to Customized: As the Basel II recommendations are phased in by the banking industry, it will move from standardized requirements to more refined and specific requirements that have been developed for each risk category by each individual bank.



6. Advantages of such Migration: The upside for banks that do develop their own risk migration systems is that they will be rewarded with potentially lower risk capital requirements. In the future there will closer links between the concepts of economic and regulatory capital.

The Second Pillar: The Supervisory Review

1. Assessment of Diverse Risk Capital: This is a regulatory response to the first pillar, giving the regulators better tools over those previously available. It also provides a framework for dealing with systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk, and legal risk, which the accord combines under the title of residual risk.
2. Internal Capital Adequacy Assessment Process: The Internal Capital Adequacy Assessment Process (ICAAP) is a result of Pillar 2 of the Basel accords.

The Third Pillar: Market Discipline

1. The Disclosure Requirements Component Complement: This pillar aims to complement the minimum capital requirements and the supervisory review process by developing a set of disclosure requirements which will allow market participants to gauge the capital adequacy of an institution.
2. Advantages of the Disclosure: Market discipline supplements regulation as sharing of information facilitates assessment of the bank by others, including investors, analysts, customers, other banks, and ratings agencies, which leads to good governance.



3. Items of Disclosure/Reporting: The aim of Pillar 3 is to allow market discipline to operate by requiring institutions to disclose details on the scope of application, capital, risk exposures, risk assessment processes, and the capital adequacy of the institution.
4. Consistency with the Operating Objective: It should be consistent with how the senior management, including the board, assess and manage the risks of the institution.
5. Facilitating the Prudent Risk Assessment: When market participants have a sufficient understanding of the banks' activities and the controls it has in place to manage its exposures, they are better able to distinguish between the banking organizations so that they can reward those that can manage their risks prudently and penalize those that do not.
6. Frequency of the Disclosures: These disclosures are required to be made at least twice a year, except for the qualitative disclosures providing a summary of the general risk management objectives and policies which can be made annually.
7. Instituting the Disclosure Policy: Institutions are also required to create a formal policy on what will be disclosed and the controls around them along with the validation and the frequency of these disclosures.
8. Applicability at the BHC Level: In general, the disclosures under Pillar 3 apply to the top consolidated level of the banking group to which the Basel II framework applies.

Chronological Updates

1. September 2005 Update: On 30 September 2005, the four US federal banking agencies (Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of Thrift Supervision) announced their revised plans for the US implementation of the Basel II accord. This delayed the implementation of the accord for the US banks by 12 months (Federal Reserve (2005)).
2. November 2005 Update: On 15 November 2005, the committee released a revised version of the accord, incorporating changes to the calculations for market risk, and the treatment of the



double default effects. These changes have been flagged well in advance, as part of a paper released in 2005 (Basel Committee on Banking Supervision (2005)).

3. July 2006 Update: On 4 July 2006, the committee released a comprehensive version of the accord, incorporating the June 2004 Basel II Framework, the elements of the 1988 accord that were not revised during the Basel II process, the 1996 Amendment to the capital accord to incorporate market risks, and the November 2005 paper (Basel Committee on Banking Supervision (2006)). No new elements were released in this compilation.
4. November 2007 Update: On 1 November 2007, the Office of the Comptroller of the Currency (US Department of Treasury) approved the final rule implementing the advanced approaches of the Basel II Capital Accord. This rule establishes regulatory and supervisory expectations for credit risk through the Internal Ratings Based (IRB) Approach, the operational risk through the Advanced Measurements Approach (AMA), and articulates enhanced standards for supervisory review of capital adequacy and public disclosures for the largest US banks (Office of the Comptroller of the Currency (2007)).
5. July 2008 Update: On 16 July 2008, the federal banking and the thrift agencies (Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of Thrift Supervision) issued a final guidance outlining the supervisory review process for the banking institutions that are implementing the new advanced capital adequacy framework (Basel II). The final guidance, relating to the supervisory review, is aimed at helping banking institutions meet certain qualification requirements in the advanced approaches rule, which took effect on 1 April 2008.
6. 16 January 2009 Update: For public consultations, a series of proposals to enhance the Basel II framework was announced by the Basel committee. It released a consultative package that includes: the revision to the Basel II market risk framework, the guidelines for computing capital for incremental risk in the trading book, and proposed enhancements to the Basel II framework (Basel Committee on Banking Supervision (2009a)).
7. 8-9 July 2009 Update: The final package of measures to enhance the three pillars of the Basel II framework and the strengthening of the 1996 rules governing the trading book capital was issued by the newly expanded Basel Committee. These measures include the enhancement to the Basel II framework, the revisions to the Basel II market risk framework, and the



guidelines for computing capital for the incremental risk in the trading book (Basel Committee on Banking Supervision (2009b)).

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Basel III

Overview

1. Definition of Basel III Standard: **Basel III** – or the **Third Basel Accord** or **Basel Standards** – is a global, voluntary regulatory framework on bank capital adequacy, stress testing, and market liquidity risk (Wikipedia (2018)).
2. Successor to Basel I and II: This third installment of Basel Accords was developed in response to the inadequacies in financial regulation revealed by the financial crisis of 2007-8.
3. Strengthening the Bank Capital Requirements: It is intended to improve bank capital requirements by increasing the liquidity and decreasing leverage.
4. Timeline - From Introduction to Complete Implementation: Basel III was agreed upon by the members of the Basel Committee for Banking Standards in November 2010, and was scheduled to be introduced from 2013 until 2015, however, implementation was repeatedly pushed to 31 March 2019 (Basel Committee on Banking Supervision (2010)).
5. Enhancement to the Basel II Standard: The Basel III standard aims to strengthen the requirements from the Basel II standards on a bank's minimum capital ratios.
6. Requirements on Liquidity and Funding Stability: In addition, it introduces requirements on liquid assets and funding stability, thereby seeking to mitigate the risk of a run on the bank.

Key Principles – Capital Requirements



1. Basel III Common Equity Rule: The original Basel III rule from 2010 required banks to find themselves with 4.5% of common equity – up from 2% in Basel II – of risk-weighted assets (RWA's).
2. Definition of the CET1 Ratio: Since 2015, a minimum Common Equity Tier 1 (CET1) ratio of 4.5% must be maintained at all times by the bank (Basel Committee on Banking Supervision (2013)). The ratio is calculated as follows:

$$\frac{CET1}{RWAs} \geq 4.5\%$$

3. Components of the Tier 1 Capital: The minimum Tier 1 Capital increases from 4% in Basel II to 6% (Basel Committee on Banking Supervision (2013)), applicable in 2015, over RWA's. This 6% is composed of 4.5% of CET1, plus an extra 1.5% of Additional Tier 1 (AT1).
4. Basel III Mandatory Capital Conservation Buffer: Furthermore, Basel III introduced two additional capital buffers; a mandatory “Capital Conservation Buffer”, equivalent to 2.5% of risk-weighted assets. Considering the 4.5% CET1 capital ratio required, banks have to hold a total of 7% CET1 Capital ratio, from 2019 onwards.
5. Basel III Discretionary Counter-Cyclical Buffer: A *discretionary counter-cyclical buffer*, allowing national regulators to require upto an additional 2.5% of capital during periods of high credit growth is also required. The level of this buffer ranges from 0% to 2.5% of RWA and must be met by the CET1 Capital.

Key Principles – Leverage Ratio

1. Basel III Leverage Ratio - Motivation: Basel III introduced a new *leverage ratio*. This is a non-risk-based leverage ratio and is calculated by dividing the Tier 1 capital by the bank's



average total consolidated assets – sum of the exposures of all the assets and the non-balance sheet items (Basel Committee on Banking Supervision (2017)).

2. Basel III Leverage Ratio – Definition: The banks are expected to maintain a leverage ratio in excess of 3% under Basel III.

$$\frac{\textit{Tier1 Capital}}{\textit{Total Exposure}} \geq 3\%$$

3. Fed Mandated Minimum Leverage Ratio: In 2013, the US Federal Reserve announced that the minimum Basel III leverage ratio would be 6% to 8% for 8 Systematically Important Financial Institution (SIFI) banks, and 5% for their insured bank holding companies (Central Banking (2013)).

Liquidity Requirements

1. Basel III Liquidity Coverage Ratio – Definition: Basel III introduced two required liquidity ratios. First, the *Liquidity Coverage Ratio* was supposed to require a bank to hold sufficiently high-quality liquid assets to cover its total net cash outflows over 30 days.
2. Basel III LCR - Expression: Mathematically it is expressed as follows:

$$LCR = \frac{\textit{High Quality Liquid Assets}}{\textit{Total Net Liquidity Outflows over 30 Days}} \geq 100\%$$

3. Basel III Net Stable Funding Ratio: The Net Stable Funding Ratio was to require that the available amount of stable funding exceed the required amount of stable funding over a one-year period of extended stress (Committee on Financial Services, United States House of Representatives (2011)).



US Version of the Basel Liquidity Coverage Ratio Requirements

1. Federal Reserve's Interagency LCR: In October 2013, the Federal Reserve Board of Governors approved an inter-agency proposal for the US version of the BCBS Liquidity Coverage Ratio (LCR).
2. Application of the Federal Reserve's LCR: The ratio would apply to certain US banking organizations and other SIFI's (Federal Reserve (2013)). The comment period for the proposal closed on 31 January 2014.
3. Comparison with the BCBS LCR Requirement: The US LCR proposal came out significantly tougher than the BCBS version, especially for the larger bank holding companies.
4. Purpose of the HQLA Requirement: The proposal requires financial institutions and FSOC designated non-bank financial companies to have a stock of high-quality liquid assets (HQLA) that can be quickly liquidated to meet the liquidity needs over a short period of time.
5. Component of the Fed's LCR: The LCR consists of two parts: the numerator is the value of the HQLA, and the denominator consists of the total net cash outflow over a specified stress period – total net cash outflows minus the total net cash inflows.
6. Asset Levels for LCR Applicability: The LCR applies to US banking operations with assets of more than \$10 billion. The proposal would require the following.
7. Large Bank Holding Companies (BHC): Large BHC's refer to those with \$250 billion in consolidated assets, or more in on-balance sheet foreign exposure, and to systemically important non-bank financial institutions. They have to hold enough HQLA to cover 30 days of net cash outflow. That amount would be based on the based on the peak cumulative amount within the 30-day period (Federal Reserve (2013)).



8. LCR for Regional Firms: Regional firms – those with between \$50 and \$250 billion in assets – would be subject to a *modified* LCR at the BHC level only. The modified LCR requires the regional firms to require holding enough HQLA to cover 21 days of net cash outflows.
9. Comparison against large BHC LCR's: These net cashflow parameters are 70% of those applicable to the large institutions and do not include the requirement to calculate the peak cumulative outflows.
10. LCR Rules for Small BHC's: Smaller BHC's – those under \$50 billion – would remain subject to the prevailing qualitative supervisory framework.
11. Quality Classification of Qualifying HQLA's: The US proposal divides qualifying HQLA's into three specific categories – Level 1, Level 2A, and Level 2B. Across the categories, the combination of Level 2A and Level 2B assets cannot exceed 40% HQLA and 2B assets are limited to a maximum of 15% HQLA.
12. Level 1 HQLA - Asset Characteristics: Level 1 represents assets that are highly liquid – generally those risk-weighted at 0% under the Basel III standardized approach to capital – and receive no haircut.
13. Entities excluded from Level 1 HQLA: Notably, the Fed chose not to include GSE issued securities in Level 1, despite industry lobbying, on the basis that they are not guaranteed by the *full faith and credit* of the US government.
14. Level 2A HQLA Risk Weights: Level 2A assets generally include assets that would be subject to a 20% risk weighting under Basel III, and includes assets such as GSE issued and guaranteed securities.
15. Level 2A HQLA Haircut: These assets would be subject to a 15% haircut, which is similar to the treatment of such securities under the BCBS version.
16. Composition of the Level 2B HQLA Assets: Level 2B assets include corporate debt and equity securities, and are subject to a 50% haircut.
17. Variation with the BCBS Treatment: The BCBS and the US versions treat equities in a similar manner, but corporate debt under BCBS version is split between 2A and 2B based on public credit ratings, unlike the US proposal.
18. Elimination of the References to Credit Rating: This treatment of the corporate debt securities is the direct impact of the Dodd-Frank Act's Section 939, which removed



references to credit ratings, and further evidences the conservative bias of the US regulators' approach to the LCR.

19. LCR Operational Implementation Plan Timeline: The proposal requires that the LCR be at least equal to or greater than 1.0, and includes a multi-year transition period that would require: 80% compliance starting 1 January 2015, 90% compliance starting 1 January 2016, and 100% compliance starting 1 January 2017.
20. LCR Operational Slippage Remediation Plan: Lastly, the proposal requires both sets of firms – large bank holding companies and regional firms – subject to the LCR requirements to submit remediation plans to the US regulators to address what actions would be taken if the LCR falls below 100% for three or more consecutive days.

Summary of Originally Proposed Changes (2010) in the Basel Committee Language

1. Quality, Consistency, and transparency of Capital: First, the quality, the consistency, and the transparency of the capital base will be raised.
 - a. Tier 1 Capital => The predominant form of Tier 1 Capital must be common shares and retained earnings.
 - b. Tier 2 Capital => Tier 2 is the supplementary capital; however, the instruments will be harmonized.
 - c. Tier 3 Capital will be eliminated (Basel Committee on Banking Supervision (2009)).
2. Strengthening of the Capital Framework: Second, the risk coverage of the capital framework will be strengthened.
 - a. Promote more integrated management of market and counterparty credit risk.
 - b. Add credit valuation adjustment – risk due to deterioration in the counterparty's credit rating.



- c. Strengthen the capital requirements for counterparty credit exposures arising from bank's derivatives, repos, and securities financing transactions.
 - d. Raise the capital buffers backing these exposures.
 - e. Reduce procyclicality.
 - f. Provide additional incentives to move OTC derivatives contracts to qualifying central counterparties – probably clearing houses. Currently, BCBS has stated that derivatives cleared with a QCCP will be risk-weighted at 2%. This rule is still to be finalized in the US.
 - g. Provide incentives to strengthen risk management of counterparty credit exposures.
 - h. Raise counterparty credit risk management standards by including wrong-way risk.
3. Leverage Ratio Monitoring and Maintenance: Third, a leverage ratio will be maintained as a supplementary measure to the Basel II risk-based framework. It is intended to achieve the following objectives:
- a. Put a floor under the buildup of the leverage in the banking sector.
 - b. Introduce additional safeguards against model risk and measurement error by supplementing the risk-based measure with a simpler measure that is based on gross exposures.
4. Reducing Procyclicality and Promoting Counter-cyclical Buffers: Fourth, a series of measures have been introduced to promote the buildup of capital buffers during good times that can be drawn upon in periods of stress.
- a. The measures to address pro-cyclicality are:
 - i. Dampen excess cyclicality of the minimum capital requirement.
 - ii. Promote more forward-looking provisions.
 - iii. Conserve capital to build buffers at individual banks level and at the banking sector level that can be used in periods of stress.
 - b. The measures to achieve broader macro-prudential goal of protecting the banking sector from periods of excess credit growth are:
 - i. Requirements to use long-term data horizons for estimation.
 - ii. Downturn loss-given-default estimates, recommended in Basel II to become mandatory.



- iii. Improved calibration of the risk functions, which convert loss estimates into regulatory capital requirements.
- iv. Banks must conduct stress tests that include widening credit spreads in recessionary scenarios.
- c. The measures for promoting stronger provisioning practices (forward-looking provisioning) are:
 - i. Advocating a change in the accounting standards towards an expected loss (EL) approach – usually

$$EL\ Amount = LGD \times PD \times EAD$$

as outlined in Basel Committee on Banking Supervision (2005).

5. Required Levels of LCR and NSFR: Fifth, a global minimum liquidity standard for internationally active banks is introduced that includes a 30-day liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio called the Net Stable Funding Ratio. In January 2012, the oversight panel of the Basel Committee on Banking Supervision issued a statement saying that regulators will allow banks to dip below their required liquidity levels, the liquidity coverage ratio, during periods of stress.
6. Extra Capital, Liquidity, and Supervisory Measures: The Committee is also reviewing the need for additional capital, liquidity, or other supervisory measures to reduce the externalities created by systemically important institutions.
7. Basel III Tiered Capital Ratio: As of September 2010, the proposed Basel III norms asked for ratios as: 7 – 9.5% (4.5% + 2.5% (*Conservation Buffer*) + 0 – 2.5% (*Seasonal Buffer*) for common equity, and 8.5 – 11% for Tier 1 Capital, and 10.5 – 13% for total capital.
8. Measuring and Controlling Large Exposures: In April 2014, BCBS released the final version of its *Supervisory Framework for Measuring and Controlling Large Exposures* (SFLE) that builds on longstanding BCBS guidance on credit measure concentrations.
9. US Banking Agency LCR Implementation: On 3 September 2014, the US Banking Agencies – Federal Reserve, Office of the Comptroller of the Currency, and Federal Deposit Insurance



Corporation – issued the final rule covering the implementation of the Liquidity Coverage Ratio (LCR).

10. Purpose of the LCR: The LCR is a short-term liquidity measure intended to ensure that banking organizations maintain a sufficient pool of liquid assets to cover net cash outflows over a 30-day stress period.
11. Disclosure of Regulatory Metrics and Qualitative Data: The 11 March 2016, the Basel Committee on Banking Supervision released the second of three proposals on public disclosure of regulatory metrics and qualitative data by banking institutions.
12. Granular Disclosure of the Market Risk Metrics: The proposal requires disclosures on market risk to be more granular for both the standardized approach as well as the regulatory approval of internal models.

US Implementation

1. US Implementation of Basel III Rules: The US Federal Reserve announced in December 2011 that it would implement substantially all of the Basel III rules.
2. Applicability across the Range of Institutions: It made clear that they would apply not only to banks, to also to all institutions with more than \$50 in assets. The rules may be summarized as follows.
3. Risk-Based Capital Surcharge: The first is the *Risk Based Capital and Leverage Requirements* which includes annual capital plans, stress tests, and capital; adequacy checks, including a Tier 1 Common Risk Based Capital Ratio greater than 5%, under both expected and stressed conditions.
4. Liquidity Based Quantitative Limits: The next is market liquidity tests, based first on the US's own *Inter-agency Liquidity Risk Management Guidance* issued in March 2010 that require liquidity stress tests and set internal quantitative limits, later moving to a full Basel III regime.



5. Fed Mandated Plus Internal Stress Tests: The Federal Reserve Board itself would conduct tests annually *using three economic and financial market scenarios*. Institutions would be encouraged to use at least five scenarios reflecting improbable events, and especially those considered impossible by the management, but no standards apply yet to extreme scenarios. Only the summary of the three official Fed scenarios *including company-specific information, would be made public*, but one or more internal company-run stress tests must be run each year with summaries provided.
6. Single Counterparty Credit Limit: Single counterparty credit limits to cut *credit exposure of a covered financial firm to a single counterparty as a percentage of the firm's regulatory capital*. *Credit exposure between the largest financial companies would be subject to a tighter limit*.
7. Early Weakness Monitoring and Remediation: *Early remediation requirements* will be required to ensure that *financial weaknesses are addresses at an early stage*. One or more *triggers for remediation – such as capital levels, stress test results, and risk management weaknesses – in some cases calibrated to be forward-looking* would be proposed by the Board in 2012. *Required action would vary based on the severity of the situation, but could include restrictions on growth, capital distributions, executive compensation, as well as capital raising or asset sales* (Federal Reserve (2011)).
8. Currentness of the Fed Implementation: As of January 2014, the United States has been on track to implement many of the Basel III rules, despite differences in ratio requirements and calculations.

Europe Implementation

1. EU Implementation of the Accord: The implementation of the Basel III agreements in the European Union has been the new legislative package comprising Directive 2013/36/EU



(CRD IV) and Regulation (EU) No, 575/2013 on prudential requirements for credit institutions and investment firms (CRR) (European Banking Agency (2013)).

2. Replacement of the Existing Directives: The new package, approved in 2013, replace the Capital Requirements Directives (2006/48 and 2006/49) (European Commission (2014)).

Key Milestones

1. Capital Requirements:

Date	Milestone: Capital Requirement
2014	<u>Minimum Capital Requirements</u> : Start of the gradual phasing-in of the higher minimum capital requirements.
2015	<u>Minimum Capital Requirements</u> : Higher minimum capital requirements are fully implemented.
2016	<u>Conservation Buffer</u> : Start of the gradual phasing-in of the Conservation Buffer.
2017	<u>Conservation Buffer</u> : The conservation buffer is fully implemented.

2. Leverage Ratio:

Date	Milestone: Leverage Ratio
2011	<u>Supervisory Monitoring</u> : Developing templates to track the leverage ratio and the underlying components.



2013	<u>Parallel I</u> : The leverage ratio and its components will be tracked by the supervisors but not disclosed and not mandatory.
2015	<u>Parallel II</u> : The leverage ratio and its components will be tracked and disclosed but not mandatory.
2017	<u>Final Adjustments</u> : Based on the results of the parallel run period, any final adjustments are to be made to the leverage ratio.
2018	<u>Mandatory Requirement</u> : The leverage ratio will become a mandatory part of the Basel III requirements.

3. Liquidity Requirements:

Date	Milestone: Liquidity Requirements
2011	<u>Observation Period</u> : Developing templates and supervisory monitoring of the liquidity ratios.
2015	<u>Introduction of the LCR</u> : Initial introduction of the Liquidity Coverage Ratio (LCR), with a 60% requirement. This will increase by ten percentage points each year until 2019. In the EU 100% will be reached by 2018 (European Commission (2014)).
2018	<u>Introduction of the NSFR</u> : Introduction of the Net Stable Funding Ratio.
2019	<u>LCR comes into Full Effect</u> : 100% LCR is expected.

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