



BROADOAK CONSULTING

Regulation of the Financial Services sector

BASEL IN A NUTSHELL

As we saw last month, a bank's equity or capital account acts as a buffer against unforeseen losses. This month we will differentiate between equity capital as an accounting concept and **Regulatory Capital** which is used to monitor and ensure the health of the banking sector.

It's all about Basel....

The Bank for International Settlements (BIS), based in Basel, Switzerland, is effectively the central banks for each national central bank. Prior to 1988, the majority of banking regulation was conducted through national authorities and financial institutions in each country were required to only satisfy their domestic requirements.

In 1988 the BIS introduced **Basel I** to limit a bank's ability to take excessive credit and market risk. There were as yet no standardised rules on capital adequacy.

In 2007 **Basel II** (and interim enhancements) added provisions that focused on the trading book (including securities and derivatives), market risk, operational risk and interest rate risk.

Basel II also required banks to calculate credit risk using 3 different methods depending on the complexity & importance of the bank (Standardised, Foundation Internal Ratings Based (IRB) and Advanced IRB approach). For the first time, BIS also added "**pillars**" for supervisory review and market discipline.

The **Advanced IRB** approach must be used by **Global Systemically Important Banks** (GSIBs) that have Tier 1 capital in excess of EUR 3bn and are well diversified and internationally active.

The Financial Crisis

The primary aim of **Basel III** is to improve financial stability following the financial crisis, the causes of which were numerous, well documented and still debated. In our opinion the main culprits were the repeal of the Glass Steagall Act¹, the sustained period of low interest rates (post tech bubble) and excessive liquidity chasing lower yield.

¹ The Glass-Steagall Act was introduced in 1933 following the Great Depression and prohibited FDIC-insured banks from investing in anything other than government bonds and similarly low-risk vehicles. Effectively it ensured investing banking remained separate from retail banking. Its repeal allowed Main St to take on additional risk and allowed Wall St to access to greater capital.

Basel III focuses on two elements that were seen as critical in the 2007-08 financial crisis:

1. The excessive levels of liquidity within the financial system, and
2. The mismatch between the maturity of assets (long duration) and funding (short duration) which forced the sale of assets in times of market stress, when short term (inter-bank) funding had dried up further depressing asset prices.

CAPITAL COMPONENTS (3)

Basel III regulations require minimum levels of **Tier 1 and 2 Capital** to be maintained.

A. Common Tier 1 capital

Common T1 capital includes qualifying **common equity (CET1)**, surplus treasury shares, retained earnings, accumulated other comprehensive income (OCI) and the equity balance of minority (non-controlling) interests (NCI). The majority must be common voting shares.

B. Additional Tier 1 Capital

Additional T1 capital includes non-cumulative perpetual preferred equity, qualifying minority interests and other less certain investments

C. Tier 2 Capital

The objective of Objective of **Tier 2 capital** is to absorb losses on a going concern basis and includes asset revaluation reserves, subordinated debt and qualifying minority interests.

CAPITAL ADEQUACY

As we discussed last month, capital is the core measure of a bank's ability to absorb losses. **Basel I** established a minimum level of capital for all international banks (separate national jurisdictions can be set higher).

$$\text{Capital Adequacy Ratio} = \frac{\text{Tier 1 capital} + \text{Tier 2 capital}}{\text{Risk Weighted Assets}} \times 100$$

RISK WEIGHTED CAPITAL

As can be seen above the greater the level of equity a bank holds the more business, the higher the risk it can take and therefore the greater the yield it can earn by extending funds (RWA). The ratio is therefore **procyclical**, the more profitable the bank is, the more it can grow however as it incurs losses it must rapidly reduce its risk exposure.

If a bank therefore invests in high-risk start up businesses (as opposed to Treasury bonds) it will assume greater risk and therefore must allocate additional capital and charge a higher rate to cover the cost of this capital. Therefore, banks will seek to price the risk they take on so that, across their entire lending portfolio, the higher yield on riskier loans will cover the losses on the loans that may fail.

Consequently, **capital adequacy ratios** measure capital against risk-weighted assets (RWA) and therefore assess the vulnerability of a bank's entire portfolio to macroeconomic conditions.

BASEL III

Basel III proposes additional capital, leverage and liquidity standards to strengthen the regulation, supervision and risk management of banking. The capital standards and additional capital buffers now require banks to hold more capital (and a higher quality of capital) than was previously the case under Basel II. Basel III also introduced **non-risk-based measures** such as the leverage and liquidity ratios (to ensure that sufficient funding would be available during periods of market stress).



KEY ELEMENTS OF BASEL III

1. Minimum capital requirements (Tier 1 + Tier 2)
2. Capital conservation buffer
3. Countercyclical buffer
4. Risk coverage
5. Leverage ratio
6. Liquidity coverage ratio
7. Net stable funding ratio

1. Minimum capital requirements (Tier 1 + Tier 2)

Previously the minimum capital banks needed to hold was 8.0% (risk-adjusted), of which 4.0% had to be Tier 1 capital. Under Basel III, the minimum remains at 8.0%, but 4.5% of that must be **Common Equity Tier 1 (CET1)** and 6.0% must be **total core Tier 1** capital.

Therefore, banks that had previously included non-cumulative perpetual preferred in Tier 1 will have had to raise higher levels of common equity to meet the 4.5% minimum.

2. Capital conservation buffer

The capital conservation buffer is designed to ensure banks retain (rather than distribute) capital during profitable periods to provide extra capital to absorb losses during periods of financial and economic stress. Banks are therefore required to hold an **addition CET1 capital** of 2.5% to withstand future periods of stress. Therefore, the total CET requirement is now 7% (4.5% + 2.5%)

Banks that fall below the minimum capital conservation buffer are limited in their distributions but can operate normally. Restricted distributions include dividends, share buybacks or employee options/bonuses.

3. Countercyclical buffer

The **countercyclical buffer** is designed to ensure banks retain (rather than distribute) capital also. It is therefore closely linked to the capital conservation buffer as both limit distributions but permit normal operations.

The buffer is set by national regulators between 0% - 2.5% of common equity and applies only to large systemically important banks (using the Advanced IRB). In some circumstances a bank could be required to hold up to 9.5% of common equity (4.5% + 2.5% + 2.5%).

4. Risk coverage

Basel II provided two different approaches to measuring credit risk: the **standardised** approach (which uses external credit ratings) and **advanced** approach (which uses internal ratings). Basel III applies more focus to **market risk** with respect to security financing transactions (repo's, SLB's, margin lending arrangements and OTC derivatives) default risk and MTM risk.

5. Leverage ratio

The leverage ratio represents a backstop measure as it prevents banks from taking on excessive leverage by holding low risk-weight assets.

6. Liquidity coverage ratio (LCR)

The LCR is a non-risk-based measure and requires banks to hold sufficient **high-quality liquid funds** to cover total net cash outflows of the bank for up to 30 days should a bank-specific stress event and a market downturn occur at the same time.

While **liquid funds** are not defined, the term generally requires investments that:

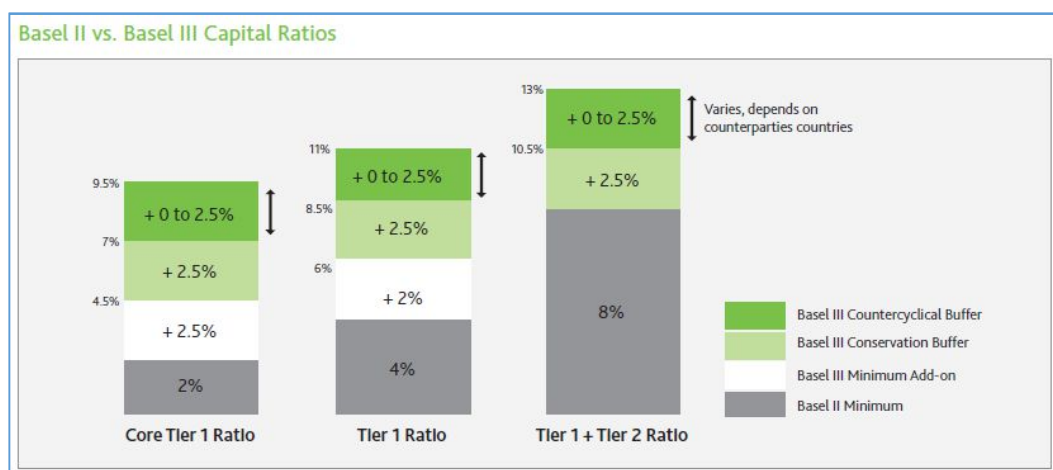
- Can be sold promptly without loss in value
- Low credit and market risk, therefore may be considered as a safe haven
- Can be easily and accurately valued on a listed exchange
- Not subject to wrong-way risk (the asset is not correlated to liquidity events)
- Has a large, active market with a diverse group of buyers and sellers and committed market makers

7. Net stable funding ratio (NSFR)

The NSFR takes a longer view and encourages banks to match the funding characteristics of their assets and liabilities beyond a one-year period. Therefore, this should reduce the level of "maturity transformation" provided by the financial sector (the ability of banks to borrow short and lend long), which in part contributed to the severity of the financial crisis.

From a practical perspective, available stable funding should exceed required stable funding, where available stable funding is defined as a reliable source of funds for more than one year.

As can be seen below, Basel III minimum add-on, conservation buffer and counter-cyclical buffer will affect the core, tier 1 and tier 1+ 2 ratios.



What are the consequences?

The effect of strict definitions of capital and increased RWA will make CET1 capital significantly more expensive than under Basel II.

The Basel Quantitative Impact Study² found that double the amount of capital would be required under Basel III due to the tighter definition of capital and the increase in RWA (before any increase in minimum ratios or the impact of the leverage ratio).

This has in turn depressed **return on equity** indicators across the Sector and has fundamentally changed an investors' approach.

$$\text{Capital Ratios} \uparrow = \frac{\text{Eligible Capital} \downarrow}{\text{Risk Weighed Assets} \uparrow}$$

As can be seen above increasing capital ratios (Core Tier 1, Tier 1, Conservation buffer, Countercyclical buffer), stricter rules on eligible capital and higher capital requirements (RWA increase for some asset classes) will significantly increase the sector's cost of capital. When combined with lower levels of investment banking activity (particularly in fixed income markets) ROE has declined since the GFC resulting in profitable but safer banks.

Banks also face extensive operational challenges. These include: strengthening risk management; changes to capital and liquidity management; enhanced stress testing capabilities; new funds transfer pricing mechanisms and multi-year programmes to enhance system and reporting infrastructure.

Who will be impacted?

While Basel III regulations has affected all banks, the severity of the impact will differ according to the type, scale and location of banks. Most banks will be impacted by the increase in quantity and quality of capital, liquidity and leverage ratios, as well as the enhanced requirements for Pillar 2 and capital preservation.

Most sophisticated investment banks will be affected by the amended treatment of counterparty credit risk, the more robust market risk framework and to some extent, the amended treatment of securitisations.

² Basel Quantitative Impact Study December 2010 study of 74 Group 1 banks