

BASEL IV AND ITS IMPACTS ON BANKS

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ABSTRACT

The Basel framework, an international standard for bank regulatory capital requirement, was first enacted in 1988. The Basel Committee on Banking Supervision (BCBS) has updated the framework a few times in 1996, 2010, and in 2016. The last update which started in 2016 (coined as Basel IV) is not yet finalized. The Basel objective is to ensure that banks hold sufficient capital to cover their risks and facilitate comparability of banks' capital positions. Basel I was focused on credit risk; and was updated in 1996 to include market risk components. Basel II allows banks to use their internal models; however, supervisory agencies may impose additional capital requirement as they deem fit. The 2008 financial crisis triggered an adjustment to Basel II with the introduction of capital buffer and increased capital requirements. And Basel III was born. After thorough analysis, the BCBS proposed some amendments to Basel III framework. With a set of additional disclosure requirements, a revision of the leverage ratio, and a treatment for sovereign risk exposures to Basel III, Basel IV was proposed. The US is a major advocate of Basel IV; however, because the Federal Reserve Bank governor resigned in February 2017 and the Board is missing three other seats, Basel committee has to put a hold on finalizing Basel IV.

Keywords: Basel framework; Basel objective; Basel impact; Regulatory capital requirements; Risk weighted assets (RWA); Regulatory standardized model

Introduction

After Basel III went into effect, the Basel Committee wanted to revisit transparency and consistency in risk measurement. Because of this, Basel IV was introduced. Basel IV is a revised standard of Basel III. Basel IV is a proposed standard on capital reserves for banks to protect against the risk of financial crisis. Although Basel III defines the disclosure requirements, Basel IV is aimed at enhancing the quality and frequencies of data reporting. Basel IV is expected to follow Basel III; but requires more stringent capital requirements and financial disclosure (Dormas & Pit, 2017; Magnus et al., 2017). However, Basel IV will put a downward pressure on

banks' profitability and may require that some banks change their business strategies and models to achieve a sustainable future (kpmg.com, 2016).

Basel IV is a regulatory recalibration of Basel III (Wackerbeck et al., 2016). While Basel III focused on the numerator of the solvency ratio (capital), Base IV focuses on the denominator (risk calculation). Basel IV includes stringent capital and liquidity requirements that banks are subjected to comply with. Basel IV requires that financial institutions use a standardized model rather than their internal models in calculating capital requirements and RWA (Durante, 2016). This standardized model will minimize variations among banks' calculations of RWA. Internal model have caused controversy and variations in RWAs, which resulted in banks accusing each other of manipulations (Meager, 2017).

According to Meager (2017), it was claimed that comprise is close to being reached regarding finalizing Basel IV; however, that may be far from the truth as the world's biggest economy is absent. The US is a major advocate of Basel IV. But because the Federal Reserve Bank governor resigned in February 2017 and the Board is missing three other seats, Basel committee had to put a hold on finalizing Basel IV. Without the US, the Basel committee would be significantly undermined and global inconsistency might evolve.

Basel IV and Europe

The BCBS proposed to withdraw internal model approaches for the calculation of operational risks minimum capital requirement due to excessive complexity (Magnus et al., 2017). It is hard to estimate probabilities of default; hence, for low-default exposures, it is better to use the standardized method. European banks hold more exposure to counterparties which would be negatively impacted by the recent proposals (Magnus et al., 2017). Europeans fear Basel IV will put the financing of the European economy in jeopardy. United States large corporations rely less on bank credit and residential mortgages exposures are usually offloaded to federal agencies.

As Basel committee is nearing conclusion on the final deal, one main obstacle standing in their way is France (Groendahl & Brush, 2017). If the French do not change, the committee may have to close the deal without them; although the Basel Committee makes decisions by consensus. The French have more big banks that benefit from the internal risk model. Basel committee is willing to set the floor at 45% in 2021, and raising it to 75% by 2027. If the French still did not come around, the Basel Committee's oversight body may have to "break the deadlock" (Groendahl & Brush, 2017).

Business Levers

Business levers are specific aspects/elements of a business that are directly related to a company's profitability. If any of these levers is pulled (increased/decreased), there will be a change (increase/decrease) in a company's profitability. Business levers may slightly reduce revenues but at the same time increase capital efficiency/profitability. Using structured approach such as reducing capital deductions, increasing capital efficiency/profitability, applying business levers such as improving RWA accuracy can help to increase capital efficiency even though it does not affect revenues. Banks put little emphasis on reducing other capital drivers, such as capital deductions (minority interests, goodwill, intangibles, non-consolidated investments, etc.). To improve capital ratio, banks should consider some 'no-regret moves' e.g. moving securitizations from one organization to another and reviewing policies and amortization periods.

There are three types of business levers: tactical, strategic, and technical.

Tactical Levers

Tactical levers include improving RWA & capital deduction, improving low-profitability clients, and commercial action. With tactical lever, banks slightly adjust the current product offering or deal requirements to make it more capital efficient for the bank. Examples of tactical levers are collateral optimization (obtaining more collateral) and adjusting contract clauses. With low-profitability clients, banks will either try to increase profits from the relationship by renegotiating deals or opt out of it. Banks may also use commercial action, which involves the bank to continue to meet client needs via adjustment of product offerings. Banks can adjust mortgage to be on loan to value (LTV) rather than based on borrower's income. Banks could also consider using re-pricing and cost-reduction strategies.

Strategic Levers

To be more competitive, banks need to review businesses to determine areas where cost reduction is necessary. Using advanced modeling and optimization approaches by examining their capital allocations in each client segment and geographical locations. The assessment may also include reducing the number of subsidiaries/branches for cost efficiency. To ensure sustainability of RWA reductions, banks must educate all employees. Strategic levers help to improve the risk-return profile in any scenario.

Both the standardized approval (SA) and the internal ratings-based (IRB) approach will be beneficial under any regulatory outcome.

Technical Levers

Technical levers beyond RWAs, such as capital deductions (minority interests, goodwill, intangibles, non-consolidated investments, etc.), capital buffers for global systematically important banks (G-SIB, Pillar-2, countercyclical buffer) improve capitalization (see Appendix B). Banks should therefore implement tactical levers e.g. require more collateral, adjust contract clauses, and increase profitability but wait for the final regulatory changes before implementing commercial action; as it depends on the capital cost of final rules. Ensuring that RWA fixes are sustainable, applying the right capital metrics, etc., are all critical for effective capital management.

Basel IV Impact on Banks

Bankers were still trying to meet Basel III capital rules; and here comes Basel IV. Capital requirements for some banks were increased by as much as 20% Under Basel IV; which will put further pressure on banks' profitability. Global Systematically Important Institutions (G-SISs) will have to follow prudential rules to enhance the financial stability of their institutions in periods of severe stress. Under Basel IV, the zero risk-weight exemptions for sovereign bonds exposures will be removed. Basel IV framework could incorporate a liquidity and solvency risks stress testing, and higher risk-weightings. Basel IV therefore, poses a greater challenge to banks' viability than all the regulatory measures of the past 6 years put together (Mc Kinsey.com, 2017).

The key areas affected by Basel IV regulation are: capital management, portfolio composition, product structure, and operational adjustments because Basel IV focuses on the calculation of credit, market, and operational risk exposures. As noted by Wackerbeck et al. (2016), many banks have to make some drastic workable strategic changes to reconsider their business model, their capital management approach, portfolio composition, product structures, and their reliance on balance sheets to generate income in order to comply with the new capital requirements and at the same time deliver appropriate returns to shareholders. Some banks may have to raise additional funds to meet the new required capital base. However, raising additional funds may put a damp on the already shrinking profit for many banks and an attempt to increase the required capital will cause increases in risk weighted asset (RWA).

Banks with limited access to equity capital markets or long-term credit portfolios have to de-leverage their balance sheet. European banks may need additional 120 billion pounds (Mc Kinsey.com, 2017) to meet the capital requirement. Basel IV may reduce the banking sector's return on equity (ROE) by 0.6 percentage points (Quesnel, n. d.). Basel IV makes trading activities far more expensive for banks than envisaged under the Basel III proposals.

Impact on calculating RWA

When banks use **internal models** in calculating risk exposure weightings, there are variations among banks. Banks therefore, will have to follow a standardized approach laid out by global regulators. Using a standardized approach will create consistency. Banks need to develop strategic models that are less dependent on their own balance sheet for generating revenues. Banks are likely to make more high-risk loans as they will typically carry higher returns.

Impact on Capital and Margin

The biggest US banks have improved their capital ratios by more than half since the crisis (McKinsy.com, 2017). Bankers say what their industry needs is regulatory certainty and a period of stability in order for them to rebuild their shattered margins. The global thirst for new regulation appears unquenched though. The world's biggest banks have to meet new rules requiring them to have higher levels of capital that can be "bailed in" if a bank runs into trouble. Some banks now see such evolution as a permanent fact of life.

The new mandates include risk data aggregation and information technology (IT), the revised interest rate risk in the banking book standards (IRRBB), and the introduction of international financial reporting standard (IFRS 9). Because banks need to find adequate resources to cover substantial additional capital requirement, increased capital thresholds and meeting new loss absorbency requirements may result in higher refinancing costs. It is not clear industry-wise what the future regulatory scenario and its impact will be (McKinsy.com, 2017). This clarity issue is due to the fact that Basel IV is not a single regulatory framework, but a collection of proposals.

Impacts on Corporate- and Mortgage-lending Portfolios

Banks expect a significantly higher impact as they move from an internal-model method to the standard method. There will be a significant impact in banks' corporate- and mortgage-lending portfolios. Basel IV will significantly increase RWA for many banks; this increase will cause about 2% reduction in common equity Tier1 (CET1) for banks (KPMG.com, 2016). The risk for most banks will increase by 40%; which is not much because market risk is only 10% of RWA. A KPMG's survey result indicated that 12 important international banks in UK expected a 50-75% increase in market risk. Banks will need to increase their CET1 by 350B pounds sterling (\$452B) to maintain the new capital ratio. Minimum capital requirement was increased by 4.7% (KPMG.com, 2016).

With Basel IV, banks may consider pricing mortgages based on loan-to-value of collateral ratios rather than borrower's income and credit history. There will be a small impact on US banks in selected asset classes; for example, US banks typically have smaller mortgage portfolios, because they offload their mortgages to Freddie Mac and Fannie Mae. Corporate exposure is

low, because large corporations fund themselves often directly through capital markets. US banks are also likely to face less significant increases in required operational risk capital as US banks currently have high capitalization levels for operational risk.

According to an Operational Riskdata eXchange (ORX) analysis, US institutions' operational risk capital requirements would only increase by about 1-3% whereas European Institutions have an increase of 60-80%. US financial institutions may face similar declines in capital like the Europeans based on the Financial Accounting Standard Board's current expected credit loss model. Loan loss reserves for the US banks is expected to increase by about 30-50% corresponding to a CET1 drop of about 25-50 basis points (Quesnel, n. d.). As noted by KPMG.com (2016), large financial institutions (measured by total assets) will be affected more by Basel IV rules by the operational risk standardized measurement approach (SMA) introduction, the revised credit risk, and the internal model elimination.

Impact on ROE

Return on equity (ROE) for the average European bank would drop by 8.0% if no mitigating action is taken and banks plan to keep up fully with the capital requirements (Quesnel, n. d.). Universal banks and specialized institutions' ROE will be greatly affected. Trying to meet the capital requirement will reduce banks' ROE by 1% universally if no mitigation action is taken. Internal Ratings-Based (IRB) retail banks are less affected and remain the most profitable institutions, because they have higher starting position. Their ROE drops by about 0.1 percentage points; which makes their post-regulatory ROE about 10.0% (Quesnel, n. d.). However, retail banks that use credit risk standardized approach experienced a 0.4% decline in their ROE. This decline causes their ROE to be below cost-of-capital targets.

Impact on RWA

The impact of the new regulations on banks will vary depending on location, bank type, and business model. There is no one-size-fits-all approach. Each bank must consider its sensitivity to the new regulatory rules and pursue the correct approach. Some banks have boosted their RWA accuracy while most banks still have the opportunity to reduce RWAs and improve economic profit. Implementing a short-term strategic plan of working with Basel IV does not require significant investments, but create significant impact. A 1 billion pound in RWA creates an increase of economic profit of 10-15 million pounds (Quesnel, n. d.). Properly classifying intangible assets, properly reflecting and applying netting procedures in deferred tax assets and deferred tax liabilities, goodwill, and pension fund deductions help banks to increase capital ratio significantly. Changing the regulatory treatment of its major participations may also help in significantly reducing a bank's RWAs.

Impact on Credit Risk

Basel IV makes the standardized approach more risk sensitive by increasing the risk weights on lending where repayment is based on the cash flow generated by the property used to secure the loan's risk exposure. Financial institutions are no longer able to use advanced IRB approach for default on residential mortgages. Basel IV will affect many low-risk financial institutions that are in the low-risk market such as mortgage-lending as they hold a large amount of this type of investment in their portfolios. Some banks argued that Basel IV will force financial institutions to focus their lending on riskier asset class, but banks are skeptical on holding such assets on their balance sheets. American Express on the other hand, promotes the idea of eliminating the use of internal model (Magnus et al., 2017).

Operational Risk

Banks will now use a standardized approach in measuring operational risk. Requirements will depend on business and internal control factors and specific internal loss data. Banks that have experienced fines in recent years will have high operational loss capital requirements. Banks especially in countries that are experiencing low profitability since the world financial crisis lamented that this higher capital requirement will increase their costs of funding, reduce ROE, banks' ability to lend and manage risk exposure using a risk-sensitive approach. Implementation of the market risk is delayed in the European Union until 2020. After implementation, imposition of market risk charge will be only 65% for 3 years (Quesnel, n. d.).

Impact on Costs

Banks will incur a range of costs in implementing the new standard model. Banks need to develop new models for economic capital management. They have to make available timely and accurate data for calculation under the new standard as there have been changes in data sets used for calculating risks. There is the cost of developing or revising systems and processes for the required calculations. Banks also need to respond to Basel Committee principles and system of reporting. These macro-economic pressures resulted in non-performing loans. There are challenging competitions from banks and non-bank financial institutions in lending, payment systems, and technological innovations (commercial pressure). There is a range of regulatory changes such as new ways of loss absorption, reporting of interest rate risk in banks' books, tighter rules and regulations on disclosure, trading in exchange rate, anti-money laundering, and managing non-financial risks. And there is a growing pressure from supervisory agencies.

Long-Term Effect

It is not certain if the US will withdraw from the Basel accord as her new president does not share the same international agreement liking with his predecessors. The Basel committee had to put a hold on finalizing Basel IV because the US Federal Reserve Bank governor resigned in February 2017 and the Board is missing three other seats. If the US withdrew, that would cause a serious global issue (Meager, 2017). It is an option to abandon the output floor. Without the US, the Basel committee would be significantly undermined and global inconsistency might evolve.

Pressures

There have been shifts in business models in response to macro-economic, commercial, and regulatory pressures. Some banks in Europe have to withdraw from certain lending activities. Low interest rates, slow economic growth, sharp exchange rate fluctuation, price volatility, and capital flow are some of the macro-economic pressures experienced by banks.

Europe vs. USA

In Europe, banks provide 76% of business funding; in the US, banks are responsible for only 27% of funding (Quesnel, n. d.), the rest comes from the capital market (see Appendix A). In the US, mortgage lending is based on loan-value to collateral; while in Europe it depends on the ability of the borrower to repay the loan. This system makes mortgage loans harder for borrowers to secure in Europe than in the US. Banks should not be surprised however as regulatory requirements are constantly changing Banks in the US may not be significantly affected by the change in requirements as some banks are already under restrictions due to the Collins Amendments (Durante, 2016).

European Commission initiated the effort to create a Capital Market Union (CMU) in Europe to reduce the gap between banks and markets funding. However, this initiative will take some time to produce effects. Europeans proposed some financial reforms that they are not sure of the impact on the economy. For instance, the average common equity tier 1 (CET1) capital ratio of the 15 European G-SIBs³ and 8 US G-SIBs increased by 7% per year for the period 2009-2015 (Quesnel, n. d.). Aggregated CET1 capital increased by 80% to 1,500 EUR Billion in 2015. Banks embark on low dividend payout ratios and use the rest as retained earnings to build capital. Increasing regulatory pressure coupled with low economic growth resulted in challenges for European banks with reduced profitability. The impacts of the reforms are uncertain but they will impinge new constraints on banks especially European banks as they have invested a lot on internal models. As note by , Basel IV would cause an increase of 20-40% in RWA; which would cause an increase in capital.

Given the fact that currently, banks are being undervalued (valued below their book value), banks may decide to de-leverage; which may reduce funding for European companies. The additional operational costs for implementing Basel IV may be passed to customer as cost of financing loans. Overall, for Europe, Basel IV could favor a move towards a more capital-market based financing model as in the US (Quesnel, n. d.).

Conclusion

Loans to businesses and individuals help investment, which helps the economy to grow. The goal of implementing Basel IV is to evaluate, standardize, and simplify the complex internal risk measuring models approved under Basel II and III. However, Basel IV over-focuses on financial stability at the expense of economic growth; because the new regulations would force banks to curtail lending. Basel IV impact will be mitigated for banks with well diversified portfolios, such as mortgage banks that have low loan-to-value mortgages. The difference between a bank's internal rating model and the standardized model could cause an increase in the overall risk of a bank's portfolios. Banks will need to be more transparent in their risk reporting under the new standardized framework; because additional financial statement information is required even if the bank is not internationally active. In Europe, banks provide 76% of funding while in the US, the capital market provides most of the funding. The impact of Basel IV on the economic growth, therefore vary globally.

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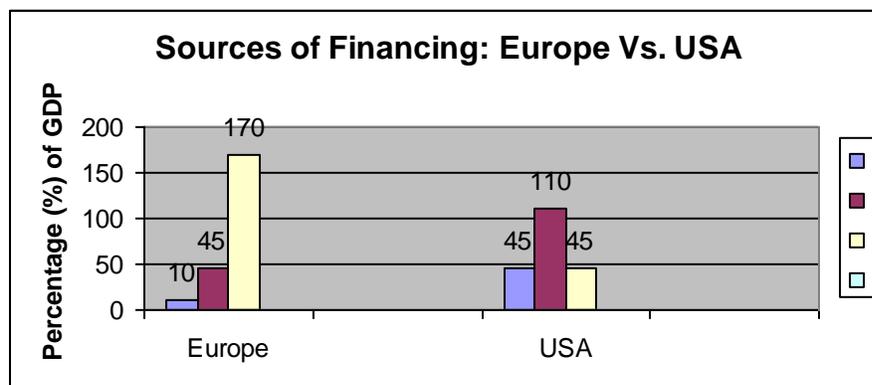
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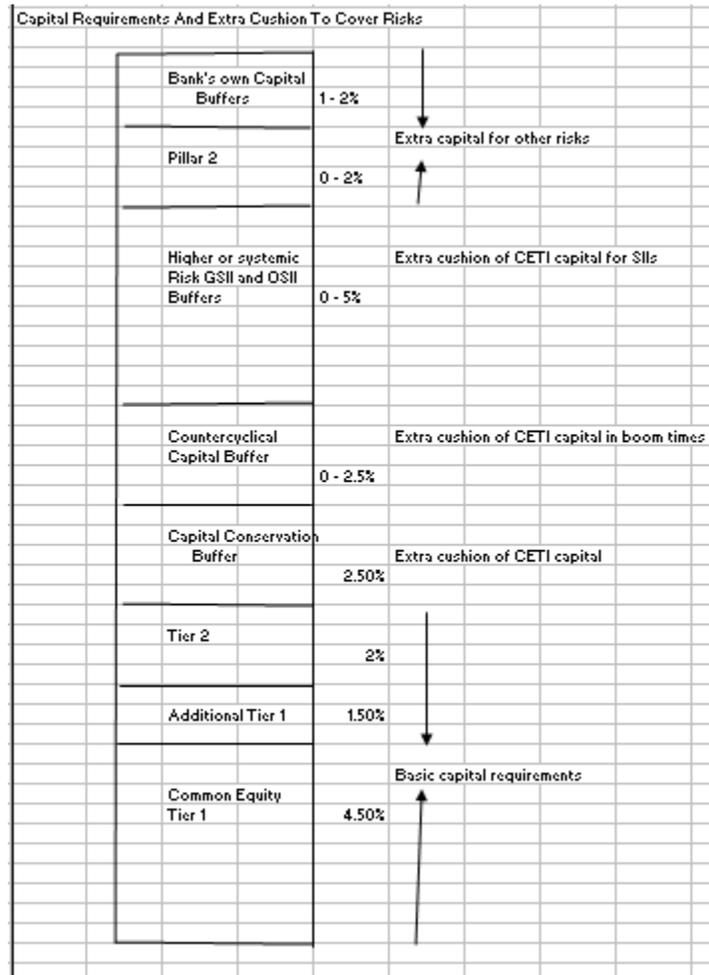
Appendices

Appendix A



Appendix B

Capital Requirements and Extra Cushion to Cover Risks



Source: Data from European Commission