RETHINKING BANKING:
HOW TO FIT BANK BUSINESS MODELS TO REGULATORY CONSTRAINTS
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ABSTRACT

Open risks identified during the global financial crisis that started in 2008 have now been addressed by global banks post-crisis, focusing on the improvement of loss absorption to their capital and funding. Global banks, labelled as global systemically important banks (G-SIBs) by supervisors, have been busy coping with regulatory change over the past five years and complying with new business restrictions (constraints on capital, liquidity, and leverage; bail-in and TLAC schemas, and stress testing among others). G-SIBs have been successful in anticipating and meeting the new regulatory hurdles. They have done so by individually undertaking balance sheet corrections to meet higher capital and liquidity constraints. As regulatory uncertainty diminishes and the fog starts to dissipate, it is clear that banks are finding it challenging to meet investor demands for adequate returns. It is time for banks to embed regulatory constraints in strategic planning and management performance, so that proper incentives are in place to achieve business model optimisation. In other words, it is time for banks to rethink their strategies in order to fit business models to the new normal in regulatory constraints.

Keywords: bank strategy, bank business models, banking supervision, financial regulation, capital, liquidity, leverage, TLAC, stress test requirements, risk management.
INTRODUCTION

The objective of this paper is to explore ways to rethink banking business strategies and business models in the context of multiple regulatory rules that constrain bank balance sheets and activities. It begins with a framework to measure and assess bank performance, balancing both regulatory and investor expectations. Metrics considered include five key dimensions: capital, leverage, liquidity, resolution, and risk. The piece outlines the strategic planning and risk management challenges currently faced by banks.

The second section provides a detailed overview of how the U.S. and European G-SIBs are performing across a comprehensive set of metrics that evaluate their regulatory compliance and business model fitting. It explores how with the reduction in regulatory uncertainty, financial institutions need to focus quickly on viable strategies within this framework.

In the last section, perspectives on management practices, governance, process enhancements, and improved analytical systems are provided.

OVERVIEW OF NEW REGULATORY CONSTRAINTS POST-CRISIS

The banking regulatory framework has evolved significantly since the financial crisis of 2008. Regulators have responded by addressing the weaknesses of the banking system with more rigorous quantification of capital and liquidity. This situation has made it difficult for financial entities to comply with regulatory measures, and even harder to reach profitability levels that meet investors’ expectations.

In addition to compliance with regulatory capital, the Basel III regulatory framework brought new liquidity ratios with which banks must comply: the liquidity coverage ratio1 (LCR), and the net stable funding ratio (NSFR). These metrics aim to reinforce short and medium term liquidity of financial institutions2. To improve, banks need to manage their lending practices according to a minimum Net Interest Margin (NIM) greater than 2%, while capping funding costs at 0.3%.

Resolvability is another constraint the banking system faces in the targeted scheme of regulators. The Financial Stability Board, an international body formed by the G20 nations, issued minimum amounts of Total Loss Absorbing Capacity (TLAC) to be held by G-SIBs3 in addition to capital adequacy ratio requirements of the Basel III framework. This amount should be readily available for bail-in in the event of a bankruptcy. By 1 January 2022, G-SIBs must have TLAC of 18% of RWAs, which must also be greater than 6.75% of the Basel III leverage ratio denominator.4

JURISDICTIONAL DIFFERENCES

International banking standards have evolved primarily through summits of national representatives of the leading economies, such as G20 nations. Nevertheless, Basel III standards have different adoption rates around the world due to national economic concerns and interests. Some regulators are taking a phased-in approach to reduce shocks to domestic financial systems, but in practice, some of the changes are not so easily diminished.

The adoption, transposition, and application of banking standards by national regulators have created a challenge for global banking groups, regarding compliance, as well as profitability. Consequently, the banking sector still exhibits varying levels of regulatory management among regions (as demonstrated later in this paper between the E.U. and U.S.).

The E.U. implementation of Basel III went through two legislative acts (CRR and CRD, now united as CRD IV) to enforce the existing capital framework. CRR regulation was directly applicable to member states of the European Economic Area (EEA) after 1 January 2014, while CRD needed transposition to national law, making room for local adaptation.

Some disparities on Basel III topics include liquidity requirements1 (U.S. does not include LCR and NSFR), risk-weighted assets5 (differs from E.U. to U.S.), stricter additional requirements for leverage (U.S.), all which present compliance arbitrage situations among regions.

Furthermore, stress-testing requirements differ for U.S., U.K., and European banks, adding regional complexity to the global balance sheet mix. For example, while the EBA (based in London) conducts stress testing on European banks, U.K. banks are also subject to the Prudential Regulatory Authority (PRA) stress tests.

BANKS’ RESPONSE

The new normal for the banking sector involves reorganization of assets around regulatory constraints, as well as business model transformation to retain market share in financial services (see Figure 1).
2. **Liquidity** – Similar to the evolution of capital, G-SIBs have strengthened their liquidity buffers and comply with new LCR and NSFR minimum thresholds. However, opportunities exist to implement funding and liquidity optimization strategies that will allow banks to expand NII margins above 2%, reduce the cost of funding, and create further sustainability of funding sources under stress.

3. **Resolution** – Resolution is the only regulatory topic where G-SIBs are still non-compliant under new and increasing TLAC rules. Banks are capable of addressing this shortfall, but compliance continues to put pressure on funding costs. In addition to bail-in funding, operational continuity will become a critical topic for banks to demonstrate and measure. Systemic buffer requirements need to be minimized through business model simplification.

4. **Risk** – As credit risk profiles continue to improve, risk management priorities are turning towards conduct risk management and supervisory relations management. Some open gaps in risk management practices relate to poor cultural response to conduct risk events, lack of diversification in business lines and strategies, and no strategic risk approach within the CRO function.

**STRATEGIC CHALLENGES AHEAD**

The new banking normal requires rethinking core activities alongside changes in governance, risk analytics, process, and controls.

**Governance**

- How do managers implement governance and promote sound strategic planning, oversight, and integration with risk appetite?

**Analytics and tools**

- How do compensation incentives align to business strategy and risk appetite?

**Process**

- How do banks integrate strategic planning with other capital planning and risk management processes?
- How do banks promote business model transformation?
- How do banks adjust incentives at segment and product level?

**Controls**

- How do CROs challenge business strategy and control for successful planning and execution?
- How do data and infrastructure tools deliver accurate information to management?

To understand and quantify this banking challenge, we have developed a comprehensive scorecard that combines regulatory and investor expectations. In this section, we provide a detailed overview of how U.S. and European G-SIBs are performing across a comprehensive set of metrics that evaluate the regulatory compliance and business model fitting. We propose a series of measures that combine the multiple regulatory constraints banks face today, together with its interdependencies (see Figure 2).

To assess G-SIBs' status, the traffic light approach has been selected (red-R, yellow-Y and green-G). Red means no compliance with the regulatory minimum, yellow indicates passing the minimum threshold, and green identifies G-SIBs that exceed minimum requirements by at least 20%. For fitting metrics, the same meaning applies according to investor consensus.

G-SIBs display gaps in only 3 out of 11 compliance metrics; however, banks show failure in 8 out of 11 fitting metrics. Therefore, banks must develop a structured methodology and toolset to enhance the fitness of their business model. Below we analyse the scorecard indicators across the globe, and make some comparisons between U.S. and E.U. G-SIBs.

**Figure 2: Scorecard of G-SIBs**

G-SIBs display gaps in 3/11 compliance metrics vs. 8/11 fitting metrics.

**COMPREHENSIVE G-SIB SCORECARD**
CAPITAL AND LEVERAGE

As regulatory requirements continue to take effect, G-SIBs already have a substantially increased CET1 position. European G-SIBs have boosted the average CET1 ratio by 270 bps since 2010, and U.S. G-SIBs have increased CET1 by 164 bps from 9.8% to 11.4% (see Figure 3). Subsequently, G-SIBs are experiencing difficulties achieving sustainable profitability and growth on their new capital position.

(see Figure 4). The ‘fully loaded’ basis takes into account Pillar 1, Pillar 2, and additional buffer requirements of the Basel III framework.

Regulatory stress scenarios on CET1 FL have shown an impact of -300bps on banks’ capital (down from 11% to 8%), showing they are well capitalized as they exceed expectations of 6%. While stress test requirements are changing across the globe, outcomes have become less impactful regarding new capital needs.

Leverage ratios for global banks are 0.2% below the 5% requirement, with U.S. banks ahead in leverage compliance relative to European counterparts.

The poor performance of RoRWA is due to decreased profitability and an increase in regulatory capital requirements as a percentage of RWAs, causing low levels of RoRWA and negative economic profits.

RoRWA levels for European G-SIBs are below investors’ expectations (1.5%) and even further below its U.S. G-SIB peers, which average a RoRWA of 2.4%.

In addition to low ROE, when compared to the cost of capital levels, banks are generating negative economic profits. U.S. and E.U. economic profit is negative (-3.1% each), far below investor targets of 4%.

Banks lack organic creation of CET1; evidenced by the 45 bps shortfall to the 75 bps annual capital generation target for healthy bank management.

Finally, RWA density at 37.3% slightly exceeds the guideline threshold of 35%, indicating that bank asset portfolios are at the ceiling for healthy risk tolerance given their regulatory risk weights and subsequent consequence of capital intensity, among other risks.

LIQUIDITY

Most G-SIBs have strengthened their liquidity buffers and have complied with both liquidity regulatory ratios, LCR and NSFR. However, financial entities have not properly optimised funding strategies and their resulting business models.

G-SIBs have averaged NIM of 1.3% and Funding Cost shortfall of 0.5%, above the 0.3% target where banks should be positioned (see Figure 5).

Results differ between U.S. and E.U. banks, as U.S. entities present lower LCR levels than European banks while they showed a positive difference in NIM and funding cost targets.

E.U. banks showed a different pattern compared to the U.S., having a 123% ratio and a shortfall in NIM and funding cost of 0.6% and 0.8%, respectively.
RESOLUTION

Resolution is the only regulatory topic where G-SIBs are still non-compliant. Figure 5 shows that G-SIBs are below the regulatory TLAC target by 247 basis points (see Figure 6). The regulatory expectation by 2022 is for G-SIBs to meet a minimum 18% TLAC. G-SIB scoring, a composite measure of systemic importance that is used to determine higher loss absorbency requirements, reveals that U.S. financial institutions carry the greatest significance based on banking system factors; they exceed the index by an average of 128 basis points. Consequently, the G-SIB buffer requirement is higher for U.S. G-SIBs. U.S. G-SIBs are required to hold average capital buffers of 1.5% while European G-SIBs have an average requirement of 1%.

Furthermore, operational continuity and resolvability of financial institutions have become recent topics of focus for the banking union in Europe, as a new resolution framework was established in January 2016, alongside the Single Resolution Mechanism (SRM). Operational continuity in a time of crisis (and potential regulatory takeover) is an important planning aspect for regulators, as it is core to their objective of maintaining financial stability.

G-SIBs are still improving their credit risk profile. Levels of non-performing loans among G-SIBs are decreasing as is shown in Figure 7 (3.1% vs. 4% expected).

CONCLUSIONS AND IMPACT ON BANK VALUATION

Overall, G-SIBs have good performance in regulatory compliance and poor business model fitting. The complexity of concerns that financial regulators have sought to address in the financial sector is mostly being relieved by increases in bank capital and heightened attention to asset quality. This is causing a much more insulated banking system than before the financial crisis, but the work to optimise return on capital in the context of new constraints remains a challenge for banks. G-SIBs are still working (and need to work harder) on aligning with additional Basel standards (TLAC, NSFR, Leverage ratio FL, etc.), which will become the next focus of regulators.
CONCLUSIONS AND IMPACT ON BANK VALUATION

Business model fitting is where G-SIBs are experiencing further difficulties. We have compiled 11 fitting metrics that are indicative of G-SIB strength and efficiency. G-SIBs display gaps in 8 of the 11 analysed metrics, showing that they have room to improve their business models going forward.

During 2015, G-SIBs made progress in compliance but contracted in fitting. U.S. banks have made more progress than their European peers, earning a scorecard average (Compliance + Fitting metrics) of 0.95 points compared to an average of 0.85 points, respectively (see Figure 8).

Adapting and thinking in the new regulatory framework will be a distinguishing factor of success for bank managers. Customer experience, digital transformation, and cost efficiencies are getting greater attention in the new banking landscape, but improvements in balance sheet efficiency will be the primary driver of success in business model fitting for banks.

Regulatory optimisation must increase to drive higher market valuations for banks. Financial entities have a positive relationship between RoRWA and Price to Book levels. It has been demonstrated that regulatory compliance and fitting scores strengthen the relationship between these variables (as figure 9 shows) and proves that managing a portfolio of multiple metrics is required.

Figure 8: Fitting vs. Compliance

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Figure 9: Price to Book vs Scorecard

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Banks are seeing the light at the end of the regulatory tunnel. In 2015, legislative initiatives on capital, leverage, and resolution were much better defined by supervisory initiatives. We saw the launch of the Single Supervisory Mechanism in Europe and gained further economic insights from the U.K. and European stress test results. While some uncertainty remains, primarily in the area of further capital reform (Basel IV) and harmonised rules, banks are in a better position to develop integrated capital and funding plans that satisfy regulators, and align to new banking strategies for restoring profitability.

To generate higher levels of return on capital, rethinking of frameworks for business optimisation and performance measurement is needed. Financial institutions could use the following points in their planning:

1. **Revamp performance measurement methods** to integrate return on regulatory capital and other constraints (leverage, liquidity, stress tests, economic capital, TLAC, etc.). These additional metrics can be included in business performance MIS, compensation schemes, portfolio management, and pricing tools. Banks should identify their capital and liquidity thresholds and manage them by business, segment, geography, product, and client (see Figure 10).

2. **Incorporate linkages and interdependencies of competing regulatory constraints** into measures of return on capital. Regulators are using multiple supplementary measures to constrain bank balance sheets.

3. **Consider the differing regulatory views** of balance sheet constraints across multiple jurisdictions, including differences among corporate group and local entity calculations.

4. **Address uncertainty of key regulatory components** and their impact on performance measures by using forward-looking contingency and sensitivity analysis.

5. **Develop strategic capital management dashboard** for the Capital Committee to balance capital adequacy and capital allocation in decision-making.

6. **Enhance the capital planning process** by introducing regulatory capital and return on regulatory capital in plans and budgets, as well as implement balance sheet steering and monitoring at the business unit and portfolio levels.

7. **Create interactive performance measurement models** that integrate regulatory compliance and fitting metrics (see Figure 11).

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**Figure 10:** Illustration of compliance and fitting integration

**Figure 11:** Regulatory Compliance and Fitting Metrics Interactive tool

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**Diversification note:** The Herfindhal-Hirschman Index (HHI) was used to measure the concentration of risk exposure of banks, taking into account the ten most relevant countries for each bank. The variance-covariance approach was applied in order to analyse the impact of GDP on the HHI score. The correlation matrix used in the calculation was based on GDP data from 2000-2014.
LIST OF ACRONYMS

BCBS: Basel Committee on Banking Supervision
Bps: Basis points
CET1: Common equity tier 1
CET1 FL: Common equity tier 1 fully loaded
CRD: Capital requirements directive
CRR: Capital requirements regulation
EBA: European Banking Authority
EP: Economic profit
E.U.: European Union
G-SIBs: Global systemically important banks
HHI: Herfindahl–Hirschman Index
LCR: Liquidity coverage ratio
LRE: Leverage ratio exposure
MIS: Management information system
NIM: Net Interest Margin
NPL: Non-performing loans
NSFR: Net stable funding ratio
PRA: Prudential Regulation Authority
ROE: Return on equity
RoRWA: Return on risk-weighted assets
RWA: Risk-weighted assets
TLAC: Total loss absorbing capacity

REFERENCES AND NOTES


General references:

- Institute of International Finance (2016)* IIF Global Regulatory Update,* Washington

Data note:

G-SIBs used at the time of our research were:
- Europe: BBVA, Groupe BPCE, Barclays, BNP Paribas, Credit Suisse, Crédit Agricole, Deutsche Bank, HSBC, ING Bank, Nordea, Royal Bank of Scotland, Santander, Société Générale, Standard Chartered, UBS, Unicredit Group
- World: all of the above including Asia (Mitsubishi UFJ FG, Mizuho, Sumitomo Mitsui FG)

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METHODOLOGY FOR METRICS

- **CET1 phased-in ratio**: CET1 / Total RWAs as of June 2015
- **CET1 FL ratio**: CET1 fully-loaded ratio as reported by banks as of June 2015
- **CET1 FL ST**: CET1 fully-loaded adverse scenario result from EBA 2014 ST, subtracted by CET1 fully-loaded reported by banks as of June 2015
- **Total capital ratio**: Tier 1 + Tier 2 capital / Total RWAs
- **Leverage ratio fully loaded**: Tier 1 / Total exposures
- **RWA Density**: Total RWAs / Total Assets
- **Capital generation (CET1)**: CET1 minus CET1 from previous period, showed in bps
- **RoRWA**: Net income from 1st half of 2015 multiplied by 2 / Total RWAs
- **Dividend yield**: Annual dividends per share / Price per share as of June 2015 bank reports
- **Economic profit**: Last 2 years return on average equity - cost of equity as of Sept 2015. Note: Cost of equity = Risk free rate + (Beta*Equity premium)
- **Liquidity coverage ratio**: Two methodologies used: (1) As reported by banks and (2) proxy calculation utilizing high quality liquid assets (85% RWA Level 1 assets + 50% RWA Level 2 assets) / Net liquidity outflow, obtained by summing 20% of deposit outflows, 100% trading liabilities, fed funds and repos, 30% other liabilities, minus a supposed inflow of 6.3% of total liabilities.
- **Net stable funding ratio**: Two methodologies used: (1) As reported by banks and (2) proxy calculation considering 100% CET1 + 80% T2 + 80% Deposits + 70% Other liabilities, as available stable funding (numerator) / 10% RWA Level 1 assets + 70% RWA Level 2 assets + 80% Other assets, considered as required stable funding.
- **Net interest margin**: Net interest income / Average financial assets
- **Funding cost**: Interest expenses: Total interest-bearing liabilities / Average financial liabilities
- **2022 TLAC shortfall**: (CET1 + T2 + Subordinated debt) – Maximum of (18% RWA or 6.75% leverage ratio exposure) + capital buffers.
- **G-SIB buffer**: G-SIB disclosures updated in November 2015.
- **G-SIB scoring**: Individual and aggregate analysis of weighted systemic indicators used to calculate the risk level of G-SIBs. Banks have been sorted into buckets that will be used to determine their additional loss absorbency requirement as a percentage of regulatory capital. The “substitutability” characteristic of the score has been capped at 100bps per bank.
- **Non-performing loans**: Gross impaired loans / Loans at amortized cost. If 1st half 2015 was not available, 2014 data was used.
- **Coverage ratio**: Loan allowance / Impaired loans. If 1st half 2015 data was not available, 2014 data was used.
- **Conduct cost**: Accumulated fines, penalties and settlements since 2008 + costs and provisions from 2012, 2013, 2014.
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