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Post-Global Financial Crisis Regulation of EU G-SIBs: Achievements, Limits, and Future Directions in a Diverging Global Framework

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**Post-Global Financial Crisis Regulation of EU
G-SIBs: Achievements, Limits, and Future
Directions in a Diverging Global Framework**

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Resumo

A regulação dos bancos de importância sistémica global sofreu uma transformação profunda desde a crise financeira de 2008, tendo o quadro de Basileia III como elemento central. A presente dissertação investiga se as reformas regulamentares pós-crise aplicadas aos G-SIBs com sede na União Europeia cumpriram eficazmente os seus objetivos (reforçar a resiliência bancária, reduzir o risco sistémico e promover a estabilidade financeira), avaliando ainda de que forma esses objetivos podem ser sustentados face à crescente pressão para simplificar as regras e à acentuada divergência regulatória internacional.

O estudo analisa em profundidade a arquitetura e a implementação da agenda de reformas pós-2008 na UE, incluindo a transposição dos padrões de Basileia para o direito da UE e o desenvolvimento dos principais instrumentos prudenciais. Com base em literatura académica, análises de política pública, perspetivas de supervisores e contributos do setor bancário, a dissertação avalia criticamente tanto os progressos alcançados como as limitações do atual quadro regulamentar, com especial enfoque na suficiência de capital, na complexidade das regras e nos desafios persistentes em conciliar resiliência com rentabilidade.

Episódios reais de stress, nomeadamente a fase inicial da reforma, a pandemia de COVID-19 e a turbulência bancária de 2023 são analisados para aferir a eficácia do quadro regulamentar sob pressão. Estes estudos de caso revelam um sistema visivelmente mais robusto do que antes da crise, embora ainda limitado por dificuldades na utilização dos buffers, falta de clareza regulatória e incoerências na supervisão.

Para além do contexto europeu, a dissertação explora como os Estados Unidos e o Reino Unido seguiram caminhos de implementação distintos, refletindo filosofias de supervisão e estruturas institucionais diferentes. Esta divergência cria riscos de fragmentação, distorções concorrenciais, arbitragem regulatória e incerteza jurídica, sobretudo para bancos com operações internacionais.

As considerações finais defendem que a UE deve manter o compromisso com os seus princípios prudenciais fundamentais, promovendo simultaneamente simplificações pontuais e revitalizando a coordenação internacional. O caminho a seguir exige conciliar os objetivos originais das reformas de Basileia III com as novas realidades de divergência política, concorrência de mercado e fadiga regulatória. Em última análise, a dissertação apela a uma abordagem da UE coerente, adaptável e empenhada a nível global na salvaguarda da estabilidade financeira num panorama internacional em constante evolução.

Abstract

The regulation of global systemically important banks (G-SIBs) has undergone a profound transformation since the 2008 financial crisis, with the Basel III framework at its core. This thesis investigates whether the post-crisis regulatory reforms applied to EU-headquartered G-SIBs have effectively delivered on their objectives (strengthening bank resilience, reducing systemic risk, and enhancing financial stability) while also evaluating how these goals can be sustained amid growing pressure for simplification and mounting international regulatory divergence.

The study examines in depth the architecture and implementation of the post-2008 reform agenda in the European Union, including the transposition of Basel standards into EU law and the development of key prudential tools. Drawing from academic literature, policy analysis, supervisory perspectives, and industry insights, the thesis critically assesses both the achievements and the limitations of this regulatory overhaul, highlighting areas such as capital adequacy, the complexity of rules, and the persistent challenges in aligning resilience with profitability.

Real-world stress episodes, namely the early phase of reform, the COVID-19 pandemic, and the 2023 banking turmoil, are analysed to gauge the effectiveness of the framework under pressure. These case studies reveal a system that is measurably more robust than before the crisis, but still constrained by challenges in buffer usability, regulatory clarity, and supervisory consistency.

Beyond the EU, the thesis explores how the United States and the United Kingdom have charted divergent implementation paths, reflecting different supervisory philosophies and institutional designs. This divergence creates risks of fragmentation, uneven playing field, arbitrage, and regulatory uncertainty, especially for internationally active banks.

The concluding policy considerations argue that the EU should remain committed to its core prudential principles while pursuing targeted simplifications and revitalising global coordination. The path forward must reconcile the original aims of the Basel III reforms with the new realities of political divergence, market competition, and regulatory fatigue. Ultimately, the thesis calls for a coherent, adaptive, and globally engaged EU approach to safeguarding financial stability in an evolving international landscape.

Acronyms and Abbreviations

AMA	Advanced Measurement Approach
AT1	Additional Tier 1 Capital
BCBS	Basel Committee on Banking Supervision
BRRD	Bank Recovery and Resolution Directive
BU	Banking Union
CCB	Capital Conservation Buffer
CCP	Central Counterparty
CET1	Common Equity Tier 1
CMG	Crisis Management Group
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CS	Credit Suisse
D-SIB	Domestic Systemically Important Bank
EBA	European Banking Authority
ECB	European Central Bank
EDIS	European Deposit Insurance Scheme
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EMIR	European Market Infrastructure Regulation
ESRB	European Systemic Risk Board
EU	European Union
FSB	Financial Stability Board
G-SIB	Global Systemically Important Bank
HQLA	High-Quality Liquid Assets
ICAAP	Internal Capital Adequacy Assessment Process

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IRB	Internal Ratings-Based
LCR	Liquidity Coverage Ratio
LOLR	Lender of Last Resort
MREL	Minimum Requirement for Own Funds and Eligible Liabilities
NSFR	Net Stable Funding Ratio
PRA	Prudential Regulation Authority (UK)
QIS	Quantitative Impact Study
RWA	Risk-Weighted Assets
SIFI	Systemically Important Financial Institution
SIU	Savings and Investments Union
SMA	Standardised Measurement Approach
SRB	Single Resolution Board
SREP	Supervisory Review and Evaluation Process
SRF	Single Resolution Fund
SSM	Single Supervisory Mechanism
TBTF	Too Big to Fail
TLAC	Total Loss-Absorbing Capacity
UK	United Kingdom
US	United States

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1. Introduction and Research Context

The Global Financial Crisis (GFC) of 2007–2009 was a watershed moment in modern financial history, exposing serious weaknesses in the structure and oversight of global banking systems. Triggered by the collapse of subprime mortgage markets and the subsequent failure of major financial institutions, the crisis swiftly evolved into a systemic meltdown, affecting economies worldwide. One of the most critical revelations was the inability of existing regulatory frameworks to anticipate and contain risks posed by large, complex, and deeply interconnected financial institutions. In particular, G-SIBs were found to amplify systemic shocks due to their size, leverage, cross-border operations, and opaque interdependencies. The result was not only massive economic disruption but also extensive public bailouts and a profound erosion of trust in the financial system.

In response to these systemic failings, global regulators - under the auspices of the G20 and coordinated by the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS) - launched a comprehensive overhaul of the international financial regulatory architecture. Central to this effort was the development of the Basel III framework, which sought to strengthen bank capital requirements, introduce new liquidity and leverage standards, and incorporate macroprudential tools to curb systemic risk.

For G-SIBs in particular, Basel III introduced additional capital surcharges, the concept of Total Loss-Absorbing Capacity (TLAC), and enhanced supervisory expectations, all intended to ensure that these institutions could withstand financial stress and be resolved without taxpayer support. These reforms were subsequently implemented across jurisdictions, including in the European Union (EU), through legislative instruments such as the Capital Requirements Regulation (CRR) and Capital Requirements Directive (CRD IV and its successors).

Now, more than a decade and half after the GFC and with the Basel III framework approaching full implementation, it is both timely and necessary to critically assess the effectiveness of these reforms, particularly in the EU context.

- *Have the goals of post-crisis regulation been fulfilled? Are G-SIBs more resilient, and has systemic risk truly been mitigated?*

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- *What lessons have been learned from subsequent events, such as the COVID-19 pandemic and the 2023 banking turmoil, and how might they inform the next phase of regulatory development?*
- *What are the implications of regulatory divergence, implementation gaps, and cross-jurisdictional arbitrage on the effectiveness and credibility of the G-SIB regulatory framework?*
- *Based on lessons learned and recent developments (including the move toward regulatory simplification), what are the potential directions for future reform?*

This thesis seeks to answer these questions by focusing on the regulation of EU G-SIBs, evaluating the extent to which the post-GFC reforms have delivered on their objectives, and considering potential future directions.

The core research question of this thesis is thus:

Post-Global Financial Crisis regulation of EU global systemically important banks – have the goals been fulfilled, and what is the path forward in the midst of a trend towards simplification and global regulatory fragmentation?

To answer this question, the thesis will pursue four main objectives:

First, it will evaluate the effectiveness of post-crisis regulatory reforms as applied to EU G-SIBs. This includes examining how capital and liquidity requirements, leverage ratios, and resolution frameworks have altered the risk profile and stability of these institutions, and whether these changes have made them more resilient in the face of financial stress.

Second, the thesis will assess the extent to which the core regulatory goals (resilience, systemic risk reduction, and financial stability) have been achieved. It will examine quantitative and qualitative indicators such as bank solvency during periods of stress (e.g., the COVID-19 shock), results of supervisory stress tests, and trends in systemic risk measures. The analysis will also consider whether G-SIBs now pose less of a threat to the financial system and whether the risk of taxpayer-funded bailouts has been materially reduced.

Third, the research will identify remaining gaps and areas for improvement in the current framework or, alternatively, assess whether, in light of growing complexity, mounting implementation costs, and potential competitiveness hindrance, the Basel reforms may have

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reached their practical limits. This objective is particularly relevant at a time when a global trend toward regulatory simplification is gaining momentum. While it remains unclear whether this simplification narrative will continue or reshape future reforms, the thesis will not take that shift for granted. Instead, it will critically examine whether further advancement of the Basel framework is warranted, weighing the trade-offs between resilience, complexity, and international competitiveness.

Fourth, the thesis will analyse international divergences in Basel III implementation and their implications for regulatory arbitrage and global financial stability. As some jurisdictions, notably the United States and United Kingdom, begin to delay, adjust, or selectively adopt the final Basel III components, questions arise about the integrity and consistency of the global regulatory framework.

Methodologically, the research will combine doctrinal legal analysis with comparative and evaluative approaches. A thorough examination of EU legislative instruments and relevant Basel standards will be conducted to clarify the legal and regulatory obligations placed on G-SIBs within the EU. This legal analysis will be complemented by a comparative assessment of how the US and the UK have implemented similar frameworks, identifying both commonalities and divergences both in content and in timeline that may affect regulatory effectiveness and market outcomes.

In addition to legal sources, the thesis will incorporate empirical evidence and brief case studies to assess regulatory effectiveness in practice. Events such as the COVID-19 crisis and the 2023 banking turmoil will be used as experiments to test the resilience of G-SIBs under stress. Official evaluations by the Basel Committee, Financial Stability Board, European Banking Authority, Single Resolution Board, European Central Bank, European Systemic Risk Board, etc., as well as academic studies and market data, will provide the empirical foundation for assessing whether the reforms have achieved their intended effects.

This approach allows for an understanding of both the legal architecture and the practical outcomes of the G-SIB regulatory framework. The findings will not only provide a snapshot of the current state of affairs but also inform discussions on how to adapt and improve the regulatory framework in the face of evolving risks and political environment.

Ultimately, this research aims to contribute to the ongoing scholarly and policy debate on the future of financial regulation and aspires to offer constructive insights for strengthening the resilience, credibility, and coherence of the international financial system in the years ahead.

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What makes this thesis particularly timely is its focus on a critical juncture in the evolution of global financial regulation, a moment marked by growing regulatory divergence among major jurisdictions, the emergence of a fragmenting global order, and increasing calls for simplification of complex prudential frameworks.

As international coordination weakens and jurisdictions pursue differing agendas, the balance between preserving core values of financial stability and integrity, resisting undue lobbying pressures, and enhancing efficiency and proportionality becomes more delicate and essential. By engaging with this evolving context, the thesis assesses both whether post-GFC regulatory goals have been fulfilled in the EU and also looks forward, providing grounded reflections on how policymakers can navigate this shifting landscape in ways that uphold resilience while enabling sustainable competitiveness and coherence across borders.

This thesis is organised as follows. After this introduction, **Chapter 2** provides an overview of the Basel III framework and its transposition into the EU's legal order. It covers key prudential components with a specific focus on measures targeting G-SIBs. **Chapter 3** surveys the academic literature, policy debate and industry insights surrounding the effectiveness, implementation challenges, and trade-offs of these reforms. It identifies theoretical and empirical tensions, and highlights concerns regarding complexity, calibration, and diminishing marginal returns. **Chapter 4** shifts to a practical perspective, tracing how EU G-SIBs have responded to the reforms across major real-world episodes, including the initial phase of Basel III implementation, the COVID-19 pandemic, and the 2023 banking turmoil. This chapter serves as an empirical assessment of whether the reforms have achieved their intended goals. **Chapter 5** offers a comparative analysis of Basel III implementation across the EU, the United States, and the United Kingdom, examining differences in timing, scope, and supervisory philosophy, and considering their implications for a level-playing field. Finally, **Chapter 6** concludes by synthesising the main findings and offering policy considerations for future regulatory evolution.

2. Basel III and the Post-Crisis EU Regulatory Framework

Chief among post-GFC reforms was the Basel III framework, a comprehensive set of measures developed by the BCBS and endorsed by G20 leaders.^{1 2} Building upon its predecessors, Basel III is an international regulatory standard that aims to strengthen the regulation, supervision, and risk management of banks worldwide by introducing more stringent capital requirements, new leverage and liquidity ratios, and macroprudential tools designed to reduce systemic risk. The overarching objective of Basel III is to enhance the resilience of the banking sector, ensuring that institutions are better equipped to absorb shocks arising from financial and economic stress, thereby safeguarding the broader financial system and the real economy.

Basel III is not a legally binding treaty, but rather a set of soft-law standards. Its implementation depends on national or supranational legislators who transpose these principles into binding domestic or regional legislation. As such, the framework has been implemented with varying degrees of consistency and timing across jurisdictions.

Basel III tightened the quality and quantity of regulatory capital, introduced new liquidity and leverage requirements, and added macroprudential buffers to mitigate system-wide risks.³ It corrected several weaknesses exposed under Basel II; most notably, the overreliance on banks' internal models, the underappreciation of liquidity risk, and the insufficient quality and quantity of capital held to absorb unexpected losses.

For the largest global banks, designated as *global systemically important banks* (G-SIBs), Basel III imposed extra loss-absorbing capacity and heightened oversight to address the “too big to fail” problem.⁴ The EU transposed these international standards into its legal framework

¹ Basel Committee on Banking Supervision. (2010, December). *Basel III: A global regulatory framework for more resilient banks and banking systems*. Bank for International Settlements. www.bis.org/publ/bcbs189.htm

² G20 Leaders. (2009, September 24–25). *Leaders' Statement: The Pittsburgh Summit*. Pittsburgh, PA. home.treasury.gov/system/files/206/pittsburgh_summit_leaders_statement_250909.pdf

³ Bank for International Settlements, Basel Committee on Banking Supervision. (2010). *Basel III: International framework for liquidity risk measurement, standards and monitoring* (Basel Committee on Banking Supervision Paper No. 188). Bank for International Settlements. <https://www.bis.org/publ/bcbs188.pdf>

⁴ The *too-big-to-fail* problematic refers to the situation where certain financial institutions are so large, interconnected, or complex that their disorderly failure would threaten financial stability, potentially requiring government intervention. The expectation of public support creates moral hazard, distorts market discipline, and may encourage excessive risk-taking. See more: Stern, G. H., & Feldman, R. J. (2004). *Too big to fail: The hazards*

through the Capital Requirements Directive and Regulation (CRD IV⁵/CRR⁶) in 2013-2014 and subsequent updates (CRD VI⁷/CRR III⁸ in 2024), as well as the Bank Recovery and Resolution Directive (BRRD)⁹ and associated rules on *Minimum Required Eligible Liabilities* (MREL).

This chapter provides a doctrinal and descriptive analysis of the Basel III framework and its implementation in EU law. It covers: (1) the key Basel III capital, leverage, liquidity, and macroprudential standards; (2) the G-SIB-specific components such as capital surcharges, Total Loss-Absorbing Capacity, and enhanced resolution planning; and (3) the transposition of these standards in EU legislation (CRR/CRD IV, CRR II/CRD V, and BRRD/MREL), including areas of alignment and divergence from Basel.

Additionally, Annex I provides an overview of scholarly perspectives on whether these reforms have made banks safer, the extent of EU “gold-plating” or shortfalls, and the costs and complexities for EU G-SIBs.

2.1. Capital, Leverage, Liquidity, and Buffers

A core objective of the Basel III framework is to ensure that banks maintain sufficient loss-absorbing capacity to withstand periods of financial stress without jeopardising systemic stability. To that end, Basel III introduced a more robust and granular approach to capital regulation, emphasising both the quantity and quality of capital held by credit institutions.

One of the most groundbreaking features of Basel III was its redefinition and strengthening of bank capital. Under Basel II, banks could meet a significant portion of their capital requirements using lower-quality instruments and hybrid securities, often with limited or

of bank bailouts. Brookings Institution Press; Financial Stability Oversight Council. (2011). *2011 annual report*. U.S. Department of the Treasury, <https://home.treasury.gov/system/files/261/FSOC2011AnnualReport.pdf>.

⁵ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. *Official Journal of the European Union*, L 176, 27.6.2013, p. 338–436.

⁶ Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012. *Official Journal of the European Union*, L 176, 27.6.2013, p. 1–337.

⁷ Directive (EU) 2024/1276 of the European Parliament and of the Council of 29 April 2024 amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks. *Official Journal of the European Union*, L 202, 30.5.2024, p. 1–117.

⁸ Regulation (EU) 2024/1624 of the European Parliament and of the Council of 29 April 2024 amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor. *Official Journal of the European Union*, L 202, 30.5.2024, p. 118–474.

⁹ Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms. *Official Journal of the European Union*, L 173, 12.6.2014, p. 190–348.

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delayed loss-absorption capacity. It redefined capital tiers, prioritising Common Equity Tier 1 (CET1)¹⁰ as the highest quality capital, while also increasing minimum capital requirements. Alongside these capital reforms, the framework introduced a non-risk-based leverage ratio as a backstop measure, aimed at curbing excessive balance sheet expansion regardless of internal risk modelling.

Additionally, the framework incorporated macroprudential capital buffers which allow national authorities to respond to system-wide risks and procyclical dynamics.

Basel III substantially raised banks' minimum capital requirements and focused on improving the quality of capital. Under Basel III, banks must hold at least **8% total capital** (risk-weighted) as under Basel II, but with stricter composition: **Tier 1 capital** must be at least 6%, of which **CET1** – the highest quality capital (common shares and retained earnings) – must be 4.5%.¹¹ The remaining capital can be Tier 2 (subordinated debt, loan-loss reserves), while the previous Tier 3 (ancillary capital for market risk) was eliminated.

Crucially, Basel III narrowed the definition of capital to emphasise going-concern loss absorption. CET1 capital is defined as equity that can absorb losses immediately, and **Additional Tier 1 (AT1)** capital¹² (e.g. perpetual contingent convertible bonds) provides going-concern support but with less stringent criteria than CET1.¹³ Tier 2 is considered “gone-concern” capital that absorbs losses in insolvency, and instruments must be capable of full loss absorption at the point of non-viability (e.g. via bail-in).¹⁴ To improve consistency, Basel III harmonised deductions and prudential filters (for goodwill, deferred tax assets, etc.) mostly at the CET1 level.¹⁵

These measures strengthened banks' capital bases in both quantity and quality, addressing the erosion of confidence in capital ratios seen during the crisis. In addition to higher minima,

¹⁰ Common Equity Tier 1 (CET1) refers to the highest quality of regulatory capital under the Basel III framework, consisting primarily of common shares, retained earnings, and other comprehensive income. It is the core measure of a bank's financial strength, used to absorb losses while the institution remains a going concern.

¹¹ Bank for International Settlements. *Definition of capital in Basel III – Executive Summary*. www.bis.org/fsi/fsisummaries/defcap_b3.pdf

¹² Additional Tier 1 (AT1) capital refers to a category of regulatory capital under the Basel III framework that ranks below Common Equity Tier 1 (CET1) but above Tier 2 capital. It typically includes perpetual bonds or preferred shares with loss-absorbing features, such as write-down or conversion to equity in times of stress, and is intended to provide a buffer to absorb losses on a going-concern basis.

¹³ Bank for International Settlements. *Basel III: A global regulatory framework for more resilient banks and banking systems* (BCBS Paper No. 189), p. 15. www.bis.org/publ/bcbs189.pdf

¹⁴ Bank for International Settlements. *Basel III: A global regulatory framework for more resilient banks and banking systems* (BCBS Paper No. 189), p. 17. www.bis.org/publ/bcbs189.pdf

¹⁵ Corporate Finance Institute. *Common Equity Tier 1 (CET1)*. www.corporatefinanceinstitute.com/resources/wealth-management/common-equity-tier-1-cet1/

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Basel III introduced **capital buffers** that sit on top of the minima (discussed below), effectively raising the going-concern capital levels banks must maintain in normal times.

Under the fully phased-in Basel III regime (by 2019), banks must maintain a **CET1 ratio of 7%** (4.5% minimum + 2.5% conservation buffer) in normal conditions, and a total Tier 1 ratio of 8.5%, total capital ~10.5%, before other buffers or surcharges. This was a significant increase from Basel II's 2% CET1 minimum. These higher requirements were phased in gradually to allow banks to build capital through retained earnings and issuance.¹⁶ Empirical data show that banks did increase capital ratios substantially; for example, Group 1 international banks raised their average CET1 from ~5.7% in 2009 to well above the new minima by the implementation date.

Basel III's explicit recognition of the systemic dimensions of banking regulation was a significant step ahead. Where Basel II focused narrowly on institution-level risks, Basel III brought in macroprudential components such as the capital conservation buffer, the countercyclical buffer, and surcharges for systemically important banks. These tools aimed to address procyclicality and externalities from large bank failures. They were accompanied by enhanced supervisory expectations for risk governance, stress testing, and resolution planning, reflecting a growing emphasis on forward-looking supervision and crisis preparedness.

Basel III's **Capital Conservation Buffer (CCB)** is a mandatory buffer of **2.5% of RWA**, comprised entirely of CET1 capital, imposed above the minimum requirements.¹⁷ Its purpose is to ensure banks have an extra layer of usable capital that can absorb losses during stress while incentivising prudent capital management. When a bank's CET1 falls into the buffer range (i.e. below 7% CET1 but above 4.5% minimum), automatic constraints on capital distributions (dividends, share buybacks, bonuses) kick in, increasing in severity as the ratio approaches the minimum. This mechanism encourages banks to rebuild capital and restrains payouts when capital is strained. The CCB reached its full 2.5% level in 2019 after phased introduction.

¹⁶ Basel Committee on Banking Supervision. (2019). *Basel III monitoring report October 2019*. Bank for International Settlements, p. 83. www.bis.org/bcbs/publ/d477.pdf

¹⁷ Office of Financial Research. (2017, February). *Capital buffers and the future of bank stress tests* (OFR Brief Series No. 17-01). U.S. Department of the Treasury, p. 3. www.financialresearch.gov/briefs/files/OFRbr_2017_02_Capital-Buffers.pdf

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Breaching the buffer does *not* automatically trigger default or regulatory intervention; instead, it limits discretionary distributions, allowing the bank to continue operating while conserving capital. By tying distribution restrictions to the buffer, Basel III seeks to bolster resilience without causing abrupt market effects, essentially requiring banks to “coast” on a higher capital cushion in good times so that it can be drawn down in bad times.

To address procyclicality and excessive credit growth, Basel III introduced the **Countercyclical Capital Buffer (CCyB)**, a time-varying macroprudential buffer of up to **2.5% of RWA** (CET1) that national authorities can activate during credit booms. The CCyB is designed to increase bank resilience in periods of systemic risk buildup and to be released in downturns to support lending.^{18 19} Each jurisdiction monitors credit conditions (with reference to indicators like the credit-to-GDP gap) and can require banks to hold an additional buffer for exposures in that jurisdiction.

When activated, banks must calculate their effective CCyB requirement as the weighted average of the buffers in jurisdictions where they have credit exposures, pursuant to a system of international reciprocity. Like the CCB, the CCyB is an extension of the conservation buffer: if a bank falls short, it faces graduated distribution constraints. The reciprocity mechanism is mandatory up to the 2.5% level for BCBS members to prevent regulatory arbitrage (banks shifting exposures to avoid buffers). In the EU, the CCyB is implemented through CRD IV (Art. 130 and 135), allowing each Member State or the ECB (for Banking Union members) to set a CCyB rate and requiring other Member States to reciprocate up to 2.5%. Several EU jurisdictions have utilised this tool in recent years, adjusting CCyB rates in response to financial cycle conditions.

The CCB and CCyB discussed above are key macroprudential buffers applied to all banks. In addition, **systemic importance surcharges** for G-SIBs (and, at national discretion, for domestic systemically important banks) and the TLAC requirement for G-SIBs are explicitly macroprudential tools aimed at reducing system-wide risk and the externalities of large bank failure. Basel III thus established a framework where each bank faces a *combined buffer requirement* on top of minima, consisting of the capital conservation buffer (2.5%), any countercyclical buffer, and for G-SIBs a systemic surcharge.

¹⁸ Basel Committee on Banking Supervision. *Countercyclical capital buffer (CCyB)*. Bank for International Settlements. <https://www.bis.org/bcbs/ccyb/index.htm>

¹⁹ Hoevelmann, K. (2020, February 26). *What Is a Countercyclical Capital Buffer (CCyB)?* Federal Reserve Bank of St. Louis.

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In EU implementation, further buffers exist: the **G-SII buffer** (for G-SIBs, as per CRD IV Art.131), **O-SII buffer** (for other systemically important institutions domestically), and **Systemic Risk Buffer (SyRB)** which Member States can use to counter non-cyclical systemic risks. These can stack with or alongside the Basel buffers. For example, a large EU bank that is a G-SIB might have to meet the 2.5% CCB, a CCyB (if set), and a G-SIB buffer of 1-3.5%, on top of minimum capital. Such macroprudential capital buffers create loss-absorbing capacity dedicated to system-wide stresses or the extra impact of a systemically important bank's distress.

Beyond minimum requirements and macroprudential buffers, Basel III also reinforced **Pillar 2**, the supervisory review process, as a critical pillar of resilience. It expanded supervisors' mandates to adopt a more **forward-looking and risk-based approach**, going beyond mechanical metrics to assess banks' internal capital adequacy processes (ICAAP), governance structures, and risk controls.

Post-crisis expectations emphasised **early intervention, comprehensive stress testing**, and the ability of supervisors to impose firm-specific capital and liquidity add-ons when warranted by a bank's risk profile. This marked a shift from Basel II's more passive oversight, embedding a more intrusive and judgment-based supervisory culture. Pillar 2 thus complements the standardised capital framework with supervisory discretion, ensuring that risks not fully captured by Pillar 1 (such as interest rate or conduct risks) are still addressed to maintain safety and soundness.

However, despite these advances in both minimum requirements and supervisory discretion, one of the most significant regulatory failures of the pre-crisis framework was the undue reliance on banks' internal models to calculate these risk weights, which allowed some institutions to substantially underestimate their exposures and overstate their capital strength.

In response, Basel III introduced a non-risk-weighted **Leverage Ratio** to serve as a simple, transparent backstop that limits the overall size of banks' balance sheets, regardless of the perceived riskiness of the assets they hold. This marked a crucial shift in regulatory approach: even if risk weights are manipulated or modelled inaccurately, banks must still fund a minimum portion of their total exposures with high-quality capital. The leverage ratio thus operates as a failsafe constraint, reinforcing the resilience of the system against model risk, underestimation of tail events, and excessive leverage.

Per article 92 CRR, the **Basel III leverage ratio** is defined as Tier 1 capital divided by a broad measure of total exposures (including on-balance assets and certain off-balance sheet items), with a minimum requirement of **3%**. Unlike risk-weighted capital ratios, the leverage ratio treats all exposures uniformly, ignoring risk weights, to prevent banks from building leverage by concentrating in low-risk-weight assets (which Basel II had arguably incentivised). By 2014-2017, the Basel Committee tested the leverage ratio in a “parallel run” to calibrate its impact,²⁰ finalising it as a Pillar 1 standard effective 2018. The relatively modest 3% level was chosen initially, but importantly it supplements the risk-based requirements.

In practice, many large banks maintain leverage ratios above 3% to avoid binding constraints, but for banks whose internal models produce very low risk weights, the leverage ratio becomes the binding capital constraint, curbing unsustainable leverage. Basel III also later added a leverage ratio buffer for G-SIBs (50% of their risk-based G-SIB capital buffer) to further constrain leverage of the biggest banks – this is discussed below in the G-SIB section and has been implemented in the EU. The leverage ratio has been lauded as a critical safeguard: it is simple, hard to game, and provides a final backstop that ensures even low-risk asset portfolios are funded with a minimum amount of equity.

Beyond enhancing the quality and quantity of capital, Basel III also sought to address gaps in risk coverage exposed during the financial crisis. One critical area was counterparty credit risk, particularly in derivatives markets, where sudden shifts in counterparty creditworthiness had ripple effects on system-wide stability. To address this, Basel III introduced a **Credit Valuation Adjustment (CVA) risk capital charge**, requiring banks to hold capital against mark-to-market losses from deteriorating counterparty credit quality, even absent default. This was a major departure from Basel II, which only captured default risk and neglected the volatility of valuations due to credit spreads.

In the area of market risk, shortcomings in the trading book framework were another key failure of the pre-crisis rules. The **Fundamental Review of the Trading Book (FRTB)** redefined the boundary between trading and banking books, overhauled risk factor modelling, and introduced more robust approaches to capitalising tail risks and liquidity horizons. Likewise, the securitisation framework was revised to better capture the risk of complex structured products, increasing capital requirements for lower-rated tranches and aligning incentives for

²⁰ Basel Committee on Banking Supervision. *Calibrating the leverage ratio*. BIS Quarterly Review, December 2015, p. 44. https://www.bis.org/publ/qtrpdf/r_qt1512f.pdf

originators and investors. These enhancements aimed to ensure a more risk-sensitive and comprehensive coverage of exposures across banks' portfolios, closing loopholes that had contributed to excessive risk-taking and undercapitalisation.

In parallel, two quantitative liquidity standards were introduced for banks: the **LCR** and the **NSFR**.²¹ These were the first global liquidity requirements of their kind, reflecting lessons from the crisis when many banks, despite adequate capital, faced acute liquidity shortages.

LCR aims to ensure banks can withstand a severe 30-day liquidity stress scenario. It requires banks to hold a stock of **High-Quality Liquid Assets (HQLA)** sufficient to cover **net cash outflows over 30 days** under an acute stress scenario.

The LCR was phased in from 2015 to 2019 (starting at 60% and rising to 100%). Its daily compliance forces banks to maintain ample liquidity at all times.²² In effect, the LCR incentivated banks to increase holdings of HQLA (such as government bonds) and reduce reliance on short-term wholesale funding. Indeed, between 2009 and full implementation, banks significantly increased their average LCRs; one Basel monitoring exercise showed large banks' average LCR rising from ~83% in 2009 to above 100% by compliance time.

The NSFR complements the LCR by promoting longer-term funding stability. It requires banks to maintain a stable funding profile relative to their asset liquidity profiles over a **one-year horizon**.²³

By mandating NSFR $\geq 100\%$, Basel III ensures banks do not excessively rely on short-term funding to finance illiquid, long-term assets. In essence, a bank should have enough stable funding (e.g. customer deposits, long-term debt, equity) to fund its illiquid assets over a year. This addresses the maturity mismatch issues central to the crisis (where banks had to constantly roll over short-term debt). The NSFR was subject to an observation period and became a minimum standard from 2018 internationally.

The **interaction** of LCR and NSFR is notable: they constrain liquidity risk in different ways – LCR focuses on acute stress survival, NSFR on structural funding – and they can bind different

²¹ Bank for International Settlements. *Basel III: International framework for liquidity risk measurement* (Dec 2010), p. 3-30.

²² For more on LCR calculations, see Investopedia. (2025, February). *Liquidity Coverage Ratio: Definition and how to calculate*. www.investopedia.com/liquidity-coverage-ratio-5189488

²³ Basel Committee on Banking Supervision. (2014). *Basel III: The net stable funding ratio*. Bank for International Settlements, p. 1.

types of banks. Studies (including by the ECB) find the ratios often target different vulnerabilities, so both add value.^{24 25}

Overall, Basel III's combination of higher base requirements, conservation buffers, countercyclical buffers, and G-SIB surcharges marks a shift to a more resilient banking system *in aggregate*. The Basel Committee explicitly noted that these reforms, both micro- and macroprudential, “will significantly reduce the probability and severity of banking crises in the future”.²⁶ Empirical evaluations by the BCBS in 2021 indeed found that Basel III increased bank capital and liquidity ratios substantially, improving loss-absorbing capacity and reducing systemic risk, with only moderate impacts on lending. These impacts will be further discussed in Section 5.

2.2. G-SIB-Specific Standards: Surcharges, TLAC, and Enhanced Resolution

Certain banks whose failure would have especially large systemic impact are subject to additional safeguards under the post-crisis framework. The FSB and BCBS have, since 2011, identified an annual list of **G-SIBs** using an indicator-based methodology.^{27 28} These G-SIBs face *higher loss absorbency* requirements (capital surcharges), as well as enhanced supervision and resolution planning requirements, in line with the FSB's 2011 “too big to fail” reforms.

²⁴ European Central Bank. (2019, October). *On the interaction between different bank liquidity requirements* (Behn, M., Corrias, R., & Rola-Janicka, M.). *Macprudential Bulletin*, (9), Section 4.

²⁵ Papers analysing the interaction between capital requirements include Goel et al. (2017) and Mankart et al. (2018). The interaction between capital and liquidity requirements is studied by Chami et al. (2017), Cecchetti and Kashyap (2018), Hoerova et al. (2018) and Behn et al. (2019).

²⁶ Bank for International Settlements. *Basel III: International framework for liquidity risk measurement* (Dec 2010). Quote by Nout Wellink, Chairman of the Basel Committee.

²⁷ Financial Stability Board. *Global Systemically Important Financial Institutions (G-SIFIs)*. www.fsb.org/work-of-the-fsb/market-and-institutional-resilience/global-systemically-important-financial-institutions-g-sifis/

²⁸ Financial Stability Board. (2024, November). *2024 List of Global Systemically Important Banks (G-SIBs)*. www.fsb.org/2024/11/2024-list-of-global-systemically-important-banks-g-sibs. As of this latest international assessments, **29 banks worldwide** are designated as G-SIBs. The current EU-headquartered G-SIBs (termed “G-SIBs” in EU parlance) include: **BNP Paribas** (France, Bucket 3, 2.0% CET1 buffer), **Deutsche Bank** (Germany, Bucket 2, 1.5%), **Crédit Agricole Group** (France, Bucket 2, 1.5%), **Banco Santander** (Spain, Bucket 1, 1.0%), **Groupe BPCE** (France, Bucket 1, 1.0%), **Société Générale** (France, Bucket 1, 1.0%), and **ING Bank** (Netherlands, Bucket 1, 1.0%).

The BCBS G-SIB assessment methodology assigns each large bank (above a size cutoff) a score based on several indicators of systemic importance.^{29 30} Banks above a certain **cutoff score** are designated as G-SIBs and are allocated into **buckets** based on their scores. Each bucket corresponds to a level of additional **CET 1** capital that the G-SIB must hold on top of other requirements. Under the initial BCBS scheme, Bucket 1 G-SIBs must hold a **1.0% CET1 surcharge**, Bucket 2 a 1.5% surcharge, Bucket 3 a 2.0%, Bucket 4 a 2.5%, and Bucket 5 (the highest, if ever populated) a 3.5% surcharge.³¹

If a G-SIB falls into its surcharge buffer (like other buffers), it faces dividend payout restrictions, similarly to the CCB framework. The surcharges only become effective with a lag – each annual list’s new higher requirements take effect 14 months later (to give banks time to adjust).

The rationale for G-SIB surcharges is to make these banks more resilient (lower probability of failure) in proportion to the systemic harm their failure would cause. This is often described through the “**expected impact**” approach: the surcharge is calibrated such that a G-SIB’s probability of default is reduced until the expected systemic impact equals that of a reference non-G-SIB bank. Some analyses (including by Federal Reserve economists) have argued that even the 1–3.5% surcharges might underestimate the capital needed to fully protect the system, especially for G-SIBs heavily reliant on short-term funding. Nonetheless, there is evidence that the introduction of G-SIB buffers has improved market perceptions of G-SIB resilience – their credit default swap spreads and funding costs have, if anything, not increased relative to others, implying markets see them as safer, offsetting any cost of higher capital.³²

In addition to going-concern capital, G-SIBs must maintain sufficient *gone-concern*³³ loss-absorbing resources to facilitate orderly resolution if they fail. In 2015, the FSB introduced the

²⁹ Basel Committee on Banking Supervision. *Global systemically important banks: assessment methodology*. Bank for International Settlements. www.bis.org/bcbs/gsib/index.htm

³⁰ The indicators span multiple dimensions – typically: (1) size (total exposures); (2) interconnectedness (e.g. intra-financial assets and liabilities); (3) substitutability/financial infrastructure (e.g. payments activity); (4) complexity (notional amount of derivatives, trading and available-for-sale securities, etc.); and (5) cross-jurisdictional activity (assets and liabilities across borders). Each bank’s score is calculated as its percentage of the aggregate for each indicator, averaged across categories (with equal weights per category).

³¹ Federal Reserve Board. (2017, February 27). Passmore, W., & von Hafften, A. H. *Are Basel’s capital surcharges for global systemically important banks too small?* FEDS Notes No. 2017-02-27-1, p. 50. <https://doi.org/10.17016/FEDS.2017.021>

³² Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 19. <https://www.bis.org/bcbs/publ/d544.htm>

³³ A central conceptual distinction in the post-crisis regulatory framework is between going concern and gone concern loss-absorbing capacity. **Going concern capital** refers to financial resources available while a bank

TLAC standard, which requires G-SIBs to have a minimum amount of instruments that can absorb losses and recapitalise the bank in resolution (such as equity and eligible long-term debt).³⁴ The TLAC requirement, which came on top of Basel III capital, was set at **minimum 16% of Risk-Weighted Assets (RWA)** from 1 January 2019, rising to **18% of RWA** from 1 January 2022.³⁵

There is also a parallel leverage-based TLAC requirement: at least **6% of the Basel III leverage exposure** from 2019, rising to **6.75%** by 2022.³⁶ These levels are *inclusive* of regulatory capital; in other words, the CET1 G-SIB buffers and other capital count toward TLAC, but **regulatory capital buffers (CCB, etc.) must be usable without breaching TLAC**.³⁷

To satisfy TLAC, instruments must be truly loss-absorbing: equity or unsecured debt that can be written down or converted in resolution with **no legal impediments** (i.e. debt that is structurally or contractually subordinated to prevent holdout creditors from impeding losses). TLAC instruments generally exclude insured deposits, short-term debt (under 1 year), derivatives liabilities, and any funding that cannot be bailed in without disrupting critical functions.

The aim is that if a G-SIB fails, the resolution authority can impose losses on shareholders and TLAC-bearing creditors to absorb the bank's losses and **recapitalise** the firm (or a successor bridge entity) to continue critical operations, *without* using taxpayer funds. In effect, TLAC is a cushion for **resolution** – sufficient resources for an orderly wind-down or restructuring. FSB's TLAC term-sheet also requires G-SIB home authorities to **internalise** TLAC within material subsidiaries (internal TLAC) to ensure loss-absorbing capacity is prepositioned in key jurisdictions. As of 2019, all G-SIBs globally were on track to meet the

remains solvent, enabling it to absorb losses and continue operating without triggering resolution or insolvency procedures. CET1 and AT1 capital fall into this category and are intended to support ongoing viability. In contrast, **gone concern capital** refers to instruments designed to absorb losses once a bank has failed or entered resolution. These resources, such as subordinated debt or TLAC-eligible senior liabilities, are not aimed at preventing failure, but at ensuring that, if failure occurs, it can be managed in an orderly way without disrupting critical functions or relying on taxpayer bailouts.

³⁴ Jeffery, E. (2017, March 15). *TLAC: What you should know*. Euromoney.

www.euromoney.com/article/27bjsstsqxhkmh0wsdjqv/banking/tlac-what-you-should-know

³⁵ IFLR. (2015, November 9). *FSB reveals 18 % TLAC requirement*. IFLR.

iflr.com/article/2a63gco6mrjdl95wyyhog/fsb-reveals-18-tlac-requirement

³⁶ Bank for International Settlements. (2017, June 24). *TLAC – Executive Summary*. BIS.

www.bis.org/fsi/fsisummaries/tlac.pdf

³⁷ Financial Stability Board. (2015, November 9). *Principles on loss-absorbing and recapitalisation capacity of global systemically important banks in resolution: Total loss-absorbing capacity (TLAC) term sheet*, p. 7.

www.fsb.org/2015/11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet/

TLAC requirement; many issued substantial amounts of TLAC-eligible debt (often called “senior holding company debt” or “bail-in bonds”).

Despite internal TLAC requirements and Crisis Management Groups, the practical enforcement of cross-border loss absorption remains challenging, especially in jurisdictions lacking clear bail-in laws or where host authorities fear domestic creditors may bear disproportionate losses. These tensions can undermine the credibility of group-wide resolution strategies and require strong home-host cooperation.

TLAC has significantly increased loss-absorbing capacity: by one estimate, the largest G-SIBs carry TLAC resources well above 20% of RWAs when including buffers. There is some overlap and distinction between **going-concern capital** (which also counts toward TLAC) and **gone-concern TLAC debt**; regulators have to ensure that banks maintain TLAC *in addition to* capital buffers, without double-counting buffers as meeting TLAC if they are needed to be usable pre-resolution. Accordingly, a breach of TLAC minimums is treated very seriously – akin to breaching minimum capital – and could trigger supervisory intervention or resolution if not remedied.

G-SIB designation also comes with intensified supervisory expectations and resolvability requirements. Since 2013, **G-SIBs are required to have Recovery and Resolution Plans** (“living wills”) and be subject to regular **Resolvability Assessments** by authorities. The FSB’s *Key Attributes of Effective Resolution Regimes*³⁸ serve as the international standard guiding jurisdictions to establish the legal powers for resolving banks in crisis (e.g. bail-in powers, bridge bank, etc.).

For each G-SIB, home and key host regulators form a **Crisis Management Group (CMG)** to coordinate resolution planning. Annually, the FSB conducts a **Resolvability Assessment Process (RAP)** where senior regulators evaluate whether each G-SIB is resolvable under its plan or if impediments to resolution exist.³⁹ If impediments are found, regulators can require changes (e.g. altering organisational structures, reducing complexity, adopting *holding company* structures) to facilitate separability of critical functions.

³⁸ Financial Stability Board. (2014, October). *Key Attributes of Effective Resolution Regimes for Financial Institutions*. www.fsb.org/2014/10/key-attributes-of-effective-resolution-regimes-for-financial-institutions-2/

³⁹ See latest edition: Financial Stability Board. (2024, December 5). *2024 Resolution Report. From Lessons to Action: Enhancing Resolution Preparedness*. www.fsb.org/2024/12/2024-resolution-report-from-lessons-to-action-enhancing-resolution-preparedness/

Many G-SIBs have had to reorganise or issue debt from parent holding companies to meet TLAC and resolvability requirements (the **single-point-of-entry** resolution strategy favoured in US and EU for large banks often uses a holding company whose debt is bailed in). Furthermore, supervisory scrutiny of G-SIBs is heightened in going concern. BCBS and national authorities impose **higher supervisory expectations for risk management and internal controls** on G-SIBs. This includes more rigorous standards for corporate governance, risk data aggregation and reporting⁴⁰, risk appetite frameworks, etc. G-SIBs are often subject to **more frequent stress tests** and supervisory inspections. In the EU, for instance, the ECB's SSM treats identified G-SIBs with additional oversight and coordinates closely with the SRB on resolution plans.

In summary, post-crisis reforms for G-SIBs operate on two levels: (1) *going concern*: extra capital buffers and stricter oversight to reduce failure probability; (2) *gone concern*: TLAC and robust resolution plans to manage failure in an orderly way if it occurs. While these measures have increased compliance costs for G-SIBs, they have also likely reduced the funding cost advantage G-SIBs derived from implicit “too-big-to-fail” guarantees (creditors now face explicit loss risk via TLAC). An FSB evaluation in 2020 found that too-big-to-fail reforms (including higher capital and TLAC) have made **progress in reducing systemic risk and market expectations of bailouts**, although work remains to ensure resolvability in practice (e.g., improving cross-border coordination and ensuring legal frameworks are fully operational).⁴¹

2.3. Transposition into EU Law: CRR/CRD IV, V & VI and BRRD/MREL

The EU has implemented Basel III and G-SIB standards through a series of legislative acts, chiefly the **CRR** and **CRD IV** in 2013, their revisions known as **CRR II / CRD V** in 2019 and **CRR III / CRD VI** in 2024. These, together with the **BRRD** (2014, revised 2019), form the core post-crisis regulatory framework in Europe.

The EU approach has been to adopt the Basel standards largely verbatim but with certain **EU-specific adjustments and flexibilities**, sometimes termed “gold-plating,” to account for

⁴⁰ BCBS 239 principles were initially inspired by large banks' data shortcomings.

⁴¹ Financial Stability Board. (2021). *Evaluation of the effects of too-big-to-fail reforms: Final report*, p. 1. www.fsb.org/2021/03/evaluation-of-the-effects-of-too-big-to-fail-reforms-final-report/

regional considerations. Because CRR is an EU regulation, its provisions (like capital and liquidity minimums) are directly binding on banks across Member States, ensuring uniform implementation, while CRD (a directive) is implemented via national laws and addresses areas like supervisory powers, buffer setting, and corporate governance.

CRD IV/CRR (2013–2014): Basel III Core Requirements in EU Law

Adopted in June 2013, the **CRD IV package** (CRD IV Directive 2013/36/EU and CRR Regulation (EU) No. 575/2013) represented the EU's implementation of Basel III. It introduced new definitions of capital, higher minimum ratios, the new buffers, and initial liquidity and leverage measures.

CRR adopted Basel III's capital definitions nearly wholesale. It introduced strict criteria for CET1, AT1, and Tier 2 capital instruments in EU law (CRR Part Two). Deductions for goodwill, deferred tax assets, etc., were aligned with Basel and mostly taken from CET1. As in Basel, certain legacy capital instruments were phased out. **Article 92 of CRR** set the **minimum own funds requirements**, exactly mirroring Basel's minima.

The CRD IV Directive, in turn, required banks to hold the various **buffers** on top of these minima: a CCB of 2.5% CET1 (CRD IV Art.129), a CCyB (Art.130) as applicable, and where relevant a G-SII or O-SII buffer (Art.131). These buffer requirements in EU law became applicable from 2016 onward (phased in) and by 2019 reached the full levels corresponding to Basel III's timeline. CRD also set the framework for designating G-SIIs (global systemic banks) and O-SIIs (other domestically systemic banks) and assigning them buffer rates. The **G-SII buffer** for an EU G-SIB is calibrated according to its bucket as identified by the BCBS/EBA.

EU regulators actively contributed to Basel III's design and largely implemented it faithfully: the Commission noted that "the EU has actively contributed to developing the new capital, liquidity and leverage standards in Basel and has implemented them in full via CRD IV/CRR".⁴² However, as discussed below, there were some EU-specific deviations.

In terms of liquidity standards, CRR Article 412 empowered the Commission to introduce the **LCR** via delegated act, and indeed the LCR became a binding requirement in the EU from October 2015 (phased to 100% by 2018) through Delegated Regulation 2015/61. The CRR

⁴² European Commission. (2013, July 16). *Capital Requirements – CRD IV/CRR – Frequently Asked Questions*. https://ec.europa.eu/commission/presscorner/detail/en/memo_13_690

specified the general LCR mandate (to hold adequate liquid assets to cover 30-day net outflows) but left details to the Delegated Regulation, which closely followed Basel's LCR text.

The **NSFR** was initially not implemented in CRR I; instead, CRR required banks to report NSFR and called for a review. It wasn't until CRR II (2019) that NSFR became a binding requirement in the EU. So the EU lagged Basel's timeline slightly on NSFR, aligning it effective mid-2021 with a 100% minimum. Notably, during the interim, EU banks were generally already moving toward NSFR compliance in anticipation. The slight delay was to await final Basel calibrations and to assess EU-specific impacts.

Under CRR/CRD IV, the leverage ratio was introduced initially as a **Pillar II supervisory tool and a disclosure requirement**.⁴³ Banks had to calculate and report their leverage ratios to regulators and disclose them from 2015, but it was not yet a binding constraint. The plan was to monitor and then implement through a separate legislative update (which became CRR II). This approach mirrored Basel's timeline (which had a monitoring period). So from 2014–2018, EU banks' leverage ratios were monitored, and most large banks improved them above 3% in preparation for binding enforcement.

CRD IV created the legal basis for capital buffers. The **Capital Conservation Buffer** of 2.5% CET1 was mandated for all banks (phased in 2016–2019). The **Countercyclical Buffer** regime was set such that each Member State's authority could impose up to 2.5% (or higher with reciprocity only mandated up to 2.5%) when excess credit growth leads to systemic risk (Arts.135-140 CRD). Several EU countries have actively used the CCyB in recent years.

Systemic buffers: CRD IV Article 131 provided for **G-SII buffers** (for the 8 G-SIBs in the EU at that time) and allowed **O-SII buffers** for domestically important banks (capped at 2% unless higher with approval). Additionally, Article 133 allowed an SyRB that Member States could apply to address structural systemic risks, not specific to individual firms but for, say, the banking sector or subsets (this buffer has been used in some cases for mortgage risk or sectoral exposures). The SRB could be stacked or applied to all banks.

These features go slightly beyond Basel (which did not explicitly have an SyRB, it's an EU addition) and illustrate some **gold-plating**: the EU chose to have a tool for broader systemic

⁴³ European Central Bank. *Pillar 2 requirement*. Banking Supervision.
www.bankingsupervision.europa.eu/activities/srep/pillar-2-requirement/html/index.en.html

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risks and sometimes requires higher capital in certain areas than Basel minimum (e.g. some Member States applied SyRBs of 3% or more on all banks).

CRR also incorporated the revised **large exposures** regime (post-crisis BCBS rules capping exposures to a single counterparty at 25% of Tier 1 capital, or lower for G-SIB interconnections), and enhanced risk coverage for trading book and securitisation (partly through CRR and subsequent amendments). Some Basel changes (like the revised market risk framework “Fundamental Review of the Trading Book”) were not fully ready in 2013, hence CRR gave only interim provisions; those were later handled in CRR II. Importantly, **CRR applied directly across all EU banks**, which was a shift from previous Capital Requirements directives – it ensured uniform implementation, reducing national variation.

The EU did exercise certain *discretions and divergences* in this initial phase, often to accommodate regional policy objectives. A few key examples frequently cited are:

To encourage lending to small and medium-sized enterprises (SMEs) during a weak economic recovery, the CRR introduced an **“SME supporting factor” (Article 501 CRR)** which effectively allows banks to hold less capital against SME loans than Basel standards would require. It provided a capital discount of ~0.76 on RWA for qualifying SME exposures. Basel II/III did not have this; it’s an EU-introduced deviation. The supporting factor was justified by the observation that SME loan portfolios had lower unexpected loss volatility and by a policy desire to stimulate SME credit. However, regulators like the EBA later noted that this supporting factor’s effect on actual SME lending was unclear and recommended its reconsideration.⁴⁴

Basel III introduced a capital charge for **Credit Valuation Adjustment (CVA)** risk (the risk of mark-to-market losses on derivatives from counterparty credit spread changes). **The EU, in CRR, exempted certain entities from the CVA charge** – notably trades with non-financial corporates, pension funds, and sovereigns were exempted from CVA VaR calculation under CRR Article 382. These exemptions were not contemplated by Basel (which wanted a comprehensive CVA charge).

The EU argued that applying CVA capital to sovereign or pension exposures might overstrain certain European markets or that these counterparties posed lower risk. However, this was

⁴⁴ European Banking Authority. *Basel III reforms: Impact study and key recommendations*, p. 26
www.eba.europa.eu/sites/default/files/Basel%20III%20reforms%20-%20Impact%20study%20and%20key%20reccomendations.pdf

criticised as a significant deviation that underestimates actual counterparty risk and misaligns incentives (banks had lower capital against swaps with exempt counterparties). This is an example where the EU *undershot* Basel's risk coverage for the sake of specific sector considerations. ECB staff estimated that the EU-specific approach would **reduce the long-run benefits of the Basel III standards by 40%** compared to full implementation.⁴⁵

Basel II allowed low risk weights for sovereigns (especially highly rated), but Basel III didn't change sovereign risk weight rules. However, a notable discussion is that in EU practice, banks assign a **0% risk weight to EU sovereign bonds denominated in the home currency** under the standardised approach and internal models often assume sovereigns as risk-free due to the EU's regulatory treatment. This "sovereign carve-out" is not a formal Basel deviation (Basel allows national discretion on sovereign treatment to an extent), but it is often highlighted that EU banks effectively carry zero capital for holdings of domestic government bonds – a practice unchanged post-crisis due to concerns about destabilising sovereign debt markets.

The Basel Committee has considered concentration limits or non-zero weights for sovereigns (especially after Eurozone debt crisis) but no consensus was reached. The EU, citing lack of a global standard and the special status of sovereign debt, did not impose higher capital on sovereign exposures in CRR. This is seen by some as a **regulatory home bias** and a gap in the Basel framework.

The EU also sometimes took advantage of Basel's transitional allowances in a more accommodating way. For example, CRR allowed longer phase-in of deductions for deferred tax assets or minority interest. Another flexibility: certain **defined benefit pension fund assets** – Basel required deducting these from CET1 or holding capital, but the EU obtained a temporary exemption (which has been extended multiple times) allowing banks not to deduct some pension fund deficits from capital. These technical details provided European banks more time or relief in areas where immediate full Basel implementation was deemed too harsh.

Despite these deviations, on the whole **CRR/CRD IV implemented the major pillars of Basel III**: higher capital ratios, buffers, LCR, etc., across the EU. The EBA and ECB have

⁴⁵ European Central Bank. (2021). *Macroeconomic impact of Basel III finalisation on the euro area* (Katarzyna Budnik, Ivan Dimitrov, Johannes Gross, Max Lampe, & Matjaž Volk), section 6. www.ecb.europa.eu/press/financial-stability-publications/macprudential-bulletin/html/ecb.mpbu202107_1~3292170452.en.html

actively monitored the impact, and in general EU banks increased their capital and liquidity markedly in line with the new rules. By 2019, average CET1 ratios of significant EU banks were well above 12-14%, versus ~7-9% in 2012, indicating a substantial strengthening of resilience.

CRR II / CRD V (2019): Embedding G-SIB and TLAC Standards into EU Law

In 2019, the EU adopted a comprehensive reform package, commonly referred to as **the “Banking Package”**, comprising Regulation (EU) 2019/876 (CRR II) and Directive (EU) 2019/878 (CRD V). This package amended the initial CRR and CRD IV framework to finalise the implementation of Basel III and to incorporate further refinements based on supervisory experience and emerging global standards. In particular, CRR II and CRD V brought the EU framework into closer alignment with Basel III’s final elements, while also embedding the global standard on TLAC within the EU’s resolution framework through integration with the MREL.

One of the key enhancements under CRR II was the introduction of a **binding leverage ratio requirement of 3% for all credit institutions**. This marked a transition from the previous regime of mere monitoring to a fully binding constraint on excessive leverage. Additionally, the EU implemented a leverage ratio buffer for global systemically important institutions (G-SIIs), requiring an additional Tier 1 capital amount equal to 50% of the institution’s G-SII buffer.

In practical terms, this meant that a G-SII subject to a 2% risk-based G-SII buffer would also have to comply with a 4% leverage ratio requirement, as opposed to the standard 3%. This step brought the EU into early compliance with Basel’s 2017 leverage ratio revisions and placed it **among the first jurisdictions to make the G-SIB leverage buffer binding**. Breaches of this buffer trigger distribution restrictions, in line with the broader prudential buffer regime.

CRR II also finalised the implementation of the NSFR, requiring banks to maintain stable funding profiles over a one-year horizon, consistent with Basel’s liquidity framework. The EU adopted a 100% minimum NSFR but introduced some adjustments, including preferential treatment for certain high-quality securitisations and covered bonds. These deviations aimed to preserve the economic utility of some EU market instruments while remaining broadly faithful to the underlying Basel standard.

Perhaps the most significant systemic innovation in CRR II was the incorporation of the **TLAC standard into EU law**. Rather than establishing TLAC as a standalone concept, the EU chose to integrate it with the existing MREL regime, initially introduced under the BRRD. CRR II introduced TLAC requirements as a Pillar 1 floor applicable to G-SIBs, requiring them to hold at least 18% of RWA and 6.75% of leverage exposure in the form of own funds and eligible liabilities.

These eligible instruments, primarily subordinated bail-inable debt, had to meet strict subordination and maturity criteria, consistent with both TLAC and MREL eligibility standards. The SRB, or relevant national resolution authority, retained the power to set MREL requirements above these TLAC floors to account for specific resolution strategies, such as the recapitalisation of multiple legal entities within a group.

A key feature of the EU approach was its differentiation between internal and external MREL, mirroring the FSB's internal TLAC concept. Internal MREL applies to material subsidiaries of cross-border banking groups and must be met with liabilities owed to the resolution entity. CRR II also included provisions limiting EU banks' holdings of other G-SIBs' TLAC instruments, in line with Basel's objective of minimising contagion risk through excessive cross-holdings of bail-inable debt. Further, CRR II amended large exposure rules to align with the Basel Committee's updated 25% limit on exposures to a single counterparty and added a stricter 15% cap on exposures from one G-SIB to another.

On market and credit risk, **CRR II introduced the Standardised Approach for Counterparty Credit Risk (SA-CCR)**, replacing older, less risk-sensitive methodologies. Although the FRTB was incorporated only as a reporting requirement, it laid the groundwork for future binding capital requirements under CRR III. The revised CVA framework was partially implemented, but with temporary EU exemptions still in place, reflecting the EU's cautious approach toward sectors like sovereign and corporate derivatives exposures.

The EU also made policy choices diverging from Basel III in targeted ways. For instance, **CRR II retained and expanded the SME supporting factor** and introduced an "infrastructure supporting factor" that reduced capital charges for certain categories of public interest infrastructure loans. These deviations were motivated by macroeconomic objectives (supporting SME financing and infrastructure investment) but came at the cost of higher risk-weight variability and reduced global comparability. Other areas where the EU exercised

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national discretion included operational risk, where the internal loss multiplier (ILM) was fixed at 1, effectively dampening volatility in capital requirements derived from past losses.

Nevertheless, **CRR II eliminated some earlier deviations**, aligning with Basel on the treatment of deferred tax assets, significant investments, and deductions from capital. It also strengthened the output floor reporting obligations, paving the way for the full introduction of the Basel III output floor (set at 72.5%) under CRR III.

CRD V, for its part, clarified the interaction between **overlapping capital buffers**. Specifically, it ensured that if a bank is simultaneously subject to an O-SII buffer and a SRB, the higher of the two would apply to avoid double counting. It also expanded the use of the SRB to cover sectoral risks and codified the Pillar 2 Guidance (P2G) mechanism, which reflects non-binding but supervisory expectations for capital above minimum requirements.

In sum, CRR II and CRD V substantially completed the EU's implementation of Basel III, while tailoring specific elements to regional considerations. The overall direction was one of strong alignment with international standards (particularly with regard to leverage, liquidity, and loss absorbency) combined with selective deviations to support EU policy objectives.

CRR III and CRD VI: Finalising Basel III in the EU

The latest and most significant development in the EU's implementation of the Basel III framework is the adoption of **CRR III (Regulation (EU) 2024/1624)** and **CRD VI (Directive (EU) 2024/1619)**, published in the Official Journal on **19 June 2024** and entering into force 20 days later. These texts represent the EU's effort to complete the post-crisis regulatory overhaul by aligning with the **Basel III final reforms (also referred to as Basel 3.1 or Basel IV)**. They apply gradually since **1 January 2025**, with transposition of CRD VI required by **January 2026**. This legislative package is widely regarded as the final pillar in the EU's implementation of the Basel III standards.

CRR III introduces a number of significant reforms designed to address remaining inconsistencies in risk measurement and to increase the comparability of banks' capital positions. Most notably, it incorporates the **Basel output floor**, requiring that banks' RWAs under internal models cannot fall below **72.5% of the RWA calculated under the standardised approach**. This provision, phased in over time, aims to reduce unwarranted variability in capital calculations and to enhance transparency and comparability across jurisdictions. For EU banks, especially those with low risk-weight densities, such as mortgage

lenders, the output floor poses a material capital impact, leading the EU to introduce **targeted phase-in and flexibility measures**, particularly for low-risk portfolios.

In addition, the **standardised approach for operational risk** has been overhauled. The existing Advanced Measurement Approach (AMA) and other internal model-based approaches have been replaced with a single **Standardised Measurement Approach (SMA)**, based on a combination of business indicators and historical losses. While more conservative in some respects, the SMA also enhances consistency and aligns more closely with the Basel Committee's intentions.

CRR III also incorporates the **Fundamental Review of the Trading Book** into the EU framework. Initially introduced as a reporting requirement under CRR II, the FRTB will become binding for capital purposes in **2027**, due to both international delays and industry readiness concerns, as discussed later on in Chapters 4 and 5. Moreover, the EU has revised its **credit risk framework** in line with Basel, limiting the use of internal models for certain exposures and updating the standardised approach to better capture borrower-specific risk factors. The implementation of the **SA-CCR** and the revised **CVA** risk framework is also finalised, albeit with some EU-specific exemptions that still apply.

Another key element of CRR III is its integration of **environmental, social and governance (ESG)** considerations. Banks will now be required to include ESG risks in their internal governance, risk management frameworks, and disclosures. This marks a clear step by the EU to incorporate forward-looking risks (particularly climate-related financial risks) into the prudential regime, even beyond Basel's baseline requirements.

CRD VI complements the regulatory changes with refinements to the supervisory framework. It expands the powers of supervisory authorities to assess **ESG risks**, strengthens **Pillar 2** processes, and formalises the **P2G** regime as part of the Supervisory Review and Evaluation Process (SREP). Furthermore, it harmonises the treatment of **third-country branches (TCBs)**, requiring enhanced prudential standards and supervisory cooperation for non-EU banks operating in the EU. This measure seeks to close potential regulatory gaps and ensure level playing fields in cross-border banking.

Crucially, the EU's latest package also reflects a move towards **regulatory simplification**. In line with the Basel Committee's own reflection on reducing complexity, CRR III simplifies **Pillar 3 disclosure obligations**, especially for small and non-complex institutions. It also avoids excessive pro-cyclicality by maintaining certain flexibilities, for example, setting the

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internal loss multiplier (ILM) to 1 under the operational risk SMA (a departure from the Basel method, which would make this component risk-sensitive based on past losses).

CRR III ensures that TLAC requirements remain legally binding and clearly delineated from capital buffers. Importantly, it maintains the principle that **capital buffers must sit atop TLAC/MREL requirements**, avoiding regulatory overlap. Breaches of these requirements trigger supervisory responses, with TLAC breaches carrying the potential for early resolution action.

CRD VI also refines **buffer interactions**. For instance, where a bank is subject to overlapping buffers, the higher of the two applies, avoiding duplication. These calibrations reflect a more coherent supervisory approach, supporting the EU's stated goal of avoiding unnecessary regulatory burden while maintaining resilience.

Despite its strong alignment with Basel III final standards, the CRR III/CRD VI package **preserves certain EU-specific deviations**. These include the **SME and infrastructure supporting factors**. Moreover, the EU has maintained some exemptions from **CVA risk charges** and certain **leverage ratio adjustments** (e.g. recognition of initial margin on derivatives), further distinguishing its approach from the Basel "pure" model.

3. Academic, Institutional and Industry

Perspectives on Post-GFC Reforms

3.1. Evaluating the Effectiveness of Basel III measures

Nearly a decade and a half since the crisis reforms began, a substantial body of analysis examines their effects. **Have Basel III and the EU's implementation made banks safer?** Most observers agree that banks are significantly more resilient now than in 2008. Capital levels are higher by several-fold, and liquidity buffers are robust. The Basel Committee's own 2021 evaluation found that the Basel III reforms increased bank capital ratios largely through retained earnings and equity issuance, leading to **"overall resilience of the banking sector has increased"** and particularly noting that banks with weaker initial capital saw the greatest improvements.⁴⁶ Market-based measures (like bank CDS spreads, market leverage) also improved, suggesting investors perceive lower risk of bank default.⁴⁷

Academic commentators note that the capital reforms following the GFC were intended to rectify the undercapitalisation that contributed to the crisis. For example, Admati and Hellwig (2013)⁴⁸ argued banks should hold far more equity capital; post-crisis regulators did mandate higher capital, though not to the levels some critics wanted. The **minimum Tier 1 capital** requirement effectively rose from 4% to 6% (with **CET1** at 4.5% plus buffers), and G-SIBs must hold additional capital ranging ~1-3.5% of RWA as a surcharge. The expectation was that better-capitalised banks would be less prone to insolvency, reducing systemic risk.

Scholars and officials have evaluated the **effectiveness of these capital reforms**. **Goel, Lewrick & Mathur (2019)** find that post-crisis higher capital ratios did *indeed* improve G-SIB resilience.⁴⁹ Using BIS data, they estimate a marked decline in G-SIBs' probability of distress

⁴⁶ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 1. www.bis.org/bcbs/publ/d544.htm

⁴⁷ Broto, C., Fernández Lafuerza, L., & Melnychuk, M. (2025, January). *Do buffer requirements for European systemically important banks make them less systemic?* International Journal of Central Banking. Banco de España, p. 238. www.ijcb.org/journal/ijcb25q1a5.pdf

⁴⁸ Admati, A. R., & Hellwig, M. F. (2013). *The bankers' new clothes: What's wrong with banking and what to do about it*. Princeton University Press.

⁴⁹ Bank for International Settlements. (2019, September). Goel, T., Lewrick, U., & Mathur, A. Playing it safe: Global systemically important banks after the crisis. BIS Quarterly Review, p. 45. www.bis.org/publ/qtrpdf/r_qt1909e.htm

in the years after the crisis, attributable in large part to stronger capital positions. Notably, G-SIBs built up substantial common equity and retained earnings, which **lowered leverage and improved solvency**. Goel et al. observe that these banks' **balance-sheet adjustments** accord with regulatory incentives: for instance, many G-SIBs reduced risky assets and increased stable funding, aligning with the new capital and liquidity rules. This evidence suggests the capital reforms achieved their intended effect of making G-SIBs safer.

Another study by **Adrian, Kiff & Shin (2018)** concludes that the financial system became **significantly safer** as a result of post-crisis regulations, "at limited unintended cost".⁵⁰ They highlight that banks' higher equity levels and reduced leverage have not caused major distortions in credit supply or market liquidity, undercutting fears that tougher capital rules would stifle the economy. In summary, the literature indicates that **raising capital standards** for EU G-SIBs has materially increased their loss-absorption capacity, a critical element of post-crisis effectiveness.

Regarding Basel III's liquidity standards, i.e. LCR and NSFR, Adrian et al. note that these, alongside stronger capital, have improved the banking system's robustness. Banks responded by **boosting their liquid asset buffers** (e.g. government bonds and reserves) to meet the LCR, and by extending funding maturities to comply with NSFR.

Empirical evidence shows most banks comfortably met LCR/NSFR with manageable adjustments. **BIS monitoring reports** find that banks with initial liquidity shortfalls increased their stock of high-quality liquid assets significantly, without severely curtailing lending. Furthermore, they indicate that banks with larger LCR shortfalls pre-implementation subsequently raised their HQLA ratios more, as intended, improving their liquidity profiles.⁵¹ The overall picture is that **liquidity reforms** have reduced banks' vulnerability to runs. While some critics questioned if these rules might impede bank lending, studies (including Adrian et al. 2018) report only modest impacts on credit availability.⁵² Banks adjusted asset compositions (holding more liquid securities) but generally maintained credit to the real economy, aided by a phased implementation and post-crisis monetary easing.

⁵⁰ Adrian, T., Kiff, J., & Shin, H. S. (2018). Liquidity, leverage, and regulation ten years after the global financial crisis. *Annual Review of Financial Economics*, 10, p. 1–24. <https://doi.org/10.1146/annurev-financial-110217-023113>

⁵¹ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, sections 2.2 and 6. www.bis.org/bcbss/publ/d544.htm

⁵² Adrian, T., Kiff, J., & Shin, H. S. (2018). Liquidity, leverage, and regulation 10 years after the Global Financial Crisis. *Annual Review of Financial Economics*, 10(1), p. 22. <https://www.annualreviews.org/content/journals/10.1146/annurev-financial-110217-023113>

Frey & Traxler (2024) develop a mean-field game model showing that **stringent capital constraints**, absent credible resolution mechanisms or sufficient capitalization, could trigger systemic "fire-sales" across banks.⁵³ Their numerical results demonstrate that a well-capitalized banking system, or effective resolution planning, can **avert simultaneous defaults**, reinforcing the regulatory narrative underpinning higher capital requirements and TLAC/MREL frameworks.

Another innovation was the **leverage ratio**, a non-risk-weighted capital measure. Basel III set a minimum Tier 1 leverage ratio of 3%, supplementary to risk-based requirements. This simple **leverage cap** was intended as a backstop to constrain excessive borrowing and prevent banks from understating risk. **Reiners (2016)** observes that under Basel II, large banks used internal models to produce very low RWAs for similar asset portfolios, resulting in "widely different capital charges" that undermined comparability.⁵⁴ Complex modeling allowed banks to game risk weights and operate with thin equity – one reason many banks were over-leveraged pre-2008.

The Basel Committee "grew wise" to this and introduced the leverage ratio to **limit total leverage regardless of risk model outputs**. In the EU, the leverage ratio was implemented (with binding effect from 2021) at 3% for most banks, and importantly, a **higher leverage buffer for G-SIBs** (50% of their risk-based G-SIB capital buffer) was added in CRR2.⁵⁵ This means EU G-SIBs must maintain additional Tier 1 capital against total exposures, further curbing their leverage. By capping leverage, regulators aimed to ensure that even if risk weights are low, a bank cannot balloon its balance sheet without also increasing equity.

The literature views the leverage ratio as a crucial safety net. **BIS analyses** find that the leverage ratio often becomes the binding constraint in boom times when risk-weighted assets seem artificially benign – effectively reining in balance-sheet growth. While some bankers complained that a blunt leverage rule discourages low-risk lending (since even safe assets count), the consensus is that it provides an essential **simplicity and robustness** to the

⁵³ Frey, R., & Traxler, C. (2024). Playing with fire? A mean field game analysis of fire sales and systemic risk under regulatory capital constraints. *Journal of Financial Stability*. <https://doi.org/10.48550/arXiv.2406.17528>

⁵⁴ Reiners, L. (2016, December). Basel Committee is on the clock. The FinReg Blog. <https://sites.duke.edu/thefinregblog>.

⁵⁵ European Systemic Risk Board. (2022, March 1). Joining up prudential and resolution regulation for systemically important banks (Occasional Paper No. 25) — A. Ebner & C. Westhoff, p. 25.

capital framework. Thus, **EU G-SIBs' leverage** is now explicitly limited, addressing a major pre-crisis regulatory gap.

Finally, **resolution frameworks** were overhauled to ensure that if a G-SIB does fail, it can be managed in an orderly way without imploding the system or requiring taxpayer bailouts. The FSB introduced **TLAC** for G-SIBs globally; the EU implemented a parallel **MREL**. According to the **FSB (2020)** evaluation, despite the few cases and the remaining barriers, these resolution reforms have made G-SIBs *more “resolvable”* – i.e. authorities now have a better chance of winding down a failing bank without major systemic fallout.⁵⁶ Each EU G-SIB is subject to resolution planning by the Single Resolution Board, with preferred resolution strategies (e.g. Single Point of Entry bail-in) and MREL targets calibrated to ensure feasibility.

The literature highlights several improvements: **market discipline** is stronger (creditors know they're at risk of bail-in), and banks have reorganized group structures to facilitate resolution (e.g. issuing debt from holding companies). In such evaluation, the FSB found that indicators of **moral hazard** (like funding advantages for G-SIBs) had begun to decline, suggesting markets view the TBTF reforms as credible.

However, academic legal scholarship also identifies **remaining challenges in resolution regimes**. Grund (2021) argues that current frameworks *suffer from a liquidity problem* – post-crisis laws in both the US and EU **constrain central banks from providing liquidity support to a bank in resolution**, which could cause a cash-starved firm to fail even if it's solvent post-bail-in.⁵⁷

In the U.S., Dodd-Frank Act Section 1101 curtailed the Fed's emergency lending to individual institutions, and in the euro area, there is no clear mechanism for the ECB or national central banks to lend to a bank that has entered resolution. Grund notes that while the U.S. at least set up a fiscal backstop (the Orderly Liquidation Fund) to provide resolution liquidity, the EU's arrangements are more limited – the EU's Single Resolution Fund is modest in size and there is only a **“small window” for national solutions**. He advocates giving central banks a circumscribed lender-of-last-resort role during resolution (backed by fiscal guarantees) to ensure that an otherwise viable resolved bank doesn't collapse for lack of short-term funds.

⁵⁶ Financial Stability Board. (2021). *Evaluation of the effects of too-big-to-fail reforms: Final report*, p. 2-8. www.fsb.org/2021/03/evaluation-of-the-effects-of-too-big-to-fail-reforms-final-report/

⁵⁷ Grund, S. (2021). *Liquidity in Resolution, A Transatlantic Perspective*. *Business & Finance Law Review*, 4(2), 1–65. <https://doi.org/10.2139/ssrn.3638620>

This point underscores that **having enough TLAC/MREL is necessary but not sufficient** – a resolved G-SIB also needs temporary liquidity to maintain operations. The **Credit Suisse episode in 2023** put this issue in sharp relief: despite Switzerland’s robust TBTF regime and CS’s ample TLAC, authorities opted for a state-brokered takeover by UBS rather than a resolution, partly due to concerns about maintaining market confidence and liquidity. A BIS review of that case noted that **a full bail-in strategy remains untested** and that the Swiss had to provide an *emergency liquidity backstop of CHF 200 billion* to facilitate the merger.⁵⁸ The takeaway for EU policymakers is that **resolution plans must ensure both capital and liquidity** for the firm in question.

An **SRB Working Paper (2024)** examines recent crises (SVB, CS), finding that while resolution frameworks have not yet faced a G-SIB failure in the EU, the tools in place (MREL stockpiles, recovery/resolution plans) are **functioning robustly**, lending credence to their intended shock absorption role.⁵⁹ Yet, the authors note **liquidity remains untested** in a full EU G-SIB resolution, underlining a key area of uncertainty.

Another scholarly critique comes from **Hellwig (2021)**, who argues that the EU’s resolution regime “*remains impractical*.” He observes that although the BRRD was a step forward, **essential preconditions for effective resolution were not fully met in EU legislation**.⁶⁰ For instance, Hellwig points to the lack of a truly unified EU insolvency law or fiscal support mechanism, which complicates handling a failing cross-border bank. Political constraints meant some “**important gaps remain**” – he highlights issues like the still-uncertain treatment of **bank creditors across multiple jurisdictions**, the **need for credible valuations** in a fast-moving resolution, and the overarching “politics of bank resolution” that might interfere.

In practice, EU authorities have on a few occasions avoided triggering resolution for faltering banks (especially smaller retail banks), resorting to ad-hoc measures to shield depositors – suggesting reluctance to fully use the new powers. Hellwig’s critique implies that despite the

⁵⁸ Carstens, A. (2024, October 29). *A test of resolve: Credible resolution following the 2023 banking turmoil* [Speech]. FSB–FSI–IADI Resolution Conference, Basel. Bank for International Settlements. <https://www.bis.org/speeches/sp241029.htm>

⁵⁹ Single Resolution Board. (2024, July). *The 2023 Banking Turmoil: Implementation Lessons for Resolution Authorities* (Working Paper Series No. 4), p. 6-10. www.srb.europa.eu/system/files/media/document/2024-07-02_Staff-Paper-4_The-2023-Banking-Turmoil.pdf

⁶⁰ Hellwig, M. F. (2020). *Twelve years after the financial crisis – Too-big-to-fail is still with us: Comments on the Financial Stability Board’s consultation report “Evaluation of the effects of too-big-to-fail reforms”* (MPI Collective Goods Discussion Paper No. 2020/24). Max Planck Institute for Research on Collective Goods, Section 3. <https://doi.org/10.2139/ssrn.3719062>

new resolution framework and tools, there is skepticism about whether authorities would really impose losses on large banks' private creditors in a crisis.

This perspective underscores a broader point in the literature: **regulatory reforms have improved the toolkit on paper, but real-world effectiveness can only be judged when a major bank actually faces failure under these rules.** To date, no EU G-SIB has failed since the reforms, so their ultimate test lies ahead.

Notwithstanding, **Eurofi (2025)**, drawing on mid-2024 data, observes that EU G-SIBs currently maintain **strong capital, high liquidity, and sustained profitability**.⁶¹ Their joint analysis suggests that **resilience and earnings** can coexist, contradicting views that tougher rules necessarily curb performance and offering a real-time affirmation that Basel III goals are not at odds with banking health.

In sum, post-crisis regulatory reforms targeting EU G-SIBs have been comprehensive. Strengthened **capital and liquidity requirements**, a binding **leverage constraint**, and robust **resolution mechanisms** (with bail-in and TLAC/MREL) now form the core of G-SIB regulation. Each aspect was designed to address vulnerabilities revealed by the global financial crisis, and the academic and policy literature largely agrees that these reforms were necessary and effective in principle. The next sections evaluate to what extent these measures have fulfilled the core regulatory goals of resilience and stability, discuss remaining shortcomings (like complexity and costs), and examine how uneven implementation across jurisdictions impacts global outcomes.

3.2. Resilience, Systemic Risk Reduction, and Financial Stability: Are the Goals Achieved?

A fundamental goal of the post-2008 reforms was to **increase the resilience of G-SIBs** and thereby reduce systemic risk and enhance overall financial stability. A decade on, evidence suggests that many of these **goals have been partially – even largely – achieved.** There is consensus in the literature that banks are undeniably better capitalised and more liquid than before the crisis.

⁶¹ Eurofi. (2025, April). *Views: The Eurofi Magazine – Warsaw April 2025: Simplifying EU banking regulation*. www.eurofi.net/wp-content/uploads/2025/04/simplifying-eu-banking-regulation-eurofi-views-magazine-warsaw-april-2025.pdf

Goel et al. (2019) show that G-SIBs' probability of default has **declined significantly** in the post-crisis period, reflecting their higher capital ratios and more stable funding profiles.⁶² By modeling G-SIB distress probabilities, they find a clear downward trend after 2010. This suggests G-SIBs are far less likely to fail now than in the pre-crisis era, which directly speaks to greater resilience. Importantly, the same study finds that the **systemic importance of G-SIBs has also fallen** in recent years. Metrics used to identify G-SIBs (size, interconnectivity, complexity, etc.) show a slight decline on average, indicating that large banks have become a bit less central to the financial network than before. This could be due to reforms encouraging G-SIBs to simplify structures, cut interbank exposures, or divest certain risky activities. The implication is a reduction in potential systemic impact if a G-SIB does get into trouble. In essence, **G-SIBs are not only stronger individually, but also somewhat less dangerous collectively**, aligning with the reform objective of systemic risk mitigation.

Supporting this view, the previously-mentioned FSB's 2021 *Evaluation of the effects of too-big-to-fail reforms* conducted a comprehensive evaluation of TBTF reforms and concluded that **banks are indeed more resilient and more resolvable**, and that these reforms have yielded **net benefits to society**. The FSB report is quite emphatic that key risk indicators moved "in the right direction" – for example, G-SIB capital levels doubled relative to pre-crisis, and G-SIBs now meet TLAC requirements, which did not exist before. Market metrics indicate reduced implicit subsidy: the funding cost differentials between G-SIBs and smaller banks narrowed, suggesting investors believe G-SIB debt is riskier (i.e. more likely to bear losses) than previously, a sign of **diminished moral hazard**.

Crucially, **financial stability** appears to have improved: the global banking system has not experienced a crisis of similar magnitude since 2008. When the **COVID-19 shock** hit in 2020, banks – including EU G-SIBs – were able to absorb significant stress *without* precipitating a financial meltdown. The FSB notes that increased bank resilience, along with extraordinary support measures, allowed banks to be a source of stability during the pandemic rather than a conduit of panic.

This real-world test arguably validates that the core goal of **resilience** was achieved: banks entered the COVID crisis with high capital and liquidity buffers and thus could cope with

⁶² Goel, T., Lewrick, U., & Mathur, A. (2019). *Playing it safe: Global systemically important banks after the crisis*. BIS Quarterly Review, September 2019. www.bis.org/publ/qtrpdf/r_qt1909e.htm

record market volatility and loan losses while continuing to lend (in contrast to 2008, when banks amplified the crisis by cutting credit sharply).

Multiple academic studies echo that **post-crisis reforms have reduced systemic risk**. For instance, **Adrian et al. (2018)** conclude the system is substantially safer now, as regulations curtailed the excessive **leverage and liquidity risk** that previously exacerbated crises. They point out that by forcing banks to finance more with equity and stable funding, the likelihood of bank runs or sudden deleveraging spirals has diminished.

Likewise, **Cecchetti & Kashyap (2018)** observed that the combination of capital buffers, LCR/NSFR, and stress testing regime has made large banks *more shock-resistant*, and the broader financial system less prone to contagion.⁶³ Many empirical papers find that higher capital reduces the probability of banking crises and that the economic benefit of lower crisis frequency outweighs the modest cost of slightly higher loan interest rates (a finding consistent with the previously referenced Basel Committee's own impact studies).

That said, the literature also stresses **caution in declaring “mission accomplished.”** As **Hellwig (2021)** provocatively states, the system is “*safer, yes, but not safe*”.⁶⁴ He and others argue that **too-big-to-fail problems persist**, albeit in a mitigated form. Hellwig's commentary on the FSB report notes that while progress is undeniable (banks have more capital/liquidity), it is **unclear if these reforms are enough to prevent a future crisis or bailout**. One way he evaluates this is by asking a counterfactual: *If all these new regulations had been in place in 2006, would the 2008 global financial crisis have been avoided?* He reports that even former central bank governors he's spoken with answer “No”.

From this view, **the core goals are only partially fulfilled** – banks are stronger, but not impervious, and authorities might still blink when facing a potential G-SIB failure. Indeed, in 2023 when Credit Suisse neared collapse, Swiss authorities opted for a forced merger rather than test the full resolvability of a G-SIB under the new rules, hinting that in extremis, old habits of **public intervention** die hard.

⁶³ Cecchetti, S. G., & Kashyap, A. K. (2018). *What Binds? Interactions between Bank Capital and Liquidity Regulations*. In P. Hartmann, H. Huang, & D. Schoenmaker (Eds.), *The Changing Fortunes of Central Banking* (pp. 192–202). Cambridge University Press. <https://doi.org/10.1017/9781108529549.012>

⁶⁴ Hellwig, M. F. (2020). *Twelve years after the financial crisis – Too-big-to-fail is still with us: Comments on the Financial Stability Board's consultation report “Evaluation of the effects of too-big-to-fail reforms”* (MPI Collective Goods Discussion Paper No. 2020/24). Max Planck Institute for Research on Collective Goods. <https://doi.org/10.2139/ssrn.3719062>

Another dimension is **systemic risk shifting**. Among many others, the US Congressional Service recently flagged that as banks have been reined in, some risky financial activities have migrated to the **non-bank financial intermediation spectrum**⁶⁵ (formerly known as **shadow banking**).⁶⁶ For example, tighter bank lending standards post-Basel III led corporations to rely more on bond markets and investment funds. Today, large asset managers and funds perform liquidity and maturity transformation but are outside the bank regulatory perimeter.

The March 2020 stress in money market and bond funds, which required central bank intervention, illustrated that **systemic risk has not disappeared but moved**. The literature (e.g. **Pozsar et al.** on shadow banking)⁶⁷ suggests that while banks are safer, new systemic vulnerabilities in areas like money market funds, hedge funds, or fintech lending could trigger instability. This does not mean the bank reforms failed – rather, they succeeded in part (banks were stable in 2020), but **financial stability is a moving target**. To fully achieve the post-crisis goals, regulators may need to address these non-bank risks.

Some studies also discuss **unintended consequences** of the reforms that might influence stability. One concern was that higher capital and liquidity requirements could reduce bank profitability and lending, possibly hampering economic growth or driving lending to less regulated entities. Indeed, European G-SIBs have seen lower average **return on equity** in the post-crisis era, and many cite regulatory costs as a factor.

BIS analysts (2019) note that G-SIB profitability has been “weak” in recent years, which “*hindered further improvements*” in resilience because banks struggled to build capital through retained earnings.⁶⁸ Lower profits can also pressure bank management to seek higher yields, potentially by taking on more risk in less regulated activities (though overall risk-taking by banks has fallen, given stricter supervision).

⁶⁵ As ECB Vice-President Luis de Guindos noted in the latest ESRB Annual Conference (2024), non-bank financial intermediation should be referred to as a “spectrum” rather than a “sector” (as it is commonly referred to) due to the wide variety of entities, activities, and interconnectedness involved, which blur the lines between traditional banking and market-based finance.

⁶⁶ Congressional Research Service. (2024). *Nonbank financial intermediation (NBFIs or “shadow banking”) and policy issues*. <https://www.congress.gov/crs-product/R48512>

⁶⁷ Pozsar, Z., Adrian, T., Ashcraft, A., & Boesky, H. (2012). *Shadow banking*. Federal Reserve Bank of New York Staff Report No. 458 www.newyorkfed.org/medialibrary/media/research/staff_reports/sr458.pdf

⁶⁸ These statements appear in the press release accompanying: Goel, T., Lewrick, U., & Mathur, A. (2019, September). *Playing it safe: Global systemically important banks after the crisis* (BIS Working Paper No. 805). Bank for International Settlements. www.bis.org/publ/work805.htm

Martynova (2015) found that while most evidence suggests higher capital requirements may reduce bank lending in the short term, particularly to riskier or more bank-dependent borrowers, the long-run effects on lending and growth are less clear and difficult to isolate from other factors. It cites a “flight to quality” effect, where banks reduce risk-taking and shift toward safer assets, potentially improving financial stability.⁶⁹

The consensus of empirical work (IMF, BIS, academic) is that while there were some adjustment costs, the core goals of resilience and stability have largely been met without major long-term damage to credit supply.

In summary, **resilience is much improved**: EU G-SIBs today hold roughly 2–3 times more Tier 1 capital and liquidity than before the crisis, and their risk management is subject to far stricter oversight. **Systemic risk** in the banking sector has been curtailed – the probability of a systemic banking meltdown is estimated to be considerably lower now, according to models cited by the BIS and FSB in the aforementioned reports.

And **financial stability** has benefited: the era since 2008 has not seen another Lehman-type event despite severe stresses like the eurozone sovereign crisis and the pandemic, thanks in part to the buffers and frameworks in place. Yet, regulators and scholars maintain a degree of humility – the financial system can evolve in unexpected ways, and the true test of “ending TBTF” will come only when a large bank is allowed to fail without broad contagion. Achieving resilience and stability is thus an ongoing process, but the literature affirms that the post-GFC regulatory reforms were a **critical and largely successful step** toward those goals.

3.3. Remaining Gaps and Limits of Basel Reforms:

Complexity, Costs, and the Push for Simplification

One question in scholarly debate is whether the reforms overshot or undershot in terms of stringency. Some academics (e.g. A. Admati and colleagues) argue Basel III didn’t go far enough – that capital requirements, even now, are too low compared to what would maximally reduce systemic risk (they advocate equity levels well above 20-30%). Conversely, certain industry groups suggest parts of Basel III were excessive, unnecessarily raising costs. For instance, the **leverage ratio** can be binding for low-risk business models (like custodial

⁶⁹ Martynova, N. (2015, March 12). *Effect of bank capital requirements on economic growth: A survey* (Working Paper No. 467). De Nederlandsche Bank, p. 9-10. <https://ssrn.com/abstract=2577701>

banks or trade finance heavy banks) and might discourage those businesses since it does not differentiate risk.

While post-crisis reforms have strengthened banks, they have also made the regulatory landscape **highly complex**. A recurring theme in the literature is that Basel III (and its subsequent “finalization”) greatly increased the **complexity of banking regulation**, potentially reaching a point of diminishing returns. Policymakers are aware of this, as evidenced by the Basel Committee’s ongoing work on “evaluating complexity” and possible simplifications.

In the European context, a growing number of high-level initiatives have been launched to address these concerns. In early 2025, the central bank governors of Germany, France, Italy, and Spain jointly sent a letter to European Commissioner Maria Luís Albuquerque calling for **simplification of EU banking rules** where they have become “*unduly complex*.”⁷⁰ They stressed the importance of a comprehensive analysis of cumulative regulatory impacts and suggested a future legislative proposal containing concrete and realistic simplification measures.

Building on this momentum, the ECB’s Governing Council established the **High-Level Task Force on Simplification**, mandated to develop proposals to simplify both the regulatory framework (particularly capital structures and Basel III implementation) and supervisory and reporting processes.⁷¹ Its proposals, expected by the end of 2025, aim to maintain the high resilience of the EU banking sector while eliminating overlaps and inefficiencies.

The ECB has emphasised that simplification must not come at the expense of financial stability. Supervisory Board Chair Claudia Buch has defended the current complex framework as necessary to address specific risks and vulnerabilities in a tailored way. However, the task force is aligned with broader Commission efforts to enhance regulatory efficiency, and its outcomes will feed into future legislative deliberations in Brussels.

Returning to the academic perspective, **Brookes, Everitt & Vo (2022)** quantitatively analyse the **textual complexity** of Basel regulations and find that Basel III documents are more than

⁷⁰ Escrivá, J. L., Nagel, J., Panetta, F., & Villeroy de Galhau, F. (2025, February 5). Letter on simplification [Letter to Commissioner Maria Luís Albuquerque]. Banco de España.

www.bde.es/f/webbde/INF/MenuHorizontal/SobreElBanco/Transparencia/2025_Letter.pdf

⁷¹ European Central Bank. (2025). *What is the ECB High-Level Task Force on Simplification?* <https://www.ecb.europa.eu/ecb-and-you/explainers/html/high-level-task-force.en.html>

twice as long as Basel II's and significantly more complex in language.⁷² They measure longer sentence structures, more conditional clauses (many "if/when/notwithstanding" provisos), and higher reading difficulty. For example, Basel III covers a wider array of risk types (credit, market, operational, CVA, leverage, liquidity, etc.) each with intricate rules, whereas Basel II was narrower. The authors note this complexity can impair **understanding and compliance**: banks and even regulators may struggle to interpret and implement the rules consistently. High complexity also raises **compliance costs**, as banks must invest in large risk and regulatory teams and sophisticated IT systems to track dozens of ratios and buffers.

Brookes et al. warn that such complexity might lead to unintended consequences like compliance errors or creative circumventions, and it can favor big banks (which have more resources to manage complex rules) over smaller ones. This has led to calls for **simplification** – a sentiment shared by many policymakers who worry that an overly complex regime might be counterproductive.

Indeed, a famous critique by **Andrew Haldane (2012)**, titled "*The Dog and the Frisbee*," argued that simpler rules could outperform complex ones in constraining bank risk.⁷³ **Haldane** pointed out that the pre-crisis regulatory framework's complexity (Basel II's thousands of pages) did not prevent the crisis, and in some ways enabled regulatory arbitrage, as banks could exploit the loopholes in intricate rules. He advocated for straightforward measures like a higher leverage ratio or simple heuristic limits. The post-crisis reforms, however, largely added layers without subtracting much. Even Basel III's leverage ratio and stress tests were add-ons rather than replacements for complex risk-weighting.

By 2016, observers like **Reiners (2016)** noted the irony that post-crisis reforms designed to prevent crises are equally complex as the system that failed.⁷⁴ Reiners highlights how sophisticated banks navigate complex systems to their advantage, citing studies of **RWA variability** – banks with similar portfolios reported vastly different risk-weighted assets, undermining faith in capital ratios. This was a driving force behind Basel's final adjustments:

⁷² Brookes, J., Everitt, M., & Vo, Q.-A. (2022, August 24). *The Basel regulatory framework: Evolution of its textual complexity*. Bank of England Staff Working Paper No. 990. www.bankofengland.co.uk/working-paper/2022/the-basel-regulatory-framework-evolution-of-its-textual-complexity

⁷³ Haldane, A. G. (2012, August 31). *The dog and the frisbee* [Speech]. Federal Reserve Bank of Kansas City's Economic Policy Symposium, Jackson Hole, Wyoming. www.bis.org/review/r120905a.pdf

⁷⁴ Reiners, L. (2016, December). *Basel Committee is on the clock*. The FinReg Blog. <https://sites.duke.edu/thefinregblog/2016/12/12/basel-committee-is-on-the-clock/>

to “**reduce variability in RWAs**”, the Basel Committee in 2016–17 proposed measures like input floors for internal models and ultimately an **output floor** on RWAs.

The **output floor** (set at 72.5% of standardised RWA) is effectively a simplification measure – it limits how low a bank’s reported RWA can go, regardless of model outputs, thereby re-introducing a simple benchmark. This represented acknowledgement that **Basel III’s internal-model approach had reached its limit** in complexity; a blunt backstop was needed to ensure consistency. The **EU’s adoption of the output floor** (in CRR3) has been debated, with banks arguing it’s too rigid, but it reflects a broader trend of regulators looking to rein in complexity.

Another set of concerns revolves around the **costs and burden** of regulatory compliance, and whether Basel reforms have hit practical or political limits. Banks contend that the cumulative cost of higher capital, liquidity buffers, reporting requirements, and internal risk-management overhauls is very high. **Industry studies** claim that lending rates have increased and innovation stifled due to onerous rules.

Already in 2013 the American Enterprise Institute paper argued that “*some costs will outweigh the benefits*” of Basel III, citing the complexity of countercyclical buffers and liquidity rules as potentially dampening banks’ ability to lend and compete.⁷⁵ Similarly, European banking federations have lobbied that constant regulatory tightening can make EU banks less competitive globally and hinder economic growth.

While independent research generally finds **net benefits** from the reforms, it does acknowledge **diminishing returns**: going from a 4% to 8% Tier 1 capital ratio hugely reduces crisis probability, but going from 14% to 16% has much smaller incremental benefit while still incurring costs (like possibly higher loan spreads). Thus, some argue the Basel reforms may have “*reached their limits*” in the sense that further major increases in requirements could yield minimal stability gains but significant burden. This is one reason the Basel Committee declared the Basel III post-crisis agenda “finalised” in 2017 – suggesting a pause to assess effects rather than endless new rules.

There is also a **trend toward proportionality and simplification** in recent regulatory discourse. Recognising compliance costs, regulators have introduced simpler regimes for smaller banks (who are not G-SIBs). For example, the US implemented a **Community Bank**

⁷⁵ Kupiec, P. H. (2013, November 12). *Basel III: Some costs will outweigh the benefits*. American Enterprise Institute. www.aei.org/research-products/report/basel-iii-some-costs-will-outweigh-the-benefits/

Leverage Ratio option so small banks can comply with a single leverage measure instead of the whole Basel package. The EU likewise has explored proportional approaches in CRR2/CRR3, exempting smaller banks from some complex reporting.

This reflects a view that the **current regulatory complexity might be unsustainable** if even supervisors can't fully grasp it. **Basel "endgame"** largely avoided adding new categories of requirements; instead, it focused on the *quality* of existing rules (fixing RWA calculations, etc.) and not raising headline capital ratios much further. In fact, one could interpret Basel IV's output floor and revised standardised approaches as an attempt to **simplify and restore credibility** to the framework rather than to increase complexity. Still, some complexity is inevitable in risk-sensitive regulation – the challenge is finding the right balance.

On the other hand, areas of **undershooting Basel**: we identified SME supporting factor, CVA exemptions, etc., where EU chose less stringent rules. Some analysts (and international regulators) criticise these, saying they undermine comparability and might leave EU banks undercapitalised for certain risks. The **ECB/ESRB** in a 2021 study acknowledged that EU deviations (SME, CVA, etc.) "reduce the long-run benefits" of the Basel reforms for the sake of lowering short-term costs.⁷⁶

A **2024 Finance Watch report**, "Lost Momentum," warns that the global push towards **regulatory simplification** risks diluting Basel III's guardrails if not carefully managed, particularly in jurisdictions tempted to ease capital buffers and reporting burdens.⁷⁷ This call aligns with **Claudia Buch's June 2025 speech**, emphasising that **simplification must not equate to deregulation**.⁷⁸

A related issue is the **competitive impact** of the reforms. Banks and some policymakers worry that if regulations are too costly or complex, they could undermine home banks' global competitiveness or push activities to less regulated sectors/jurisdictions. For instance, EU officials have expressed concern that if Europe implements Basel III reforms stringently while other jurisdictions delay or dilute them, European banks could be at a **competitive disadvantage**. This has been cited in contexts like trade finance, market-making, or

⁷⁶ European Central Bank. (2021). *Macroeconomic impact of Basel III finalisation on the euro area* (Katarzyna Budnik, Ivan Dimitrov, Johannes Gross, Max Lampe, & Matjaž Volk). www.ecb.europa.eu/press/financial-stability-publications/macprudential-bulletin/html/ecb.mpbu202107_1~3292170452.en.html

⁷⁷ Stiefmüller, C. M., & Symon, J. (2024). *Lost momentum: The evolution and challenges of Basel III*. Finance Watch. www.finance-watch.org/publication/lost-momentum-the-evolution-and-challenges-of-basel-iii/

⁷⁸ Buch, C. (2025, June 11). *Simplification without deregulation: European supervision, regulation and reporting in a changing environment* [Speech]. Goldman Sachs European Financials Conference, Berlin. www.bankingsupervision.europa.eu/press/speeches/date/2025/html/ssm.sp250611~e309f5bec9.en.html

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derivatives, where global banks compete. In 2025, the **European Banking Federation** argued that gold-plating rules that are not applied elsewhere would make EU banks less able to attract capital and business, without commensurate stability gains.⁷⁹

Competitiveness concerns also tie into **implementation costs** – if complying with Basel III eats significantly into bank profits, banks might cut back certain businesses or regions, potentially reducing the global reach of EU banks. Some academics, however, counter that a stable banking system is itself a competitive strength in the long run, and that fears of losing business to “lighter-touch” jurisdictions are often overstated (since large internationally active banks generally must meet Basel standards in most markets). Nonetheless, these competitiveness arguments have gained traction politically, contributing to some **regulatory recalibration**. For example, the EU delayed the full implementation of trading book rules and output floor in part due to worries about cumulative impact and to await international peers.

Finally, it is important to identify **remaining gaps** where Basel reforms may have not fully solved problems, or where reforms did not reach. One gap is the **treatment of sovereign risk**: Basel III famously did not change the zero-risk-weighting of sovereign bonds in domestic currency, largely for political reasons. This leaves a vulnerability in places where banks hold large government debt (e.g. Southern Europe) – a link between bank and sovereign risk that can still be destabilizing (the “doom loop”). Another gap is **operational complexity**: as noted, the resolution of a cross-border bank with multiple regulators and legal systems remains untested and could prove chaotic despite the new rules.

FSB (2021) noted that **domestic systemically important banks (D-SIBs)** – banks that are big nationally but not globally – also need attention. Many countries have not implemented robust regimes for D-SIBs, meaning a mid-sized bank failure could still cause trouble (this was seen in the US with regional bank failures in 2023 where resolution tools were less clear). Additionally, **implementation gaps** (some countries moving slower) can themselves be seen as a “gap” – the reforms only have full effect if adopted everywhere.

In summary, the **Basel III reforms, as applied to EU G-SIBs, while effective, also introduced issues of complexity and high compliance costs**. The academic and policy literature calls for **reflection on whether simpler regulation could achieve similar objectives more efficiently**. There is a recognised *trade-off*: extremely detailed rules aim to

⁷⁹ European Banking Federation. (2025, May 16). *A competitiveness and growth regulatory mindset for Europe's banks: The EBF Board highlights*. www.ebf.eu/ebf-media-centre/updates/ebf-board-highlights-may-2025

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cover every risk, but they become unwieldy and can produce new forms of arbitrage or burden.

As a result, we see a nascent trend of **simplification and calibration** – ensuring the framework is sustainable and does not unduly harm banks’ ability to function and compete. The notion that Basel reforms may have “*reached their limits*” is about acknowledging that we cannot just keep increasing requirements endlessly; instead, regulators might need to **focus on implementation quality, supervisory judgment (stress tests, etc.), and addressing gaps** rather than adding complexity.

Each of the sources referenced above offers valuable insights into these issues. A recap of the full academic literature review can be found in Annex I.

4. Effectiveness of Post-GFC Reforms in the EU through Crisis Events (2010–2023)

This chapter evaluates whether post-GFC reforms have fulfilled their goals in the EU context while balancing the banking sector’s competitiveness, with a special focus on the EU’s G-SIBs. The analysis is doctrinal, examining the content and application of the regulatory reforms, but is supported by empirical evidence on outcomes. It proceeds chronologically through three key periods:

1. **Post-2010 implementation and initial impact:** The era of Basel III rollout (2010s) and its overall effects on EU G-SIBs’ stability and behaviour.
2. **Performance during the COVID-19 pandemic (2020–2021):** A real-world stress test of the reformed framework, assessing how EU G-SIBs fared under pandemic-induced economic shock.
3. **Developments leading to and following the 2023 banking turmoil:** The period around the 2023 banking sector volatility (e.g. U.S. regional bank failures and Credit Suisse’s distress) and what it revealed about the robustness of EU G-SIBs and any remaining vulnerabilities.

For each period, the chapter evaluates improvements in bank resilience, the impact of higher buffers on credit provision and financial stability during stress, changes in systemic risk metrics, the progress of resolution regimes in averting taxpayer bailouts, and residual fragilities (such as low profitability, compliance costs, and market valuation concerns).

In Annex II, a balanced “scorecard” assessment is presented, weighing the successes and shortcomings of the post-GFC reforms in strengthening EU financial stability as it relates to G-SIBs.

4.1. Post-2010 Reform Implementation and Initial Impact

In the decade after 2010, EU lawmakers implemented an extensive package of banking reforms inspired by Basel III and G20 agreements.

These reforms constituted a comprehensive strengthening of the regulatory architecture. The question is whether these reforms achieved the intended outcomes of greater resilience and reduced systemic risk in practice. The empirical evidence from the 2010s suggests a marked improvement in bank soundness.

EU banks, and G-SIBs in particular, dramatically increased their capital ratios throughout the 2010s. In 2011, many large European banks had CET1 ratios in the single-digits; by the end of the decade, CET1 ratios had roughly doubled. According to Basel Committee data, between 2011 and 2021 the *weighted average CET1 ratio* of large banks rose from ~7% to about 13%, and their leverage ratio (Tier1 capital to total exposures) climbed from ~3.5% to ~6.5%, reflecting a substantial boost in loss-absorbing capacity.⁸⁰ EU-specific data show similar trends: for example, by Q2 2021 the average fully-loaded CET1 ratio of EU banks was 15.5%, up from 14.7% a year earlier and much higher than in 2010.⁸¹ These increases were achieved through profit retention, equity raises, asset deleveraging, and shedding of risky activities. The quality of capital also improved (greater share of common equity). This *quantum leap* in capital strength directly addresses the core weakness revealed by the GFC and provides a thicker buffer to absorb losses.

Banks also built robust liquidity cushions. The average LCR for European banks reached 174% by 2021, far above the 100% minimum⁸², meaning banks held considerably more high-quality liquid assets than needed for a 30-day stress. NSFR levels similarly exceeded 100% in virtually all major banks by the late 2010s. This contrasts starkly with pre-crisis liquidity profiles, where many banks were dangerously dependent on short-term funding. Enhanced

⁸⁰ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 13. www.bis.org/bcbs/publ/d544.htm

⁸¹ European Banking Authority. (2021, December 3). *EBA risk assessment shows improvements in EU banks' solvency, profitability and liquidity, but asset price corrections remain a key threat*, p. 47. www.eba.europa.eu/publications-and-media/press-releases/eba-risk-assessment-shows-improvements-eu-banks-solvency

⁸² *Idem*, p. 55.

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liquidity positions reduce the likelihood of a future liquidity crunch forcing a fire sale or emergency central bank intervention.

Alongside higher capital ratios, many G-SIBs cut back non-core or risky assets, partly under regulatory pressure. Global analyses indicate G-SIBs have *softened* their systemic footprint: they grew more slowly than non-G-SIB peers after the crisis and reduced indicators of size, complexity, and interconnectedness in the Basel G-SIB scoring methodology.⁸³

For instance, some G-SIBs shrank capital markets activities or exited certain international operations. The intention was to curb the systemic impact should a G-SIB fail. Indeed, **BIS researchers find that G-SIBs' systemic importance metrics (size, interbank links, etc.) have on average been declining since the introduction of G-SIB surcharges, reflecting deliberate balance-sheet adjustments in line with the new incentives.** In short, post-GFC policies pushed the largest banks to become safer not only by *growing resilience* (more capital/liquidity) but also by *reducing their systemic risk profile*.

Importantly, market indicators through the 2010s signaled reduced risk and lower moral-hazard expectations for big banks. The FSB's 2021 evaluation of TBTF reforms concluded that **"indicators of systemic risk and moral hazard moved in the right direction" after the reforms, and market participants appeared to view G-SIBs as more disciplined with credible loss-absorbing capacity.** In particular, the implicit funding advantage that too-big-to-fail banks enjoyed pre-2008 (due to expectations of government bailouts) diminished. G-SIBs' bond credit spreads and credit default swap (CDS) premiums fell relative to smaller banks, suggesting creditors demanded less risk premium as banks became better capitalised and as bail-in rules made them bear losses ahead of taxpayers.⁸⁴

According to one ESRB analysis, G-SIBs' funding costs now appear to reflect the probability of a bail-in in the event of failure, rather than an assumption of bail-out support.⁸⁵ This indicates the reforms made progress in aligning investor behavior with the new resolution framework, thereby mitigating the moral hazard of big bank bailouts. Academic studies likewise support that higher capital and buffer requirements have had the desired effect: for

⁸³ Goel, T., Lewrick, U., & Mathur, A. (2019, September). *Playing it safe: Global systemically important banks after the crisis* (BIS Working Paper No. 805). Bank for International Settlements, p. 36.

⁸⁴ Buch, C. M. (2020, July 9). *Implications of the too-big-to-fail reforms for global banking* [Speech]. IIF-BPI Colloquium on Cross-Border Resolution & Regulation. www.bis.org/review/r200804a.pdf

⁸⁵ Giuliana, R. (2022, March). *Fluctuating bail-in expectations and effects on market discipline, risk-taking and cost of capital* (Working Paper Series No. 133). European Systemic Risk Board, p. 30-36. www.esrb.europa.eu/pub/pdf/wp/esrb.wp133~3498ce105b.en.pdf

example, research on European systemic banks finds that **being subject to a systemic surcharge correlates with a reduction in the bank’s systemic risk contribution** (measured by metrics like SRISK or ΔCoVaR).⁸⁶

A critical concern during reform design was whether forcing banks to hold more capital and liquidity would choke off lending to the economy. In the initial implementation period, banks did adjust their balance sheets – some by trimming loan books or raising lending standards – especially those with the biggest capital shortfalls. However, from a macroeconomic perspective, the *aggregate* supply of credit in the EU did not collapse as a result of Basel III. By the mid-2010s, overall bank lending had resumed growth in many EU countries after the post-crisis dip. Empirical evaluations have found **no material evidence that the Basel III reforms caused a broad credit crunch**.⁸⁷

The previously referred Basel Committee’s own review in 2022 noted that while banks with very low initial capital or liquidity tended to grow lending a bit more slowly to meet the new rules, **“there is no indication that the reforms impaired the aggregate supply of credit to the economy.”**⁸⁸ In fact, better-capitalised banks often benefited from lower funding costs and improved market confidence, enabling them to lend on a more sustainable basis. To the extent there was any short-term restraint by weaker banks, it was offset by healthier banks expanding or by capital market financing. Thus, the feared trade-off between stability and lending largely did not materialise – if anything, **safer banks were ultimately able to lend more securely**, avoiding the sharp credit contractions that occur when undercapitalised banks panic in a downturn.

Although the 2010s were mostly a period of recovery, EU banks did face some intermediate stress events that tested the reforms’ impact. The European sovereign debt crisis (2011–2012) put pressure on banks in countries like Spain, Italy, and Greece. In those cases, banks that had raised capital were better able to withstand sovereign bond losses. Some banks still required restructuring (and a few bailouts occurred early in the decade before the BRRD was in force), but by 2014 the Banking Union’s Asset Quality Review and

⁸⁶ Broto, C., Fernández Lafuerza, L., & Melnychuk, M. (2025, January). *Do buffer requirements for European systemically important banks make them less systemic?* International Journal of Central Banking. Banco de España, p. 238. www.ijcb.org/journal/ijcb25q1a5.pdf

⁸⁷ de Bandt, O., Durdu, B., Ichiue, H., Mimir, Y., Mohimont, J., Nikolov, K., Straughan, M. (2021). *Assessing the impact of Basel III: Evidence from macroeconomic models* (SUEF Policy Brief No. 102). SUEF. www.suerf.org/wp-content/uploads/2023/11/f4e56c23ce45de737a02b5534da2ea5f_26043_suerf.pdf

⁸⁸ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 3. www.bis.org/bcbs/publ/d544.htm

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stress tests helped recapitalise or resolve weakest links. Later, episodes like the 2016 volatility (Brexit referendum market shock) saw no major EU bank failures – a sign that higher capital and liquidity buffers were doing their job.

One notable early success of the new resolution regime was the case of *Banco Popular Español* in 2017. Banco Popular, a mid-sized Spanish bank deemed likely to fail due to solvency issues, became the first bank resolved under the SRM. The SRB executed a rapid sale of the bank to Santander with a bail-in of shareholders and junior bondholders (who were wiped out).^{89 90} No taxpayer funds were used; depositors were protected, and the bank continued operating as part of Santander. EU authorities hailed this as a **successful first test of the tougher post-GFC regime**, demonstrating that a failing bank could be dealt with without sparking panic or costing the public money.

By contrast, in prior crises such a bank might have received an expensive state bailout. This example in the late 2010s showed the *potential effectiveness* of the BRRD/SRM tools in practice, at least for a non-G-SIB institution. (It must be noted, however, that in other cases – e.g. the 2017 failures of two Veneto banks in Italy – political considerations led to ad hoc state aid and deviations from the BRRD, revealing that implementation was not uniform across all countries. These instances raised concerns about *inconsistent application* of the new rules, though they were exceptions rather than the norm.)

Despite the clear improvements in solvency and stability metrics, EU G-SIBs faced some residual issues during this initial post-reform period. A prominent challenge was **low profitability** and depressed market valuations. Strengthening capital often came at the expense of ROE, since higher equity capital can dilute ROE and stricter regulations curtailed some lucrative but risky activities. Additionally, the post-2010 European economic environment featured ultra-low interest rates and in some regions weak growth, which compressed banks' net interest margins. By 2018–2019, many EU G-SIBs were struggling to earn their cost of equity.

The average ROE of EU banks hovered in the single digits (often 5–7%), while investors' expected returns were higher (commonly estimated above 8–10%). The EBA reported in 2021

⁸⁹ European Court of Justice. (2023, November 22). *Press Release No 175/23: Resolution of Banco Popular: affected shareholders and creditors were not entitled to compensation from the Single Resolution Fund*. Luxembourg. <https://curia.europa.eu/jcms/upload/docs/application/pdf/2023-11/cp230175en.pdf>

⁹⁰ Aguado, J. (2022, May 5). *EU court rules against compensating Banco Popular investors*. Reuters. www.reuters.com/business/finance/eu-top-court-says-shareholders-are-not-entitled-compensation-popular-resolution-2022-05-05

that the average ROE of EU banks was about 7.4%, still **“below the estimated cost of equity for most banks”**, and that **only about half of banks reported an ROE above 8%**.⁹¹ This persistent profitability gap translated into *poor market valuations*: European bank stocks traded at deeply discounted price-to-book ratios.

By late 2021, listed EU banks on average were valued at only ~0.6 times their book value, compared to ~1.6x for U.S. banks. Such low valuations signal investors’ scepticism about banks’ future earnings and perhaps concerns about unrecognised risks. From a financial stability viewpoint, low profitability is a vulnerability because it hinders banks’ ability to organically generate capital and makes it harder to attract new equity investment in a downturn. It can also incentivise management to take higher risks to boost returns – precisely what regulators wish to avoid. In the context of reforms, some critics argued that *cumulative regulatory costs* (capital charges, compliance expenses, etc.) were partly to blame for low European bank profits, especially relative to U.S. peers.

Indeed, an industry study in 2023 attributed roughly a 0.8–1.0 percentage point ROE gap between EU and U.S. banks to heavier regulatory cost burdens in Europe.⁹² While other factors (fragmented markets, competition, legacy non-performing loans) mostly explain weak profits, the trade-off between resilience and profitability became a topic of debate. Notably, officials like Supervisory Board Chair Claudia Buch have remarked that **some decline in bank ROE is an expected outcome of making the system safer** – effectively, banks no longer enjoy cheap implicit guarantees and must hold more capital, which naturally **“may be in line with a more robust banking system and lower costs for taxpayers”**.⁹³

Another challenge was the **complexity and compliance costs** of the new regulatory framework. Basel III and related EU rules became voluminous and technically intricate. The Basel III framework now spans approximately 1,850 pages, almost six times longer than the final 330-page version of Basel II from 2006. One of the most common criticisms it faces is its excessive complexity, a concern echoed across a wide range of stakeholders, including banks, market participants, lawmakers, supervisors, academics, and even the public, each for their own reasons. Such complexity means that banks have to invest heavily in risk

⁹¹ Banco Santander. (2021, December). *European Banking Assessment*. Santander Insights. www.santander.com/en/press-room/insights/european-banking-assessment

⁹² Oliver Wyman & European Banking Federation. (2023, January). *The EU banking regulatory framework and its impact on banks and the economy*, p. 5. www.oliverwyman.com/our-expertise/insights/2023/jan/the-eu-banking-regulatory-framework-and-its-impact-on-banks-and-the-economy.html

⁹³ Buch, C. M. (2020, July 9). *Implications of the too-big-to-fail reforms for global banking* [Speech]. IIF-BPI Colloquium on Cross-Border Resolution & Regulation. www.bis.org/review/r200804a.pdf

systems, reporting, and legal compliance; regulators and supervisors have more demands; market participants have less transparency and comparability; and civil society loses confidence in the solidity of the sector.⁹⁴

A Basel Committee survey of member jurisdictions confirmed that **about 85% of regulators observed increased compliance costs for banks due to Basel III, requiring more staff and IT resources, and that roughly 81% believed banks' own compliance resource expenditures had grown since 2011.**⁹⁵ This regulatory overhead was particularly felt by large banks (which must comply with multiple overlapping requirements and supervisory expectations). While these costs were justified by the benefits of stability, they contribute to the lower profitability discussed above and can create competitive disadvantages or push some activities to less-regulated “shadow” institutions. Policymakers have acknowledged this complexity issue; discussions on simplifying certain rules without sacrificing resilience were ongoing in the late 2010s and have arisen again in the past few months.

The initial implementation period of post-GFC reforms in the EU largely achieved its doctrinal objectives: **EU G-SIBs** proved able to absorb moderate shocks, and the banking system as a whole did not constrain credit supply unduly – in fact, the **net societal benefits of the reforms were judged to be positive, with “no signs of material negative side-effects” on lending or market functioning.** By 2019, however, these reforms had yet to face a truly severe systemic test. The next sections examine how the new regime fared when such tests arrived, starting with the unprecedented COVID-19 shock.

4.2. Performance During the COVID-19 Pandemic (2020–2021)

The COVID-19 pandemic brought a sudden and severe global economic contraction in 2020, precisely the kind of extreme stress scenario that post-GFC reforms were designed to guard against. In the span of weeks, economic activity in Europe plunged due to lockdowns, markets gyrated, and there were fears of a deep financial crisis. However, unlike 2008, the shock this time originated outside the financial system, and banks were *part of the solution*

⁹⁴ Basel Committee on Banking Supervision. (2013, July). *The regulatory framework: Balancing risk sensitivity, simplicity and comparability* (Discussion paper). Bank for International Settlements. <https://www.bis.org/publ/bcbs258.pdf>

⁹⁵ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 65. <https://www.bis.org/bcbs/publ/d544.htm>

rather than the problem. This section evaluates how EU G-SIBs performed during 2020–2021 and what this reveals about the effectiveness of the reforms in practice.

European G-SIBs entered the pandemic in early 2020 with historically high capital and liquidity buffers. As noted, average CET1 ratios were in the mid-teens percent – levels far above regulatory minima and above pre-GFC norms. Liquidity positions were likewise robust. The reformed regulatory framework had also introduced capital **buffers expressly meant to be utilised in stress** (such as the Capital Conservation Buffer and any Countercyclical Buffers that had been built up). Supervisors had spent the prior years pressing banks to improve risk management and pandemic preparedness was obviously not foreseen, but at least banks had recovery plans and better operational resilience.

This strong starting position was immediately acknowledged by regulators: the ECB Banking Supervision stated that European banks were overall resilient, and stress tests indicated they could withstand a severe downturn while continuing to support the economy.⁹⁶ Indeed, just before the pandemic, an EU-wide stress test (2018) had shown major banks could on average maintain CET1 ratios above 9% under a drastic adverse scenario – a level that would have been unthinkable high during the 2008 crisis. This gave confidence that banks could absorb substantial losses if they materialised.

Supervisors and regulators took swift actions in early 2020 to ensure banks could use their buffers to sustain lending. The ECB and national authorities released CCyBs (most EU CCyB rates, which had been modest ~0.25–2.5% in some countries, were promptly cut to 0%). Banks were explicitly allowed to dip into the CCB and even their Pillar 2 guidance capital if needed to absorb losses or support lending.

Moreover, the ECB recommended (and in effect temporarily mandated) that banks suspend dividends and share buybacks in 2020, to conserve capital. Liquidity rules were also applied with pragmatism: the ECB indicated banks could fall below 100% LCR if necessary to meet liquidity demands, and it provided extraordinary liquidity through refinancing operations. This activist supervisory stance was crucial – it underscored that buffers *were there to be used*. However, it is noteworthy that banks were somewhat hesitant to actually run down their buffers significantly, as discussed later below.

⁹⁶ European Banking Authority. (2023, July 28). *2023 EU-wide stress test results*, p. 10.
www.eba.europa.eu/sites/default/files/document_library/Risk%20Analysis%20and%20Data/EU-wide%20Stress%20Testing/2023/Results/1061374/2023-EU-wide-stress-test-Results.pdf

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The economic shock was sharp, but unprecedented fiscal support (government loan guarantees, furlough schemes, etc.) cushioned the impact on banks' borrowers. G-SIBs did see a spike in loan loss provisions in 2020, anticipating future defaults. However, thanks to the earlier build-up of capital, these provisions – while large – did not threaten solvency. For instance, many EU banks took COVID-related impairment charges that reduced their CET1 ratios by a couple of percentage points, yet most still stayed comfortably above regulatory minima.

The average NPL (non-performing loan) ratios actually *barely increased* during 2020; by mid-2021, the average NPL ratio in the EU had **decreased to 2.3% from 2.9% a year earlier**⁹⁷, as many bad loans were deferred or state-guaranteed and thus not counted as NPL. In effect, **fears of a banking asset quality crisis “have not materialised” aside from certain hardest-hit sectors.**

Strong capital allowed banks to absorb the initial hit and also reassured markets of their stability, preventing any run on banks. It is telling that throughout the pandemic, *no major EU G-SIB approached distress or needed recapitalisation*. This is in stark contrast to the GFC or the Eurozone crisis, where dozens of banks failed or required bailouts. The resilience of banks under COVID-19 was a real-world validation of the post-GFC prudential standards: as the FSB observed, **“increased bank resilience and greater market discipline have been tested by the COVID-19 pandemic... banks – thanks also to unprecedented fiscal, monetary and supervisory support – have so far been able to absorb the shock.”**⁹⁸

Another important test was whether banks could keep lending to households and businesses during the pandemic, thereby supporting the economy. Here again the outcome was broadly positive. Initially, corporations drew heavily on bank credit lines to ensure liquidity, leading to a surge in corporate loan volumes in early 2020. Banks met this demand, aided by central bank funding facilities. Over the full course of 2020–21, bank lending in Europe actually *expanded*, especially credit to the private sector in 2020 as governments rolled out guarantee programs that banks administered.

⁹⁷ European Banking Authority. (2021, December). *Risk Assessment of the European Banking System*. www.eba.europa.eu/sites/default/files/document_library/Risk%20Analysis%20and%20Data/EU%20Wide%20Transparency%20Exercise/2021/1025102/Risk_Assessment_Report_December_2021.pdf

⁹⁸ Financial Stability Board. (2021). *Evaluation of the effects of too-big-to-fail reforms: Final report*. [Press release] www.fsb.org/2021/03/evaluation-of-the-effects-of-too-big-to-fail-reforms-final-report/

Higher capital buffers did not impede this lending; if anything, well-capitalised banks were more confident in extending credit, and regulators actively urged banks to use flexibility to lend. Empirical analyses confirm that the banks which had entered the crisis with stronger capital and liquidity were better able to accommodate credit needs without breaching regulatory limits. While some weaker banks may have been more cautious, the overall credit supply was maintained.

The Basel Committee’s evaluation explicitly found *no aggregate credit contraction attributable to the regulatory reforms* and noted that any **slight lending limitations at individual weak banks were offset by others, with “no indication that the reforms impaired the aggregate supply of credit”**.⁹⁹ In the EU, government guarantee schemes on loans (e.g. in France, Italy, etc.) further facilitated banks to lend freely with mitigated credit risk. Thus, from a policy perspective, the higher buffers fulfilled their purpose: they were *drawn down (at least conceptually) to absorb losses and support lending*, preventing a credit crunch. It is worth noting that the **use of buffers in practice was somewhat conservative**, as many banks were reluctant to let their CET1 ratios fall much, preferring to cut dividends and preserve capital, but the key point is that the presence of ample buffers gave the system room to maneuver. In the US, officials similarly observed that stronger capital levels allowed banks to be a source of strength in the pandemic, not a drain on the economy; the same held in Europe.

During the initial pandemic shock in March 2020, global financial markets were extremely volatile. Bank stocks plunged, and bank bond spreads widened, reflecting fear of a severe recession. However, thanks to the reforms and authorities’ actions, there was no loss of confidence in the basic solvency of major European banks. No EU G-SIBs suffered destabilising funding runs or severe liquidity shortages.

The LCR buffers were available and, combined with extraordinary central bank liquidity programs (e.g. ECB’s pandemic emergency LTROs), prevented any liquidity crunch. As panic subsided, bank credit spreads normalised relatively quickly. From a systemic risk viewpoint, one could say that the banking reforms passed this “crisis scenario” with good marks: despite the worst economic collapse in decades, the core banking system remained intact and even in a position to help stabilise the economy by granting loan forbearance and new credit.

⁹⁹ Basel Committee on Banking Supervision. (2022, December). *Evaluation of the impact and efficacy of the Basel III reforms*. BIS, p. 3. <https://www.bis.org/bcbs/publ/d544.htm>

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One quantitative illustration: EU banks' aggregate CET1 ratio did dip slightly in 2020 due to credit losses but remained around the high-teens percentage. The **EBA's Risk Assessment Report of December 2021** highlighted that banks' capital and liquidity positions "have further improved" even through the pandemic, with CET1 rising again by mid-2021 as profits rebounded.¹⁰⁰

Profitability, which had plunged in 2020 (ROE near zero due to provisions), recovered strongly in 2021 as loan losses proved lower than feared. By mid-2021 the average ROE was back to 7.4%. This rebound, combined with restrained payouts, helped restore capital levels quickly. Thus, not only did the reforms enable banks to weather the storm, but they also positioned banks to recover faster. A notable outcome was that banks did not require *public capital injections* during COVID, a sharp contrast to 2008–09.

There were some public support measures (such as deferred tax asset guarantees, or central banks buying bank bonds as part of market stabilisation), but no direct bailouts of EU G-SIBs were needed. This suggests the aim of preventing taxpayer rescues was largely achieved in this period, albeit the unique nature of the shock must be acknowledged.

One lesson learned during COVID-19 was the difficulty of getting banks to use their buffers in practice.^{101 102} Regulators *allowed* it, but banks worried that dropping below certain capital levels might be viewed negatively by markets or could trigger distribution restrictions under EU law. As a result, banks were generally reluctant to go below their combined buffer requirements.

The **concept of "buffer usability"** became a topic of discussion: despite the reforms creating countercyclical and conservation buffers for downturns, in reality banks kept "buffer stacking." European authorities noted this and recognised a need for clearer guidance. The

¹⁰⁰ European Banking Authority. (2021, December 3). *EBA risk assessment shows improvements in EU banks' solvency, profitability and liquidity, but asset price corrections remain a key threat* [Press release]. www.eba.europa.eu/publications-and-media/press-releases/eba-risk-assessment-shows-improvements-eu-banks-solvency

¹⁰¹ Abad, J., & Garcia Pascual, A. (2022, January). *Usability of bank capital buffers: The role of market expectations* (IMF Working Paper No. WP/22/4). International Monetary Fund. www.imf.org/en/Publications/WP/Issues/2022/01/14/Usability-of-Bank-Capital-Buffers-The-Role-of-Market-Expectations-511777

¹⁰² Leitner, G., Dvořák, M., Magi, A., & Zsámboki, B. (2023, September). *How usable are capital buffers? An empirical analysis of the interaction between capital buffers and the leverage ratio since 2016* (ECB Occasional Paper Series No. 336). European Central Bank. www.ecb.europa.eu/pub/pdf/scpops/ecb.op336~1d9ab36884.en.pdf

ambiguous communication in the EU led banks to accumulate capital on top of required buffers, effectively undermining the countercyclical intent.

In the United States, by contrast, the Federal Reserve explicitly signaled that banks would not be penalised for using their buffers to absorb losses, making buffers more clearly *usable*. This transatlantic contrast suggests that the regulatory design might need tweaking to ensure buffers truly function as shock absorbers without stigma. That said, even if banks didn't formally breach buffers, the existence of large voluntary management buffers meant resilience was very high, arguably a conservative outcome.

The pandemic did not trigger any major bank failures in the EU. However, authorities did continue resolution planning work in the background. G-SIBs increased their TLAC/MREL issuances through 2020, taking advantage of low interest rates to issue bail-inable debt. By the start of 2022, most EU G-SIBs already met or exceeded their TLAC requirements (e.g., 18% of RWA plus buffers), well ahead of full phase-in deadlines. The credible threat of resolution was maintained, and if any bank had come close to failure, the SRB was better prepared than in the past to execute a resolution.

In fact, some small banks in the EU *were* resolved or liquidated during 2020–21 (for example, a few troubled banks in Italy and Latvia), but these did not involve G-SIBs and were handled via national procedures. There was no need for taxpayer-funded rescues of large banks – a milestone achievement compared to the GFC. This reinforced the assessment of global regulators that **“the benefits of [TBTF] reforms significantly outweigh the costs”**, as society avoided the huge fiscal hit of bank bailouts during this crisis.¹⁰³

The pandemic experience showed that even an extraordinary shock did not break the banking system, thanks in no small part to the post-GFC reforms (albeit coupled with extraordinary policy support). Nonetheless, it also highlighted areas for improvement (buffer usability, the importance of swift supervisory action, etc.), and it left some underlying bank fragilities (like low profitability) temporarily masked by massive public support. As we moved past the pandemic, new challenges emerged, culminating in the banking sector turmoil of 2023, which is examined next.

¹⁰³ Financial Stability Board. (2021). *Evaluation of the effects of too-big-to-fail reforms: Final report*, p. 5
www.fsb.org/2021/03/evaluation-of-the-effects-of-too-big-to-fail-reforms-final-report/

4.3. Developments leading to and following the 2023

Banking Turmoil

After the pandemic, as economies rebounded in 2022, banks actually enjoyed a period of improved earnings (helped by rising interest rates). European G-SIBs saw profits climb and asset quality remained solid. By early 2023, many observers noted that EU banks were at their healthiest in years. **Average ROE of EU banks in 2023 approached 10%, finally covering their cost of equity** and capital ratios remained robust.¹⁰⁴

However, this relatively benign picture was upended in March 2023 by a sudden bout of global banking turmoil. A series of bank failures in the United States (Silicon Valley Bank, Signature Bank, and others) and the emergency rescue of Credit Suisse in Europe sent shockwaves through financial markets. Although the root causes of these failures lay in idiosyncratic issues (mismanaged interest rate risk, concentrated deposit bases, poor governance), the events tested confidence in banks worldwide. This section analyses how the post-GFC reforms held up during the 2023 turmoil and what lessons can be drawn, particularly for EU G-SIBs.

Notably, the banking stress of March 2023 had *limited direct impact on the EU banking sector*. There were no bank runs or failures in the euro area or other EU countries during this episode. EU G-SIBs' stock prices did fall amid contagion fears (for example, Deutsche Bank saw a temporary sharp stock drop in late March 2023), but they soon stabilised. No EU G-SIB reported solvency or liquidity troubles; deposits in EU banks largely remained stable, unlike the U.S. regional banks that saw massive outflows. **The SRB analysed that the 2023 events “had limited repercussions on the EU banking sector, whose resilience can be explained by two factors”¹⁰⁵.**

First, EU banks generally have more diversified business models and depositor bases compared to the mid-sized U.S. banks that failed. EU G-SIBs tend to be universal banks with a mix of retail, corporate, and investment banking, operating across multiple markets. They are less vulnerable to the kind of narrow client niche and concentrated uninsured deposit

¹⁰⁴ Ormezzano, V. (2024, September). *Basel III implementation: Preserving EU banks' capacity to finance the economy*. Note written for Eurofi, p. 85 www.eurofi.net/wp-content/uploads/2024/12/iv.2-basel-iii-implementation-preserving-eu-banks-capacity-to-finance-the-economy.pdf

¹⁰⁵ Single Resolution Board. (2024, July). *The 2023 Banking Turmoil: Implementation Lessons for Resolution Authorities* (Working Paper Series No. 4), p. 4. www.srb.europa.eu/system/files/media/document/2024-07-02_Staff-Paper-4_The-2023-Banking-Turmoil.pdf

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base that made banks like SVB so fragile. This diversification, while not a direct regulatory mandate, was complemented by EU supervision discouraging excessive risk concentrations.

Second, the EU **applied the post-GFC international standards broadly to banks of all sizes**. Unlike the U.S., which in 2018 raised the threshold for stringent regulation (meaning banks like SVB were exempted from LCR/NSFR and some stress tests), the EU kept even medium-sized banks within the regulatory net. All but the smallest banks in Europe must meet the LCR, hold ample capital, and have resolution plans. Therefore, the types of regulatory gaps that contributed to the U.S. failures (e.g. unhedged interest rate risk, inadequate liquidity buffers due to deregulation for mid-tier banks) were much less present in Europe.

These factors, combined with the high capital and liquidity levels already in place, meant that European G-SIBs entered 2023 on a strong footing. When rumours swirled about certain banks, regulators and bank CEOs were quick to point out the differences from troubled foreign banks. The ECB also reassured that euro-area banks were resilient, and it continued normal operations (even raising interest rates in March 2023, a vote of confidence in bank robustness). The outcome was that **no EU G-SIB needed rescuing in the 2023 turmoil**. This in itself is a testament to the reforms' effectiveness: systemic contagion was averted in the EU, and the confidence crisis was contained.

The most dramatic episode in March 2023 was the collapse of confidence in Credit Suisse, a designated G-SIB (albeit based in Switzerland, outside the EU). Credit Suisse had been a troubled bank for years, with scandals, losses, and strategic missteps leading to a steady erosion of market trust. By late 2022 it was experiencing large client outflows. Despite a CET1 capital ratio above 14% and liquidity buffers, CS faced a severe trust crisis in March 2023 after the U.S. bank failures and some adverse news. Within days, its stock plummeted and depositors fled, forcing Swiss authorities to intervene.

Ultimately, CS was not “resolved” via the new laws in a conventional sense; instead, regulators brokered an emergency takeover by UBS (Credit Suisse’s larger rival) over a weekend. They did impose heavy losses on the bank’s shareholders (who received a fraction of previous value) and – controversially – wiped out CHF 16 billion of Additional Tier 1 bonds (through a contractual write-down) to boost the bank’s capital for the merger. The Swiss

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government also provided liquidity backstops and a guarantee of up to CHF 9 billion for potential UBS losses on CS's assets.¹⁰⁶

From a post-GFC reform perspective, the Credit Suisse case is both a success and a warning sign. On one hand, **the tools of loss absorption were utilised** – shareholders and subordinated creditors (AT1s) bore the losses, consistent with the idea of bail-in and no taxpayer money (beyond a contingent guarantee) was injected upfront. This aligns with the principle that investors, not taxpayers, should bear the cost of bank failure. Moreover, the existence of high capital and liquidity requirements arguably gave CS more buffer to withstand outflows for a time and gave authorities options to arrange a sale (CS did not abruptly collapse overnight as Lehman did in 2008, partly because it had central bank liquidity access and some capital to burn through).

However, on the other hand, the fact that a G-SIB with seemingly adequate regulatory ratios could come so close to failure raises questions. The Basel Committee noted that **“a bank’s regulatory capital ratio at a given point in time does not always adequately capture its actual resilience in a forward-looking perspective”**.¹⁰⁷ In Credit Suisse’s case, high capital did not prevent a fatal loss of confidence in its business model – underlying governance and risk management issues proved decisive.

This underscores that capital/liquidity rules, while necessary, are not sufficient if a bank’s franchise is fundamentally impaired (no reform can fully account for *poor governance or fraud* within a bank). It also highlights the importance of *effective supervision*: regulators need to intervene early when a bank shows persistent mismanagement. Indeed, post-mortems indicated that Swiss supervisors had identified many of CS’s vulnerabilities but perhaps did not act forcefully enough in time.

The Basel Committee’s stocktake of the turmoil stressed **“the importance of supervisors analysing banks’ business models and identifying outlier banks” and take prompt action**.¹⁰⁸ This lesson is very relevant for the EU: even with a solid regulatory framework, intensive day-to-day supervision is vital to catch problems that ratios might mask.

¹⁰⁶ Reuters (2023, June 9). *Swiss government says it has reached agreement with UBS on loss guarantees*. www.reuters.com/business/finance/swiss-government-says-it-has-reached-agreement-with-ubs-loss-guarantees-2023-06-09/

¹⁰⁷ Basel Committee on Banking Supervision. (2023, October). *Report on the 2023 banking turmoil*. Bank for International Settlements, p. 18. www.bis.org/bcbs/publ/d555.pdf

¹⁰⁸ Basel Committee on Banking Supervision. (2023, October). *Report on the 2023 banking turmoil*. Bank for International Settlements, p. 2. www.bis.org/bcbs/publ/d555.pdf

Another aspect of the Credit Suisse case pertains to resolution regimes. Switzerland opted for a merger rather than putting CS through a formal resolution proceeding (even though CS had a TLAC stock and a resolution plan). This decision was influenced by fears that a resolution could trigger broader panic and technical difficulties in swiftly applying it over a weekend. The episode therefore raises the question: **Are our resolution tools truly ready for a G-SIB failure?** The SRB, FSB and others are examining whether further improvements are needed to make resolution feasible in extremely short time-frames and with greater cross-border coordination.

In the EU, the SRB has been working on crisis “dry-runs” and refining bail-in execution processes (e.g. bail-in playbooks, operational guidance to banks on how liabilities would be written down). By 2024, the SRB reported that **banks have considerably enhanced their ability to support bail-in execution and most have no material gaps in their bail-in playbooks.**¹⁰⁹ All EU G-SIBs have detailed plans for how a bail-in would be carried out, and authorities have practiced these scenarios.

The 2023 turmoil is pushing further refinement – for instance, looking at *funding in resolution* (would a resolved bank have enough liquidity) and *public backstops*. The previously referenced SRB staff paper in 2024 suggests assessing **the design of effective public sector liquidity backstops in resolution and the interplay of deposit insurance with resolution to prevent runs**. These are areas identified for improvement, but they do not negate the fundamental progress made: **as of 2023, EU G-SIBs have met their MREL/TLAC requirements and developed operational plans such that, in principle, they can be resolved without taxpayer bailouts.**¹¹⁰ The credibility of this regime remains untested on a live G-SIB in the EU, but smaller cases like Banco Popular and various SRB resolution dry-runs bolster confidence.

A striking observation during the March 2023 events was how *idiosyncratic* the problems were. Systemic risk metrics for EU banks had generally been improving prior to 2023 – for example, SRISK (a measure of capital shortfall in a crisis) for most EU G-SIBs was low relative to pre-2008, and interbank contagion indices were moderate. When SVB and others failed, systemic contagion was primarily psychological (investor fear) rather than due to direct

¹⁰⁹ Taos, T. (2024, July 1). *All in on bail-in: How the SRB and banks are testing bail-in and making it operational*. The SRB Blog. www.srb.europa.eu/en/content/all-bail-how-srb-and-banks-are-testing-bail-and-making-it-operational

¹¹⁰ Single Resolution Board. (2024, July). *Resolvability of Banking Union Banks: 2023*, p. 19-20. www.srb.europa.eu/system/files/media/document/2024-07-09_Resolvability-of-Banking-Union-Banks-2023.pdf

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exposures (EU banks had minimal links to those U.S. banks). Markets initially did not discriminate well, but soon it became clear that EU G-SIBs did not share the same vulnerabilities.

The fact that **EU G-SIBs' systemic importance scores have been on a downward trend** (indicating reduced relative risk) helped; they were generally more resilient and less interconnected with the epicenter of the trouble. There was also the backstop of central banks: the ECB and Bank of England reaffirmed they stood ready as lenders of last resort. This calmed systemic fears. Within weeks, bank credit spreads in Europe tightened again and CDS spreads that had spiked for some banks came back down. Preliminary analyses (e.g. by the IMF and academics) suggested no fundamental change in the trajectory of systemic risk for European banks due to the March turmoil; it was more of a confidence shock than a capital shock for EU banks.

However, a couple of systemic risk considerations arose:

The collapse of SVB was largely due to interest rate risk on its securities portfolio – a risk that Basel rules did not capitalise under Pillar 1 (it's handled under Pillar 2, and in the U.S. certain banks weren't subject to strict oversight there). EU banks, under EBA/ECB supervision, generally had to follow guidelines on interest rate risk in the banking book, and many hedged their exposures. But the 2023 events suggest regulators may formalise interest rate risk capital charges more (a point Basel is reviewing). It's a reminder that risks can emerge from areas previously considered lower priority, so regulation must adapt.

The speed of deposit withdrawals in 2023 (facilitated by mobile banking and social media rumors) was unprecedented. **The Basel Committee acknowledged that liquidity rules like the LCR, which assume a 30-day stress, may need recalibration**, as in practice deposits can flee in hours.¹¹¹ While EU G-SIBs have huge liquidity buffers, the concept of what size buffer is "adequate" might be revisited. Additionally, EU policymakers are discussing improvements to deposit guarantee schemes – for example, whether raising or even removing insured deposit limits in a systemic crisis would help stem runs. In the U.S., all depositors at failing banks were made whole (de facto expanding insurance), which begs the question if similar steps would be needed in the EU despite the official €100,000 insurance limit. The

¹¹¹ Jones, H. (2023, October 5). *Basel watchdog says banking turmoil shows better supervision is needed*. Reuters. www.reuters.com/business/finance/basel-watchdog-says-banking-turmoil-shows-better-supervision-is-needed-2023-10-05/

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SRB paper points out that **effective deposit insurance is critical to preventing runs and preserving franchise value**. The EU is in process of considering a common deposit insurance scheme (the missing “third pillar” of Banking Union), which could further enhance confidence.

The wipeout of Credit Suisse’s AT1 bondholders caused some short-term turbulence in the AT1 market, as investors reassessed the risks of these bail-in securities. The EU authorities quickly clarified that in their jurisdiction, equity would always absorb losses before AT1 (unlike the Swiss situation where AT1 were written off while equity got some UBS shares). This helped stabilise that market. But going forward, regulators see merit in ensuring clarity and consistency in how such capital instruments would behave in a crisis. The episode overall did not deter EU banks from issuing capital instruments, but it highlighted the complex legal terrain in cross-border bank resolutions and the need for transparency to avoid surprising investors in ways that could have contagion effects.

By late 2023 and into 2024, European G-SIBs remained well-capitalised and profitable (especially with higher interest margins). But some *residual fragilities* continue to pose questions about the reforms’ ultimate effectiveness in a long-term sense:

Even with the boost from higher interest rates, EU banks’ profitability, while improved, is not stellar. The ROE of ~10% in 2023 is an achievement, but it may not be sustained as competition and funding costs increase (already ROE edged down to ~9.3% by Q4 2023 as deposit rates rose). Moreover, **bank equity valuations, though up from crisis lows, are still around or below book value and not far above pre-pandemic levels**. Investors seem to price in concerns about medium-term growth and potential asset risks (such as commercial real estate downturns or climate risks). Persistently low valuation means a higher cost of equity capital for banks, which can constrain their ability or willingness to raise new capital for expansion. It can also **increase the cost of lending**, as banks try to maintain margins to satisfy shareholders. In effect, while the reforms have made banks safer, they haven’t made the banking business more attractive to investors. This could indirectly undermine stability if banks cannot attract capital during stress or if they respond by reaching for yield. Policymakers thus face a balancing act: ensuring banks can earn reasonable returns *without* diluting the stricter prudential standards.

As mentioned, European banks often cite heavy compliance burdens (in risk management, reporting, anti-money-laundering, etc.) as a drag on efficiency. While

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these are necessary for stability and integrity, they may weaken banks' competitiveness vis-à-vis less-regulated players (fintechs, shadow banks) or foreign banks with leaner operations. Over time, some lending and market-making has migrated to non-bank financial intermediaries. The FSB has pointed out the rise of non-bank finance as a new source of systemic risk that lies partly outside the scope of bank-focused reforms. The positive side is that banks are less exposed (e.g. securitisation spread some credit risk to markets), but the negative is that stress could build in those areas. For EU G-SIBs, this means a potential loss of market share and relevance, which could pressure them to lobby for looser rules or take on new risks. Regulators must remain vigilant that **risks don't simply shift, rather than reduce**, due to the banking reforms.

One fragility specific to the EU that reforms did not fully resolve is the sovereign-bank interdependence. Banks still hold large volumes of their home government bonds, and under Basel/EU rules these often carry zero risk weight. This was a concession to political realities, but it means a stressed sovereign could still drag down its banks (and vice versa). The Banking Union sought to break this "doom loop" with a common backstop but a truly mutualised deposit insurance is pending. In 2023, rising interest rates have lowered market values of bonds, but banks mostly hold them as hold-to-maturity so it's manageable (and interest income is higher). Still, in a scenario of a sovereign debt scare in a euro member country, the reformed framework might be tested in a way it hasn't been yet.

The FSB's TBTF evaluation noted remaining gaps: for example, *operational complexity* in actually executing a cross-border resolution, or uncertainty about how a large-scale bail-in might impact financial markets. The SRB's resolvability assessments of big banks, while generally positive, still find areas to improve like ensuring continuity of access to financial market infrastructures in resolution and strengthening liquidity preparedness.

All G-SIBs meeting MREL is a necessary condition, but not a guarantee of smooth resolution – the rubber meets the road in crisis conditions, and that is why authorities continue to run simulations and refine their "playbooks." Encouragingly, the SRB's resolvability assessment found banks have improved on governance and communication in crises and have robust contingency plans for connectivity to clearing houses, etc., in a resolution scenario.

In conclusion, the 2023 banking turmoil largely validated the resilience of EU G-SIBs, which emerged relatively unscathed and did not propagate the distress further. The **post-GFC**

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reforms functioned as intended in the EU: strong capital/liquidity buffers and comprehensive regulation meant that contagion was limited despite severe stress elsewhere. Yet, the events also provided a reality check that regulation must evolve (better supervision of outliers, possibly tweaking liquidity rules for faster runs, and ensuring resolution plans are truly operational within days). They also highlighted that no matter how good the rules, bank management failures can still cause crises – reinforcing the need for vigilant supervision and perhaps a regulatory focus on governance and business model sustainability, not just numeric ratios. The EU's framework proved robust, but not infallible, and ongoing refinements (the Basel finalisation, integration of new risks, completing the Banking Union) are part of the continuous improvement approach that regulators have adopted.

5. Comparative Perspective – EU, US, and UK Approaches

This chapter compares how the EU, US, and UK are implementing the Basel III framework, focusing on four key dimensions: **(1)** capital buffers for global systemically important banks (G-SIBs) and related supervisory models, **(2)** the timeline and scope of Basel III adoption (and resulting regulatory divergence), **(3)** the potential for regulatory arbitrage arising from these differences, and **(4)** observable outcomes in bank resilience and behavior. Each section (5.1–5.4) addresses a specific research question tied to these dimensions. The overarching aim is to determine how divergent legal approaches affect the level playing field and the effectiveness of bank regulation across jurisdictions.

5.1. G-SIB Capital Buffers and Supervisory Models

The **United States** implemented the initial Basel III reforms relatively early, with final rules issued in 2013.¹¹² In many respects, U.S. regulators “gold-plated.” Motivated by the recent memory of the 2008 financial crisis and the need to restore market confidence, U.S. agencies such as the Federal Reserve (Fed), the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC) introduced stricter capital buffers, higher leverage requirements, and other prudential safeguards.¹¹³ These measures were largely noncontroversial at the time, and U.S. banks began steadily building up capital reserves.

Between 2011 and 2017, CET1 capital ratio of large U.S. banks rose from 7% to around 12%, while their leverage ratios climbed from about 6% in 2008 to 9% by 2016. However, by 2021, the leverage ratio of G-SIBs had returned to post-crisis lows, despite sustained growth in assets. This divergence between risk-weighted capital ratios and leverage ratios partly reflects rising holdings of low-risk or zero-risk assets (e.g., reserves), but it also illustrates a degree of regulatory arbitrage and supervisory forbearance that emerged after 2016.

¹¹² Board of Governors of the Federal Reserve System. (2013, July 2). *Federal Reserve Board approves final rule to help ensure banks maintain strong capital positions* [Press release].

www.federalreserve.gov/newsevents/pressreleases/bcreg20130702a.htm

¹¹³ Sabel, B. K. (2013, September 27). *Basel III framework: US/EU comparison*. Harvard Law School Forum on Corporate Governance. <https://corpgov.law.harvard.edu/2013/09/27/basel-iii-framework-useu-comparison/>

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In the **US**, the approach to G-SIB capital buffers is more tailored and integrates stress testing as a core component.¹¹⁴ U.S. regulators (the Federal Reserve in particular) **do not use a single static G-SIB buffer** identical to Basel's.¹¹⁵ Instead, since 2016 the Fed's Regulation Q¹¹⁶ has required U.S. G-SIBs to calculate a **G-SIB capital surcharge** annually using two methods: *Method 1* closely mirrors the Basel Committee's indicator-based assessment (used in the EU to assign buckets), while *Method 2* is a U.S.-specific formula that drops one Basel indicator (substitutability) and adds a measure of the bank's reliance on short-term wholesale funding. A U.S. G-SIB must hold the higher of the two methods' results as its CET1 surcharge.

In practice, **Method 2 typically yields a higher surcharge** for the biggest U.S. banks – for instance, JPMorgan Chase's surcharge by Method 2 has often been a percentage point or more above what Basel's formula alone would require, reflecting U.S. concerns about banks' funding profiles. These surcharges (ranging roughly from 1% up to over 3.5% for the largest G-SIBs) function similarly to the EU's G-SII buffers but are dynamically recalibrated each year.

Crucially, the U.S. has **folded stress test results into its capital buffer regime**. Under the Federal Reserve's **Stress Capital Buffer (SCB)** rule, each large bank's capital conservation buffer is determined by its performance in the annual Comprehensive Capital Analysis and Review (CCAR) stress test. The SCB is set to the greater of (i) 2.5% of RWA or (ii) the modeled decline in the bank's CET1 ratio under a severe stress scenario *plus* the bank's planned dividend payouts. In effect, the SCB replaces the fixed 2.5% capital conservation buffer for big banks.

A U.S. G-SIB's **total buffer** above minimum requirements thus equals its SCB plus its G-SIB surcharge. This means a bank with high projected losses in the stress test might have a larger buffer requirement, directly linking capital requirements to risk outcomes. If a U.S. bank's capital falls below the sum of its minimums plus SCB plus surcharge, it faces automatic limits on capital distributions (much as in the EU's buffer framework).

Unlike the EU, the U.S. does **not rely on an explicit Pillar 2 requirement** to address specific institution-level risks – U.S. supervisors tend to use **quantitative constraints (like the stress**

¹¹⁴ Bank Policy Institute. (2023). *How G-SIB surcharges are calculated in the U.S.* <https://bpi.com/how-gsib-surcharges-are-calculated-in-the-u-s/>

¹¹⁵ Fitch Ratings. (2023, June 2). *Stronger Capital and Liquidity Regs Supportive of U.S. Bank Credit Profiles*. Fitch Wire. <https://www.fitchratings.com/research/banks/stronger-capital-liquidity-regs-supportive-of-us-bank-credit-profiles-02-06-2023>

¹¹⁶ Federal Reserve Board. (2023). *Regulation Q: Risk-based capital surcharge for global systemically important bank holding companies*, 12 C.F.R. § 217.403. <https://www.ecfr.gov/current/title-12/chapter-II/subchapter-A/part-217/subpart-H/section-217.403>

test) or targeted rule changes to cover such risks, rather than add-on capital requirements decided through a periodic review.

Another difference in the U.S. supervisory model is the strong emphasis on **leverage requirements** as a backstop. All U.S. banks must maintain a minimum Tier 1 Leverage Ratio (generally 4% for most banks, or 3% for bank holding companies subject to Basel III standards). For larger banks (above \$250 billion in assets, for example), a **Supplementary Leverage Ratio (SLR)** of 3% Tier 1 capital against total leverage exposure (including off-balance-sheet exposures) applies.

Further, U.S. G-SIBs are subject to an additional **“enhanced SLR”**: a 2% leverage buffer on top of the 3% minimum, effectively requiring a **5% leverage ratio** at the holding company level (and 6% at insured bank subsidiaries) to avoid limitations on dividends and bonuses.¹¹⁷ This eSLR acts as a **simple non-risk-based buffer for systemic banks**, parallel to the risk-based surcharges. Notably, unlike the EU’s proportional leverage buffer, the U.S. leverage add-on is a flat 2% for all G-SIBs. If a G-SIB falls below the 5% threshold, it can face prompt corrective action measures. U.S. regulators have occasionally adjusted the leverage rules (for example, temporarily excluding central bank reserves and U.S. Treasuries from the SLR denominator in 2020 to encourage banks to absorb safe assets during market stress), but by and large the leverage constraint is maintained as a critical check on bank size and funding.

In summary, the **U.S. supervisory model** for G-SIBs leans toward **formula-driven requirements and stress-test-based flexibility**, rather than bespoke supervisory judgment. It provides **less day-to-day discretion** than the EU/PRA approach (since Pillar 2 is minimal), but it can be **more stringent in practice** through the SCB’s variability and the relatively high leverage bar for G-SIBs.

Turning to the **UK**, as a member of the EU until early 2020, the UK’s framework initially mirrored the EU’s CRD IV/CRR regime. The Prudential Regulation Authority (PRA) designated G-SIBs and applied the corresponding Basel-prescribed capital buffers (e.g. HSBC and Barclays, as G-SIBs, have had to hold 2% or more CET1 as a G-SIB buffer, depending on their allocated bucket).

¹¹⁷ Tran, H. (2025, May 13). *Basel III endgame: The specter of global regulatory fragmentation*. Atlantic Council. www.atlanticcouncil.org/blogs/econographics/basel-iii-endgame-the-specter-of-global-regulatory-fragmentation/

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After Brexit, the UK retained these core elements: G-SIB buffers continue to be calculated exactly as per Basel buckets and added on top of minimum capital requirements. A large UK bank that is deemed a G-SIB must hold the assigned CET1 buffer (just as under EU rules) to avoid distribution constraints. Unlike some EU countries, the UK has *not* widely deployed a **SyRB** for domestically important banks, choosing instead to rely on G-SIB/O-SII buffers and the countercyclical buffer for system-wide risks. This indicates that UK regulators find the existing buffer structure generally sufficient for systemic risk calibration, without layering an additional SyRB except in limited cases (e.g. ring-fenced retail banks have had a form of systemic buffer in the past, but the current approach is streamlined).

The **PRA's supervisory model** is very similar to the EU's SREP concept. The PRA sets **Pillar 2A capital requirements** for specific risks (credit concentration, interest rate risk in the banking book, etc.) as needed, which are legally binding, and also provides **Pillar 2B guidance** (often called "Pillar 2 guidance") for extra cushion beyond the minimum plus buffers. For instance, if the PRA believes a bank's exposure to certain sovereign debts isn't adequately captured by the zero risk weight in Pillar 1, it might use Pillar 2A to require extra capital for that.

The PRA has also introduced a **"risk management and governance" scalar** in Pillar 2B, which can temporarily increase a bank's capital guidance if there are material deficiencies in its risk management or controls, effectively pressuring the bank to fix those issues in order to have the additional guidance removed. This hands-on, tailored use of Pillar 2 is analogous to EU practices (since both evolved from the Basel Pillar 2 framework), though the PRA now has autonomy to tweak parameters post-Brexit.

One area of divergence is the **leverage ratio framework** in the UK. The PRA introduced a **UK-specific leverage ratio** requirement that is slightly higher than Basel's: 3.25% Tier 1 capital relative to exposures (as opposed to 3%). More significantly, the UK **permanently excludes qualifying central bank reserves from the leverage exposure measure**. This exclusion was made to avoid discouraging banks from holding high-quality liquid assets or from serving as intermediaries for central bank operations, acknowledging that reserves at the Bank of England carry virtually no credit or liquidity risk. The EU had only allowed such exclusions temporarily during COVID-19, and the US includes reserves in the SLR calculation (absent temporary reliefs).

In addition to the base leverage rule, the PRA maintains an **Additional Leverage Ratio Buffer (ALRB)** for G-SIBs and other major banks (like ring-fenced banks). The ALRB is calibrated at 35% of the bank's applicable risk-weighted capital buffers (specifically, 35% of the sum of the G-SIB buffer and countercyclical buffer). This acts similarly to the EU's leverage buffer concept, but with a different calibration. Importantly, **falling short of the ALRB (or the related Countercyclical Leverage Buffer)** does *not* automatically trigger distribution restrictions in the UK.

The PRA has discretion in how to respond to a leverage shortfall, reflecting a belief that leverage constraints should be a flexible monitoring tool rather than an automatic tripwire. This contrasts with the EU, where the leverage buffer for G-SIBs (set at 50% of the G-SIB risk buffer) is legally binding with automatic consequences if breached.

In summary, **all three jurisdictions impose extra capital buffers on systemic banks, but the design and calibration differ**. The EU sticks to the Basel template of fixed percentage buffers plus discretionary Pillar 2 surcharges, emphasising a **multifaceted but somewhat complex framework**. The U.S. uses a **more formulaic and dynamic approach**, tying capital buffers to stress test outcomes and simplifying supervision by largely forgoing ad-hoc Pillar 2 add-ons – albeit at the cost of potential volatility and heavier reliance on models in the stress scenarios. The UK falls somewhere in between: it maintains the Basel-style buffers and Pillar 2 process like the EU, yet is increasingly willing to **adjust the framework for pragmatism** (e.g. carving out central bank reserves from leverage exposure, raising the base leverage minimum slightly, and not automatically enforcing leverage buffers).

5.2. Implementation Timeline and Regulatory Divergence

International standards like Basel III ideally should be implemented **consistently and promptly** across major jurisdictions to maintain a level playing field. However, in practice the EU, US, and UK have **staggered timelines and variations** in rolling out the **Basel III final reforms**.

The Basel Committee's agreed global deadline was to fully implement these final elements (revised standardised approaches for credit, market, and operational risk, along with the output floor limiting internally modelled capital benefits) by **January 1, 2023** – after a one-year COVID-related extension from the original 2022 date. None of the three jurisdictions met

that 2023 target, and each has charted its own schedule, raising concerns about **regulatory divergence**.

EU Implementation

The EU deliberately took a slower approach to Basel 3.1, aiming to tailor the rules to European banks' specific characteristics before implementation. In October 2021, the European Commission published the **Banking Package 2021** (the CRR III Regulation and CRD VI Directive) which contained the legislative proposals to implement the remaining Basel III reforms. Intensive negotiations followed, and EU legislators reached a political agreement in 2023.¹¹⁸ The final CRR III/CRD VI legislation was formally adopted in late 2023, with the bulk of new requirements coming into **force on 1 January 2025** across EU member states.

A hallmark of the EU's approach is the use of **extended phase-in periods** and *adjustments* to smooth the impact. The most significant example is the Basel **output floor** – which caps the capital benefit a bank can obtain from internal risk models by requiring that total RWAs be no less than 72.5% of what they would be under standardized approaches. EU policymakers were concerned that immediately imposing the full 72.5% floor could sharply increase capital requirements, especially for banks in countries where internal models yield much lower RWAs (e.g. for low-risk mortgages).

Thus, the EU will **phase in the output floor gradually from 2025 through 2030**. It will start at 50% in 2025, then rise incrementally (e.g. to 55%, 60%, etc., year by year) until reaching 72.5% by 2030. Moreover, certain exposures get transitional relief until 2032 – for example, a carve-out allows banks to apply the floor at the consolidated level first, delaying its impact on subsidiaries, and some specific asset classes (like loans to small businesses and infrastructure) receive temporary adjustments or allowances under the EU rules.

Another divergence in the EU package reflects the persistent misalignment between jurisdictions in implementing Basel III's more technical elements. A key example is the treatment of market risk under the Fundamental Review of the Trading Book (FRTB). The EU's Banking Package included a clause allowing the European Commission to **postpone the**

¹¹⁸ European Commission. (2023, December 14). *Latest updates on the banking package*. Directorate-General for Financial Stability, Financial Services and Capital Markets Union. finance.ec.europa.eu/news/latest-updates-banking-package-2023-12-14_en

implementation of FRTB via delegated act, in order to preserve international competitiveness should other major jurisdictions lag behind.

This flexibility has now been used twice: first, in 2024, the Commission postponed the FRTB go-live date to **1 January 2026**; and again in **June 2025**, it adopted a second delegated act deferring implementation by a further year, to **1 January 2027**.¹¹⁹

This decision was based on continued delays in other jurisdictions, particularly the United States and the United Kingdom, and the Commission's concern about **maintaining a global level playing field for EU banks engaged in capital markets activities**. While the Commission reaffirmed its commitment to the timely and full application of Basel III, it also emphasised the need to **avoid disadvantaging EU banks** in global trading activities due to premature or unilateral implementation of complex capital requirements.

Apart from the output floor and FRTB timing, the EU's CRR III also includes a few EU-specific tweaks such as more favorable treatment for certain low-risk assets (e.g. specialised lending or SME loans) and an extension of existing exemptions. These were justified to align capital requirements with the European economy's needs, but they do mean the EU's final rules won't be a *pure* copy of Basel. Nonetheless, by **2025 the EU substantially complies with Basel 3.1**, albeit with a drawn-out schedule and protective measures to ensure its banks are not first-movers alone.

It's worth noting that while most of CRD VI's provisions apply from 2025 or early 2026, some specific measures start later. For example, stricter rules on third-country branches in the EU will apply only from **2027**, acknowledging that banks need time to adjust their structures. This staggered activation of rules exemplifies the EU's careful, perhaps cautious, approach.

US Implementation

The United States has been the slowest among the major jurisdictions to implement the final Basel III reforms, and its eventual approach may result in a more selective and domestically tailored framework. In July 2023, against the backdrop of the extraordinary failures of Silicon Valley Bank, Signature Bank, and First Republic Bank, U.S. regulators (Federal Reserve, FDIC, OCC) released their long-awaited "Basel Endgame" proposal. While the proposal broadly

¹¹⁹ European Commission. (2024, July 24). *Commission proposes to postpone by one year the market risk prudential requirements under Basel III in the EU* [Press release]. EC Press Corner. ec.europa.eu/commission/presscorner/detail/en/ip_24_3981

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tracked the 2017 Basel III standards, it introduced significant deviations in scope, calibration, and methodology.

First, the Basel Endgame would have expanded the scope of Basel III well beyond the eight U.S. G-SIBs, applying enhanced capital requirements to all banks with assets above **\$100 billion**—around 37 firms in total. This marked a sharp departure from Basel’s original focus on “internationally active banks” and was a direct response to mid-2023 failures of large regional banks.¹²⁰

Second, the Endgame projected a **material increase in capital requirements**, far above what Basel originally envisaged. U.S. agencies estimated an average **16% increase in common equity Tier 1 requirements**, compared with only about 9% in the EU and 3% in the UK.¹²¹ Much of this increase stemmed from the treatment of **operational risk**: while Basel’s standardised approach allowed variability via the “internal loss multiplier,” the U.S. proposal set a **floor of one**, effectively applying the harshest calibration to all banks. According to industry estimates, this single choice accounted for almost **90% of the proposed capital increase**.

Third, the proposal diverged in its treatment of both **mortgage risk weights** and **market risk**. U.S. regulators suggested risk weights for residential mortgages that were around **20 percentage points higher** than Basel’s differentiated schedule, sparking criticism that the rules would make mortgage lending uneconomical and drive activity to nonbank lenders. On market risk, the proposal aligned with Basel’s shift from value-at-risk to **expected shortfall**, but banks argued this would duplicate the Federal Reserve’s annual stress tests and ignore diversification benefits. Agencies nevertheless estimated these changes would increase required capital ratios by roughly **67 basis points**.

FDIC Chairman Gruenberg stressed in a June 2023 speech that adopting the Basel III endgame is critical to address weaknesses in risk-based capital exposed by the 2008 crisis and to “*reduce excessive variability of risk-weighted assets*” by limiting banks’ use of internal models.¹²²

¹²⁰ Deloitte US Advisory. (2023, August). *US Basel III Endgame: Key changes, impacts and where to begin*. Deloitte. www2.deloitte.com/content/dam/Deloitte/us/Documents/Advisory/us-advisory-deloitte-basel-iii-endgame-august-2023.pdf

¹²¹ Bank Policy Institute. (2023, September 6). *Basel Endgame: Background and Key Issues*. <https://bpi.com/basel-endgame-background-and-key-issues/>

¹²² Gruenberg, M. J. (2023, June 22). *Basel III endgame* [Speech]. Peterson Institute for International Economics. FDIC. www.fdic.gov/news/speeches/2023/spjun2223.html

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The **public response was highly contentious**. Banks, trade associations, and even some regulators argued the proposal was too burdensome, risked constraining credit, and would push activities into the less-regulated nonbank sector. Supporters countered that higher capital would strengthen resilience without materially restricting lending, noting that U.S. banks had already absorbed far larger capital increases after 2010 while remaining profitable and globally competitive.

By **mid-2024**, it had become clear that the original proposal would not survive unchanged. Federal Reserve Chair Jerome Powell and Vice Chair for Supervision Michael Barr publicly signalled a shift in direction from the initial proposal, with the latter pointing to “**broad and material changes**”.¹²³ Likely revisions included exempting banks under \$250 billion in assets, reducing mortgage risk weights, and easing the operational risk formula. According to Barr, these adjustments would cut the capital increase by more than half relative to the July 2023 draft.

As of **mid-2025**, however, not even the revised Basel Endgame proposal has yet been issued, leaving U.S. banking rules **out of step with international Basel III standards**. Moreover, the EU and UK have already **delayed parts of their own Basel III rollouts** to avoid disadvantaging their banks while waiting for U.S. action, highlighting the **global ripple effects** of U.S. delays. European policymakers have even warned that if the United States ultimately declines to comply, the EU could impose **punitive measures on U.S. banks** to preserve a level playing field.¹²⁴

The stakes are high: failure by the U.S. to adopt Basel III finalisation could undermine the credibility of global standard-setting, invite retaliation from other jurisdictions, and accelerate a **regulatory fragmentation** that risks both competitiveness and stability. The U.S. still faces two fundamental policy choices: whether to adopt Basel III in substance, and whether to use the opportunity to recalibrate overall capital levels. If Washington opts for a diluted or delayed version, it could trigger a “race to the bottom” in global banking regulation—a scenario the Basel Committee and FSB have repeatedly warned against.

¹²³ Brookings Institution. (2024, September 10). *The Basel III endgame: A conversation with Michael Barr*. <https://www.brookings.edu/events/the-basel-iii-endgame-a-conversation-with-michael-barr/>

¹²⁴ Centre for Economic Policy Research. (2025, July 23). *Basel Endgame: Bank capital requirements and the future of international standard-setting*. VoxEU. <https://cepr.org/voxeu/columns/basel-endgame-bank-capital-requirements-and-future-international-standard-setting>

UK Implementation

Initially, the UK kept pace with the EU's anticipated schedule. The PRA issued consultation papers in 2022 (notably CP16/22) outlining how it planned to implement the Basel 3.1 reforms in the UK, largely mirroring the EU proposal. The working assumption was that UK rules would take effect around the **start of 2025**, similar to the EU.¹²⁵ However, through 2023 and 2024 the UK altered course, choosing to **delay implementation** in light of global developments. In July 2023, the PRA announced a **six-month delay** to align with the EU's emerging timeline, pushing the date to 1 July 2025.

Then, in January 2025, the PRA (with the endorsement of HM Treasury) decided on a much longer deferral: the **main Basel 3.1 requirements will now take effect in the UK on 1 January 2027**.¹²⁶ Reporting requirements under the new rules will begin in 2026, but banks' capital will only start being constrained by them from 2027 onward.

The official reasoning for the UK's two-year delay was to “*allow more time for greater clarity*” on the US implementation and to consider the competitiveness of the UK banking sector. Unspoken was the desire not to get too far ahead of the US – having UK banks face higher requirements years before their American rivals could put them at a disadvantage, especially in global markets like investment banking.

The UK's Financial Services and Markets Act 2023¹²⁷ gives regulators the freedom to depart from EU rules and sequence things differently, and the Basel timeline was one of the first big tests of this autonomy. By postponing to 2027, the PRA signaled that it prioritises **international coordination and a level playing field** over Basel's originally agreed calendar.

Despite the delay in start date, the PRA does aim to reach the full Basel standards not long after the EU. The phase-in will be somewhat **compressed** in the UK: starting 2027, reaching full implementation by **1 January 2030**. The strategy is essentially to **shadow the US** – wait until the US rules are clearer or in force, then move in step. Indeed, UK officials have underscored that they remain committed to Basel III “in full, timely and consistent” manner,

¹²⁵ Ptasznik, S., & Bah, A. (2024, September 30). *Differences between UK and EU implementation of Basel 3.1 Framework*. Finalyse. www.finallyse.com/blog/differences-between-uk-and-eu-implementation-of-basel-3-1-framework

¹²⁶ Prudential Regulation Authority. (2025, January 17). *The PRA announces a delay to the implementation of Basel 3.1*. Bank of England. www.bankofengland.co.uk/news/2025/january/the-pra-announces-a-delay-to-the-implementation-of-basel-3-1

¹²⁷ Financial Services and Markets Act 2023, c. 29 (U.K.), § 25. www.legislation.gov.uk/ukpga/2023/29/contents

just not ahead of others at the cost of UK competitiveness.¹²⁸ From a divergence standpoint, the UK will be, at least and for now, **two years behind the EU** in enforcing Basel 3.1.

¹²⁸ HM Treasury & Prudential Regulation Authority. (2025, January 17). *Joint PRA and HMT statement on the delay to implementation of the Basel 3.1 standards*. Bank of England. www.bankofengland.co.uk/prudential-regulation/publication/2020/joint-pra-and-hmt-statement-on-the-delay-to-implementation-of-the-basel-3-1-standards

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Date	Milestone / Event	Jurisdiction / Scope
Apr 2009	G20 London Summit establishes the FSB to coordinate global financial regulatory reforms.	Global
Sep 2009	G20 Pittsburgh Summit commits to develop tougher bank capital and liquidity rules by end-2010 in response to the financial crisis.	Global
Dec 2010	Basel Committee on Banking Supervision (BCBS) publishes Basel III framework – raising capital ratios, introducing capital buffers, a leverage ratio, and two liquidity standards (LCR and NSFR). Initial phase-in set for 2013–2019.	Global
Nov 2011	FSB designates first G-SIBs and, with BCBS, introduces G-SIB capital surcharges of 1–2.5% CET1 (to be phased in 2016–2019). Also begins annual updates of the G-SIB list and enhanced supervision/resolution planning.	Global
Jan 2013	BCBS revises the LCR , broadening eligible liquid assets and extending the phase-in to reach 100% by 2019.	Global
June 2013	EU adopts CRD IV/CRR (Directive 2013/36/EU and Regulation 575/2013), implementing Basel III capital, leverage, and liquidity requirements in EU law. New rules apply from 2014, with capital buffers phased in through 2019.	EU
July 2013	U.S. federal banking agencies (Federal Reserve, OCC, FDIC) approve final Basel III capital rules , adapting them for the U.S. (e.g. retaining certain prudential filters). Requirements phase in from 2014 to 2019.	US
Oct 2014	Basel Committee finalises the NSFR standard (long-term funding stability metric), to become a minimum requirement by 1 Jan 2018.	Global
Nov 2015	FSB, with G20 endorsement, issues the TLAC term sheet for G-SIBs, requiring minimum 16% RWAs in bail-inable capital+debt by 2019, rising to 18% by 2022 (plus leverage-based TLAC of 6% rising to 6.75%).	Global
Jan 2016	BCBS releases final Market Risk framework (Fundamental Review of the Trading Book, <i>FRTB</i>), overhauling trading book capital rules. Initially slated for implementation by 2019, it was later postponed.	Global
Dec 2017	BCBS publishes “ Basel III: Finalising Post-Crisis Reforms ” (a.k.a. Basel III endgame or <i>Basel 3.1</i>) – the comprehensive package of final Basel III measures (revised standardized approaches for credit and operational risk, constraints on internal models, an output floor limiting modelled RWA reduction to 72.5%, etc.). Global implementation was scheduled by 1 Jan 2022 with a five-year phase-in for the output floor.	Global
Jan 2019	Basel Committee revises the FRTB market risk standard (addressing calibration issues) and sets a new implementation date of 1 Jan 2022 for the revised market-risk rules. (This aligned the market risk timeline with the broader final Basel III package.)	Global
June 2019	EU formally adopts CRR II/CRD V (2019/876 and 2019/878), which implement remaining Basel III elements from the initial phase (e.g. binding NSFR and leverage ratio from 2021, tighter large exposure limits, and initial FRTB reporting requirements).	EU
Mar 2020	In light of COVID-19, the GHOS (Basel Committee’s oversight body) announces a 1-year deferral of the Basel III final reforms: the effective date is shifted from 2022 to 1 January 2023 , and the output floor phase-in extended to 2028. The FRTB market risk framework’s start is likewise deferred to 2023.	Global
Oct 2021	European Commission unveils the 2021 Banking Package (CRR III & CRD VI proposals) to transpose the <i>Basel III final reforms</i> into EU law. The proposal includes an output floor phased 2025–2030 and provisions to tailor Basel rules to EU specifics (e.g. treatment for low-risk exposures, and an “ <i>FRTB delay</i> ” clause to align trading-book capital timing with other jurisdictions).	EU
Nov 2022	Bank of England/PRA publishes Consultation CP16/22 on implementing Basel 3.1 in the UK, aiming for an effective date of 1 Jan 2025. This marks the UK’s first post-Brexit effort to transpose the final Basel III standards (largely similar to EU’s approach, with some adjustments for UK market specifics).	UK
June 2023	EU co-legislators (Commission, Parliament, Council) reach a trilogue agreement on the CRR III/CRD VI package, finalizing EU Basel III implementation. The agreed texts set 1 January 2025 as the application date for most new rules, with transitional arrangements (e.g. output floor starting at 50% in 2025 and rising to 72.5% by 2030).	EU
July 2023	U.S. regulators (Fed, FDIC, OCC) issue a joint Notice of Proposed Rulemaking to implement the Basel III Endgame standards. The proposal extends stringent capital rules to banks with \$100B+ in assets, revises risk-weight calculations (credit, market, op risk) and introduces an effective output floor (by removing most internal model approaches). Proposed timeline: final rule in 2024 and phase-in from 1 July 2025 through 1 July 2028 . Initial estimates showed an average 16% increase in required Tier 1 capital for large banks (19% for the biggest GSIBs).	US
Sep 2023	UK PRA, after reviewing industry feedback, announces a 6-month delay of Basel 3.1 go-live to 1 July 2025 (from Jan 2025) and shortens the output floor phase-in to 4.5 years. This aligns the UK’s start date with the then-expected US timeline and reflects concern for international competitive parity.	UK
Sep 2024	PRA publishes Policy Statement PS9/24 with near-final UK rules for Basel 3.1 (credit risk, CVA, market risk, op risk, etc.), and – in light of other jurisdictions’ delays – pushes the UK implementation date to 1 Jan 2026 . (Transitional periods in the rules were adjusted so full phase-in still ends by 1 Jan 2030.)	UK
Sep 2024	Fed Vice Chair for Supervision Michael Barr announces that U.S. agencies will “ re-propose ” the Basel Endgame rules to address public feedback. The revised proposal is expected to scale back the capital impact: maximum ~9% increase in common equity (for the largest banks) instead of ~16–20% in the initial version, with relief for mortgage lending and other adjustments. This move delays finalization of the US Basel 3.1 rules into 2025 and reflects legal caution (amid expectations that courts might demand more justification for major rules).	US
Jan 2025	Citing uncertainty in the US, the PRA (with UK Treasury’s backing) announces a further one-year delay of the UK Basel 3.1 implementation to 1 January 2027 . The UK affirms it will still complete the phase-in by 2030 (condensing interim periods accordingly). This delay is explicitly to preserve a <i>level playing field</i> for UK banks, avoiding disadvantaging them if US rules come later or less stringently.	UK
July 2024	The EU’s “2024 Banking Package” (CRR III Regulation 2024/1623 and CRD VI Directive 2024/1619) is formally enacted , marking the completion of Basel III transposition into EU law. Most provisions enter into force, slated to apply from the start of 2025. A built-in mechanism empowers the Commission to delay or adjust the market-risk (FRTB) requirements by up to two years via delegated act, to maintain international alignment.	EU
Jan 2025	Basel III final reforms take effect in the EU: banks across the EU (≈4500 institutions) must comply with the new CRR3/CRD6 rules from this date. Key changes include revised risk-weight calculations, stricter internal model limits, and the output floor initially set at 50% (to be gradually raised to 72.5% by 2030). To prevent competitive disparities, the EU simultaneously postpones the binding FRTB (trading book capital rules) by one year – effectively making FRTB reporting-only for 2025, with a new go-live of 2026 (subject to further delay if needed).	EU
June 2025	European Commission, observing continued US/UK delays, uses its mandate to propose another one-year delay for FRTB : pushing the EU’s market-risk capital framework start to 1 Jan 2027 . (This second deferral, if approved by Parliament/Council, represents the maximum delay allowed under the EU’s level-playing-field clause.) The EU reiterates that aside from market risk, all Basel III reforms are in force as of 2025.	EU
Mid-2025	Status check: Despite the Basel Committee’s 2023 target, many jurisdictions are still finishing Basel III implementation. The BCBS reports that while over two-thirds of member jurisdictions have published final Basel 3.1 rules, only about one-third (roughly 9 of 27) had those new standards actually in force by mid-2025. The EU and several other economies are on track (with reforms live in 2025), but the US and UK notably lag with final rules not yet effective. BCBS and FSB officials continue to urge “full, timely and consistent” implementation to avoid regulatory arbitrage.	Global

Table 5.1 – Chronological mapping of the main milestones in the global development and jurisdictional implementation of the Basel III framework (2010–2025), covering key BCBS and FSB publications, and the corresponding transposition in the EU, US, and UK.

5.3. Implications of Divergence

The diverging implementation paths taken by the EU, US, and UK have introduced **structural frictions** into the global banking landscape, with implications for **regulatory effectiveness**, **market competition**, **financial stability**, and **trust in multilateral cooperation**. For a full review of the stakeholder and institutional perspectives on such divergence, please see Annex III.

1. Effectiveness and credibility of global standards

The Basel framework is not a treaty and lacks formal enforcement mechanisms. It relies instead on **soft law and peer pressure**, with the Basel Committee's monitoring reports functioning as transparency tools. Divergence (whether in **timing, scope, or content**) undermines this model. For instance, while the EU and UK have moved forward with the implementation of credit and operational risk reforms broadly aligned with the 2017 Basel III package, the US remains in a state of uncertainty. The initial Basel Endgame proposal faced significant political and industry resistance and, as of mid-2025, is set to be re-proposed with material revisions.

This situation weakens the **credibility of the Basel process**. Jurisdictions that implement faithfully may question why they should bear the costs of stricter standards when competitors delay or dilute. The Basel Committee itself has warned that such divergence can reduce incentives for compliance, foster fragmentation, and damage **the long-term viability of international cooperation** in financial regulation.¹²⁹

2. Uneven playing field and competitive distortions

The core purpose of international standard-setting in banking is to **create a level playing field** across jurisdictions. Basel III was supposed to ensure that capital and liquidity requirements would be comparable worldwide, preventing banks from gaining regulatory advantages based on geography rather than risk profile or business model.

Divergence directly undermines this goal. If U.S. banks are allowed to apply **lighter capital requirements**, or benefit from more **lenient operational risk or market risk charges**, they may face **lower costs of compliance** and enjoy **higher returns on equity** relative to their EU

¹²⁹ Basel Committee on Banking Supervision. (2025, May 16). *RCAP on timeliness: Basel III implementation dashboard*. Bank for International Settlements. www.bis.org/bcbs/implementation/rcap_reports.htm

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or UK counterparts. Conversely, EU banks that have already implemented stricter standards (such as the output floor, revised credit risk weights, or binding leverage buffers) may suffer from **reduced profitability** and **investor scepticism**, as evidenced by persistently low valuations compared to U.S. peers.

This risk is especially acute for **internationally active banks** operating across multiple jurisdictions. A lack of convergence can lead to **fragmented business models**, as banks adjust their operations or booking structures to benefit from favourable regimes, a dynamic that has been noted in cross-border derivatives trading and booking of trading assets post-Brexit and post-EMIR reforms.

3. Regulatory arbitrage and systemic risk

One of the original goals of Basel III was to reduce **regulatory arbitrage**, particularly the excessive use of internal models to minimise capital requirements. Yet, divergence may create **new forms** of arbitrage: cross-border entities may shift risk exposures to jurisdictions with **less stringent implementation**, or structure transactions to **exploit definitional gaps**.

Moreover, **inconsistent treatment of systemic buffers** or market risk models can incentivise large banks to **optimise their capital charges** by moving exposures or legal entities across borders, not for efficiency reasons but to **regulatory-shop**. Such practices reduce the **effectiveness of macroprudential tools**, weaken supervisors' capacity to oversee consolidated risks, and increase the opacity of the global financial system. In extreme cases, it could exacerbate systemic vulnerabilities if risks are concentrated in under-regulated or less resilient institutions.

4. Regulatory uncertainty and market confidence

A further consequence of divergence is **regulatory uncertainty**. When key jurisdictions delay or re-open implementation processes, it becomes difficult for global banks to plan capital allocation, adjust risk strategies, or develop long-term compliance infrastructures. For instance, uncertainty around the U.S. implementation of the Basel Endgame (its timeline, scope, and final content) has led to delays in investment decisions, pricing adjustments, and stress test recalibrations for global banks with U.S. operations or exposures.

This unpredictability affects not only banks but also **investors and rating agencies**, who struggle to assess banks' true capital strength or risk profiles in a consistent manner. In turn,

this may increase funding costs or trigger precautionary risk aversion, particularly in periods of stress or market volatility.

5.4. Outcomes Comparison

While the EU, US, and UK all share the goal of enhancing financial system resilience through Basel III reforms, their divergent implementation approaches have led to materially different outcomes for large banks. This section evaluates those differences across four key dimensions: capitalisation, profitability, behavioural dynamics, and system-wide resilience.

Capital levels and composition

European G-SIBs consistently report higher average CET1 ratios than their U.S. counterparts. Many EU banks operate with CET1 ratios in the 13–15% range, while U.S. G-SIBs tend to cluster around 11–12%. However, these headline figures do not reflect equivalent resilience. EU banks typically compute lower RWAs due to internal model use and benefit from overlapping buffers (Pillar 2, systemic buffers, conservation buffers), boosting reported ratios. A 2022 Oliver Wyman study found that actual required CET1 ratios averaged 10.6% in the EU versus 9.9% in the US, suggesting that EU banks operate with a slightly higher cushion over regulatory minima.

Nonetheless, this cushion may not equate to greater loss-absorbing capacity. U.S. banks, constrained by binding leverage requirements and standardized risk weights, often carry more total assets relative to capital—resulting in lower leverage ratios but arguably more conservative absolute measures. This is reflected in differences in capital usage: EU banks tend to hold more “excess” capital due to supervisory uncertainty, while U.S. banks optimize buffer usage under the Stress Capital Buffer (SCB) regime. The UK falls between both models: major UK banks like HSBC and Barclays maintain CET1 ratios above 13%, but the PRA expects only a minimal rise in capital needs under Basel 3.1, indicating that UK capital levels are already aligned with expected future requirements.

Profitability and cost efficiency

A more striking divergence lies in profitability. U.S. G-SIBs report ROEs around 10–12%, while EU banks remain in the 5–7% range. This performance gap is driven by a mix of macroeconomic, structural, and regulatory factors. U.S. banks benefit from dynamic capital markets, higher interest rates, and simplified regulatory frameworks. EU banks, in contrast,

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face a heavier regulatory burden that includes more complex capital structures, higher compliance costs, and constraints on revenue-generating activities.

Oliver Wyman has estimated that regulatory and supervisory factors alone account for nearly 1 percentage point of the ROE gap. Two main contributors stand out. First, EU banks contend with discretionary Pillar 2 add-ons and fragmented stress testing regimes, which increase uncertainty and drive precautionary capital hoarding. Second, EU institutions face higher resolution-related costs, including broader MREL obligations and steeper contributions to resolution funds. These structural differences imply that EU banks' higher capitalisation comes at a real profitability cost, contributing to weaker valuations and a reduced ability to organically grow capital. UK banks, while historically closer to the EU in terms of ROE, have begun closing the gap, with some institutions nearing 10% returns amid efforts to streamline regulation and contain unnecessary costs.

Behavioural effects and business model impacts

Different regulatory incentives have shaped distinct banking models. U.S. G-SIBs, facing binding leverage constraints, have prioritized high-margin business lines (e.g., trading, credit cards), offloaded low-return assets via securitisation, and optimised balance sheets accordingly. EU banks, by contrast, have held large portfolios of low-risk assets (e.g., mortgages, sovereign exposures), taking advantage of favourable risk-weighting under internal models. This reinforced a traditional lending model but limited profitability.

These patterns extend to capital markets. U.S. banks dominate investment banking globally, in part due to more efficient capital usage and lighter trading book capital requirements. The EU implemented stricter charges earlier (e.g., CVA risk), and its fragmented capital markets have hindered competitiveness. With FRTB still pending in the US, U.S. banks retain an edge in trading activities.

On lending, post-crisis recapitalisation was quicker and more dynamic in the U.S. EU banks experienced prolonged regulatory pressure and overlapping demands, leading to more cautious credit expansion. For instance, during COVID-19, EU banks hesitated to use their buffers despite regulatory encouragement—highlighting concerns over supervisory judgement and market reactions. In the U.S., buffer usability was built into the SCB mechanism, making capital depletion and rebuild a more mechanical process. This

difference supports the view that the U.S. framework is more conducive to counter-cyclicality.

System resilience and policy effectiveness

Despite these divergences, all three jurisdictions have enhanced systemic resilience. The COVID-19 crisis validated the reforms: banks in the EU, US, and UK weathered severe macro shocks without needing bailouts. EU regulators underscored that strong capital buffers enabled banks to act as shock absorbers. The Fed's SCB and temporary leverage relief sustained U.S. lending. The UK experienced no distress among major banks, reaffirming the success of the post-2008 architecture.

The 2023 U.S. regional bank failures provided another stress test. While mid-sized banks failed due to interest rate risk and deposit flight, G-SIBs remained solid—gaining deposits, not losing them. This suggests that enhanced G-SIB capital, liquidity, and resolution frameworks are effective. It also highlights that capital quantity alone is not sufficient: risk governance, liquidity management, and supervisory responsiveness matter deeply.

Preliminary conclusion

These outcome divergences illustrate the trade-offs embedded in each jurisdiction's approach. The EU prioritised systemic safety, at the expense of ROE and capital efficiency. The U.S. aimed to balance safety with performance, leveraging dynamic tools like the SCB. The UK seeks to combine both: maintain high prudential standards without undermining bank competitiveness. While all systems are more robust than pre-2008, the economic cost per unit of stability varies. These differences will be further discussed in the policy considerations, where the case will be made for the EU to stay the course on full Basel III implementation while encouraging convergence through diplomatic and regulatory leadership.

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Dimension	European Union (EU)	United States (US)	United Kingdom (UK)
G-SIB Capital Buffers and Supervisory Models	Follows Basel G-SII buckets (1–3.5%) plus discretionary Pillar 2 surcharges. Uses a complex mix of buffers (CCB, CCyB, O-SII/SyRB) and a leverage buffer equal to 50 % of the G-SII buffer. Pillar 2 is used widely (SREP) for institution-specific capital. Stress testing does not directly set capital, though results feed into SREP decisions.	Capital surcharges calculated via Fed Regulation Q using two methods: Method 1 (Basel indicators) and Method 2 (U.S. specific, replacing substitutability with short-term wholesale funding). Banks hold the higher result. The Stress Capital Buffer (SCB) replaces the fixed 2.5 % buffer; total buffer equals SCB plus G-SIB surcharge. Minimal reliance on Pillar 2; an “enhanced SLR” adds a flat 2 % leverage buffer for G-SIBs.	Applies Basel G-SIB buckets and retains Pillar 2A (binding) and Pillar 2B guidance. Introduced a UK-specific leverage ratio (3.25 %) and permanently excludes Bank of England reserves from leverage exposure. Uses an Additional Leverage Ratio Buffer (ALRB) equal to 35 % of risk-weighted buffers, with discretion on enforcement; less automatic trigger than the EU.
Implementation Timeline and Regulatory Divergence	Final Basel III (“Basel 3.1”) measures transposed via CRR III/CRD VI (adopted in 2023) with most provisions effective from 1 January 2025. Output floor phased in from 50 % in 2025 to 72.5 % by 2030, with transitional relief for certain exposures until 2032. FRTB implementation postponed from 2025 to 2026 and again to 2027 due to global misalignment.	Basel Endgame proposal (July 2023) would have expanded scope to banks > \$100 bn and raise CET1 requirements by ~16 %. It was never implemented; instead, significant revisions expected in 2025 or later. U.S. lags global schedule and diverges on operational-risk and mortgage risk-weight calibrations.	Initially planned to follow EU timetable (2025). The PRA delayed Basel 3.1 to 1 January 2027, allowing reporting from 2026 and full application by 2030. This two-year deferral reflects a desire to align with U.S. timing and avoid competitive disadvantage, while still committing to complete Basel implementation.
Outcomes Comparison (Capitalisation, Profitability, System Behavior)	EU G-SIBs exhibit higher CET1 ratios (≈ 13–15 %) but lower ROEs (≈ 5–7 %) due to overlapping buffers and stricter regulations. Banks hold excess capital but often hesitate to use it under stress. Complexity and compliance costs are high, and profitability remains constrained.	U.S. G-SIBs hold lower CET1 ratios (≈ 11–12 %) yet enjoy higher ROEs (≈ 10–12 %), as capital is tied to stress-test outcomes rather than fixed buffers. The regime is dynamic and less complex; capital is mobilised more quickly in downturns. However, pending Basel Endgame revisions create uncertainty.	UK banks have CET1 ratios around 13 % and improving ROEs (approaching 10 %). The system balances Basel fidelity with pragmatic tweaks (exclusion of reserves, selective leverage buffer). The UK aims for resilience comparable to the EU while maintaining competitiveness and simpler rules, with fewer automatic triggers for leverage breaches.

Table 5.2 – High level summary of the key differences, presented throughout this chapter, in G-SIB capital buffers and supervisory models, Basel III implementation timeline and regulatory divergences, and outcomes comparison between the three jurisdictions.

6. Concluding reflections and policy considerations

The 2008 GFC marked a seismic turning point in the governance of global banking. The near-collapse of systemically important financial institutions revealed profound flaws in existing prudential frameworks, including insufficient capital buffers, lax liquidity standards, and inadequate mechanisms to contain contagion. In response, global standard-setters, led by the BCBS, designed a sweeping package of reforms known as Basel III, aimed at restoring financial stability, mitigating systemic risk, and rebuilding trust in the global financial system. For the EU, where banking union was still in its infancy and several member states faced severe sovereign-bank loops, the implementation of Basel III was a political and institutional imperative.

This thesis has investigated the trajectory of post-GFC regulation for EU G-SIBs, assessing both the effectiveness of the reform package and the new challenges emerging in the current policy landscape. The findings suggest that the EU has implemented Basel III in a comprehensive and rigorous manner, strengthening the resilience of its banking sector and enhancing systemic safeguards.

Capitalisation has markedly improved, loss-absorbing capacity is robust, and supervisory mechanisms, particularly through the SSM and the SRM, have become more consistent and credible. During the COVID-19 pandemic and the 2023 banking turmoil, these reforms were tested under real-world stress, and they largely held firm. This suggests that the EU has, to a great extent, fulfilled the core objectives set in the aftermath of the crisis.

However, this progress is not irreversible. The global regulatory environment is entering a new phase marked by growing divergence in implementation, political pressures for simplification, and a loss of momentum in international cooperation. These dynamics threaten to fragment the global prudential framework and diminish the credibility of Basel as a common standard.

If left unaddressed, they could undermine the hard-won gains of the past decade. The remainder of this conclusion synthesises the key findings of the thesis and outlines a forward-looking, evidence-based path to consolidate progress and navigate the challenges ahead.

Key findings

The post-crisis regulatory reforms, particularly those stemming from the Basel III framework, have delivered tangible progress in strengthening the resilience of the European banking system. EU G-SIBs are now demonstrably more robust than before the 2008 Global Financial Crisis, with higher and better-quality capital, improved liquidity positions, and clearer loss-absorbing capacity through TLAC and MREL instruments. This transformation has been anchored in a strong legal and institutional framework, notably the CRR/CRD and BRRD packages, which have embedded Basel III standards into EU law with a high degree of fidelity. The result has been not only stronger banks but also greater market discipline, increased supervisory credibility, and enhanced trust in the stability of the financial system.

Empirical stress events have validated this progress. During the COVID-19 pandemic, banks continued to lend and absorb losses without requiring government bailouts, while prudential buffers operated effectively as designed. Similarly, the 2023 market turmoil triggered by the failures of US and Swiss institutions exposed no significant vulnerabilities in EU G-SIBs. These banks weathered the turbulence with little disruption, thanks in large part to the EU's faithful transposition of Basel III and its consolidated supervision under the SSM. In both cases, the macroprudential tools and capital requirements functioned not as constraints but as stabilisers, supporting credit provision during uncertainty.

At the same time, the thesis identifies growing concern over the operational complexity of the regulatory framework. While Basel III has successfully captured a broader set of risks (credit, market, operational, liquidity, and leverage) it has also become increasingly dense, technical, and difficult to navigate. Academic analyses show that the readability and accessibility of Basel texts have significantly declined over time, with rules becoming longer and more conditional. This growing complexity has raised questions about the proportionality and usability of the framework, particularly for banks and supervisors tasked with interpreting and applying it. In response, some policymakers (such as those involved in the ECB's High-Level Task Force on Simplification) have called for greater clarity and efficiency.

However, this thesis underscores that simplification must not be confused with deregulation. While better communication, elimination of redundancies, and reduction of burdensome reporting that offers little supervisory value are welcome, any move to weaken core prudential requirements risks reversing the stability gains of the past decade.

Another key finding relates to the divergence in implementation across jurisdictions. The thesis demonstrates how, despite its global origins, the Basel III framework has fractured in practice. The EU has largely adhered to its commitments, implementing the rules on time and with minimal deviations. By contrast, the United States has opted for a more discretionary and delayed approach, integrating Basel elements through stress testing rather than comprehensive rulebooks. The United Kingdom, since Brexit, has adopted a “growth and competitiveness” lens, selectively delaying or recalibrating standards such as the output floor and FRTB. These divergences raise concerns around level playing fields, regulatory arbitrage, and the credibility of global standard-setting. Most notably, they risk undermining the normative authority of the Basel Committee and weakening the effectiveness of the entire framework.

Finally, the research identifies an emerging tension between maintaining high prudential standards and responding to competitive and political pressures. As the EU moves to finalise CRR III / CRD VI, debates have intensified around tailoring, transitional relief, and potential recalibrations. While industry voices advocate for simplification in the name of economic growth, the thesis cautions against this narrative. The evidence shows that strong regulation has not constrained lending or competitiveness; in fact, it has underpinned financial confidence and reduced systemic risk. Consequently, any deviation from the agreed path risks not only financial vulnerabilities but also reputational costs for the EU as a global rule-maker.

These key findings offer a clear diagnosis: the post-crisis reforms have worked, but their success is not guaranteed going forward. The EU must defend its progress against the combined pressures of complexity, fragmentation, and deregulation.

The final step is to articulate the high level path that emerges from these findings, one that balances technical soundness with political credibility, and resilience with proportionality, while enabling the EU to shape the next phase of global financial governance. This thesis therefore outlines a strategic response structured around five core pillars:

Full and faithful implementation of Basel III in the EU

The first and most immediate priority is for the EU to complete the finalisation and full implementation of the Basel III reforms as embedded in CRR III and CRD VI. As demonstrated throughout this thesis, this is not simply a matter of checking boxes to meet international

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expectations—it is a strategic choice to protect financial stability, preserve supervisory credibility, and reinforce the EU’s position as a global standard-setter.

Political arguments invoking “competitiveness” or “simplification” to justify delays or carve-outs risk undermining the very stability that has become the EU banking sector’s comparative advantage. Empirical evidence, including the resilience shown by EU G-SIBs during the COVID-19 shock and the 2023 banking turmoil, clearly supports the conclusion that capital and liquidity requirements have enhanced market confidence and supported the real economy. Weakening these standards would not stimulate growth or credit—rather, it would raise uncertainty, increase banks’ funding costs, and damage trust in the EU’s supervisory architecture. The EU should therefore stay the course, both to consolidate the gains of the past decade and to retain its influence in shaping future international standards.

Reinvigorating global regulatory cooperation

Second, the EU should double down on its commitment to international cooperation. The Basel framework was built on a spirit of global coordination that is now under strain. As this thesis has shown, significant implementation gaps have emerged across jurisdictions, with the United States and the United Kingdom delaying or diverging from key Basel III elements. These developments risk turning the Basel framework into an increasingly symbolic instrument—undermining its credibility and encouraging arbitrage.

The EU should use its consistent implementation record as leverage in international fora such as the Basel Committee, the Financial Stability Board, and the IMF. This means advocating for peer reviews, mutual assessments, and firm timelines for implementation. It also involves clarifying the terms of equivalence and cross-border access in a way that rewards faithful implementation and discourages selective compliance. The EU should set the tone not only through its own policies but also by shaping the incentive structures that govern global regulatory alignment.

Rational operational streamlining, not deregulation

This thesis does not endorse simplification as a policy objective in itself. However, it does acknowledge that certain operational aspects of the regulatory framework may benefit from targeted streamlining. As identified in the literature reviewed and in recent institutional debates, the rising complexity of the rulebook (particularly the overlapping reporting

obligations and the proliferation of metrics) can create inefficiencies without enhancing risk capture or supervisory insight.

Efforts to improve regulatory clarity, remove redundancies, and enhance communication between regulators and market participants are therefore welcome, but only insofar as they preserve the integrity and objectives of Basel III. Simplification must be understood narrowly: it is about improving messaging, avoiding double reporting, and removing operational burdens that do not materially improve supervisory outcomes. It is not about reducing standards, relaxing risk sensitivity, or creating tailored regimes that weaken comparability and transparency. Proportionality must be pursued through careful design, not by exempting certain actors or sectors from core requirements.

Avoiding the deregulatory fallacy: competitiveness through integration, not weakening standards

Closely related to the debate on simplification is the increasingly prominent (but misguided) argument that lowering prudential standards will improve the competitiveness of EU banks. This thesis firmly rejects that premise. A race to the bottom in regulatory requirements may offer temporary relief from compliance costs but would ultimately erode market trust, increase volatility, and expose taxpayers to renewed bailout risks.

As the Draghi Report (2024) makes clear, Europe’s long-term competitiveness will depend not on deregulation, but on deepening its internal financial integration. Completing the Banking Union and relaunching the Capital Markets Union—rebranded as the “Savings and Investment Union”—are the real levers for unlocking scale, reducing fragmentation, and facilitating cross-border capital flows. A well-integrated financial market offers structural advantages that no amount of regulatory easing can replicate. Strong, consistent prudential standards are a necessary foundation for these reforms to succeed. Deregulation would be counterproductive: it would compromise the very resilience and trust that underpin a competitive financial system.

A cautious evolution beyond Basel III

Looking ahead, any future reform of the prudential framework, whether under the informal label of “Basel IV” or otherwise, must be evolutionary, not revolutionary. The analysis in this thesis shows that Basel III has largely met its objectives: increasing the resilience of G-SIBs,

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reducing systemic risk, and restoring confidence in the global banking system. The case for wholesale overhaul is therefore weak. Instead, future reforms should aim to consolidate what has been achieved, close remaining gaps, and ensure proportionality without compromising supervisory effectiveness.

Such an approach requires a realistic understanding of trade-offs. Adding new requirements without consolidating old ones can lead to confusion, layering, and diminished usability. At the same time, premature deregulation risks reintroducing fragilities. The EU and other jurisdictions should pursue a strategy of thoughtful consolidation: refining metrics, aligning supervisory practices, and closing loopholes, rather than endlessly expanding the framework. Basel IV, if it emerges, must be incremental and evidence-based, not a political reset.

Final reflections

This thesis has assessed the evolution, implementation, and effectiveness of the post-Global Financial Crisis regulatory framework for global systemically important banks in the European Union. By critically examining the legal, institutional, and practical dimensions of the Basel III transposition into EU law, as well as the real-world performance of G-SIBs during moments of stress, it finds that the EU has largely achieved the core objectives of the reforms: enhancing resilience, reducing systemic risk, and restoring trust in the financial system. In doing so, the EU has positioned itself as a credible and rules-based actor on the international stage.

Yet this progress remains incomplete and increasingly contested. If the EU yields to growing pressure for deregulation, or if international regulatory divergence continues unchecked, the very foundations of post-crisis stability may begin to erode. A failure to implement Basel III faithfully, whether due to lobbying pressures, political recalibration, or false narratives around competitiveness, would not only reintroduce financial vulnerabilities but also weaken the EU's international standing. Furthermore, persistent gaps in resolution planning, supervisory coordination, buffer usability, emerging risks, and implementation consistency still warrant urgent attention.

At the same time, the current juncture presents a strategic opportunity for the EU. By staying the course on full Basel III implementation, streamlining regulation without weakening it, and using its credibility to promote global convergence, the EU can consolidate its leadership in

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international standard-setting. In an era of geopolitical fragmentation and regulatory retrenchment, principled and forward-looking governance will be a critical asset. The EU now stands at a crossroads: it can retreat inwards under the weight of political and market pressures, or it can rise to the occasion and shape the next chapter of global financial regulation. This thesis argues firmly for the latter.

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Annex I: Relevant Academic Literature

The present annex I provides a structured literature review of academic and policy research that has informed the analysis and conclusions of this thesis. The selected studies offer empirical, theoretical, and normative insights into the key dimensions of the post-crisis regulatory framework examined herein – including the effectiveness of capital reforms, systemic risk mitigation, the regulation of G-SIBs, the design of resolution regimes, and the debate on regulatory complexity. The review spans both foundational and recent contributions, with a focus on literature that directly addresses the core questions of resilience, comparability, and adequacy under Basel III and related EU reforms.

For clarity and relevance, the literature is grouped into thematic sections: (1) improved bank resilience; (2) cost-benefit analysis of higher capital; (3) too-big-to-fail and G-SIB reforms; (4) systemic risk and fire sales; (5) critiques and unresolved risks; (6) regulatory complexity and risk sensitivity; (7) resolution and bail-in mechanisms; and (8) future challenges, including simplification, fragmentation, and risks migrating to the non-bank sector. Together, these sources serve as the academic and policy foundation for the thesis's evaluation of the evolving prudential framework in the EU.

Improved bank resilience post-crisis

Goel, Lewrick & Mathur (2019) – Empirical BIS analysis finding that global systemically important banks (G-SIBs) became significantly more resilient after the 2008 crisis. Higher capital buffers and more stable funding reduced their default risk, and measures of their systemic importance declined, indicating that post-crisis regulations achieved the intended strengthening of G-SIB soundness.

Jordà, Richter, Schularick & Taylor (2017) – A historical study showing that better-capitalised banking systems suffer fewer and less severe crises. Using long-run data, the authors demonstrate that higher bank equity levels markedly lower the probability of systemic banking failures and improve post-crisis recoveries, suggesting that the sizable capital increases under Basel III materially bolstered financial stability.

Acharya & Steffen (2020) – Analysis of U.S. banks during the COVID-19 liquidity crunch, concluding that post-crisis capital reforms left banks adequately capitalized to withstand

severe stress. They show that in early 2020, banks could meet extraordinary corporate credit drawdowns without collapsing, attributing this resilience to the substantially thicker capital cushions mandated by post-2008 regulations.

Li, Strahan & Zhang (2020) – Empirical evidence that banks with stronger capital and liquidity positions were better able to support the economy under stress. During the COVID shock, well-capitalized banks accommodated large loan drawdowns by firms, whereas weaker banks tightened credit. This underscores that the higher capital and liquidity standards post-crisis enhanced banks' ability to absorb shocks and continue lending.

Federal Reserve (Abboud et al., 2021) – A Federal Reserve study assessing the regulatory framework using COVID-19 as a “stress test.” It finds that banks entered the pandemic with robust Tier 1 capital and liquidity coverage ratios, which allowed them to absorb losses and maintain lending. The authors note that the post-2010 reforms “performed well” in the crisis: banks' resilience prevented a credit crunch, validating the reforms' effectiveness while highlighting areas (like countercyclical buffers usage) for further improvement.

Benefits vs. costs of higher bank capital

Adrian, Kiff & Shin (2018) – An economic analysis concluding that post-crisis regulatory reforms made the banking system much safer with only modest costs. They document that banks' capital and liquidity ratios improved dramatically with minimal impact on credit availability or market liquidity. The study finds no evidence of major unintended consequences from Basel III – lending and market-making continued smoothly – implying that the substantial stability benefits of higher capital came at little cost to economic activity.

Bridges et al. (2014) – Bank of England research examining lending behavior in response to higher capital requirements. It finds that UK banks facing a regulatory capital increase did temporarily reduce loan growth, but by a relatively small amount and for a short duration. Thereafter, lending rebounded, suggesting that tougher capital rules have only a modest, transient impact on credit supply. This supports the view that the long-term stability gains from higher bank capital outweigh the short-term adjustment costs.

Boissay et al. (2019) – A comprehensive review of studies on Basel III's effects. Summarising dozens of empirical papers, this meta-analysis finds that raising bank capital ratios has only minor effects on loan interest rates and credit volumes on average. Moreover, the greater resilience from higher capital reduces the frequency and severity of financial crises, yielding

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net economic benefits. The authors conclude that post-crisis capital reforms had a favorable cost-benefit tradeoff: substantially reducing systemic risk while only marginally affecting aggregate credit.

Kashyap, Stein & Hanson (2010) – Influential analysis arguing that banks can maintain lending with much thicker capital buffers. They estimate that substantially increasing equity requirements would raise banks' funding costs only slightly (on the order of a few basis points on loan rates) while significantly lowering the likelihood of crises. This work, which informed the Basel III debates, suggests that the social benefits of high bank capital (greater stability and avoidance of crises) far exceed the small private costs, undercutting claims that higher capital undermines credit or growth.

Too-Big-To-Fail reforms and systemic importance

Financial Stability Board (2021) – A definitive official evaluation of the “Too Big to Fail” reforms. It finds that the post-2008 measures (higher loss-absorbing capital, G-SIB surcharges, and resolution frameworks with Total Loss-Absorbing Capacity) have indeed reduced systemic risk and moral-hazard incentives. Large banks are far more resilient and **resolvable**, and market pricing indicates diminished expectations of taxpayer bailouts (funding cost advantages for G-SIBs fell). The FSB reports net societal benefits from the reforms, with no material adverse side-effects, but it also flags remaining gaps – notably that some resolution plans are untested and that risks may have migrated to less regulated non-banks.

Acharya, Anginer & Warburton (2016) – An academic study of the implicit funding subsidy enjoyed by TBTF banks. Analysing bank bond spreads, the authors find that prior to the crisis, large banks had abnormally low funding costs due to investors' expectations of government support. Post-crisis regulatory changes (like higher capital and credible resolution regimes) have reduced – though not eliminated – this “too-big-to-fail” subsidy. The decline in G-SIBs' funding advantage suggests markets now assign a lower chance of government bailouts, indicating improved market discipline and success in partially addressing TBTF.

Laeven, Ratnovski & Tong (2016) – An IMF study linking bank size, capitalization, and systemic risk. It provides cross-country evidence that larger banks contribute disproportionately to systemic risk, but that robust capital greatly mitigates this risk. Importantly, the introduction of G-SIB capital surcharges and stronger resolution regimes

curbs the systemic externalities of the biggest banks. The authors support surcharges and TLAC requirements as essential: well-capitalized large banks pose far less danger to the system, bolstering the case that Basel III's size-based capital buffers help solve TBTF.

Systemic risk, fire sales, and capital constraints

Frey & Traxler (2024) – *“Playing with Fire? A Mean Field Game Analysis of Fire Sales and Systemic Risk under Regulatory Capital Constraints.”* This theoretical paper models how strict capital requirements can, in a crisis, induce banks to collectively deleverage in harmful ways. When many banks must sell assets to meet capital ratios, it can depress prices and spark a cascade of further losses (fire sales). The authors show that if banks are well-capitalized ex ante or if credible resolution mechanisms exist to inject capital, such cascades and “contagion defaults” can be averted. The findings underscore that sufficient capital buffers and effective resolution are critical to preventing self-reinforcing fire-sale dynamics in a stressed system.

Cifuentes, Ferrucci & Shin (2005) – A seminal model of systemic risk via fire sales. It demonstrates that when banks operate under capital adequacy constraints, an initial shock at one institution can force asset liquidations that depress market prices, deplete other banks' capital, and trigger further sales – a contagion spiral. The paper highlights how prudential regulations, while promoting individual bank solvency, can generate systemic effects if many banks hit constraints simultaneously. It also notes that ample capital or liquidity support can break the chain, presaging later reforms that require higher capital and central bank backstops to dampen such contagion.

Greenwood, Landier & Thesmar (2015) – This study develops a measure of banks' vulnerability to system-wide deleveraging. The authors model how an equity shock at one bank leads it to sell assets to reduce leverage, pushing down prices and causing losses for other banks with similar portfolios. Using European bank data, they find that larger and more levered banks contribute most to fire-sale spillovers. Their analysis implies that higher capital requirements for systemically important banks (as implemented in Basel III) reduce the risk of fire-sale contagion. By calibrating various interventions, they show that policies like targeted capital injections or asset purchase programs can substantially curb fire-sale externalities during crises.

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Cont & Schaanning (2017) – A quantitative framework for systemic stress testing that incorporates fire-sale contagion. The authors simulate a network of banks with common asset holdings and leverage constraints. They show that an adverse shock can propagate as banks sell assets to meet leverage limits, causing “price-mediated contagion.” The paper introduces metrics to assess each institution’s contribution to systemic risk via indirect contagion. One finding is that concentrating capital in certain banks or imposing leverage caps can attenuate the amplification of shocks. This work influenced regulators’ understanding of how microprudential rules (like leverage or capital requirements) interact with market liquidity and supports the need for macroprudential tools to complement them.

Critiques of post-crisis reforms and remaining risks

Hellwig (2021) – A leading academic voice offering a sober assessment: banks are “safer, but not safe enough.” Hellwig praises the broad thrust of the reforms but argues they remain incomplete. He contends that even with Basel III, banks could still be too highly leveraged and interconnected, and that authorities might be unwilling to impose losses on creditors in a major crisis – meaning the core problem of TBTF may persist. He also criticizes the EU’s resolution regime as potentially impractical in a systemic crisis, noting that political and legal challenges could impede effective bail-ins. Hellwig’s critique warns against complacency, urging that significantly more equity capital and simpler, stricter rules would be needed to truly eliminate TBTF.

Vickers (2018) – Vickers, who chaired the UK’s Independent Commission on Banking, delivered a notable speech titled “*Safer, but not safe enough.*” He echoed similar concerns to Hellwig’s. Vickers acknowledged that Basel III and related reforms had improved banks’ loss-absorbing capacity, but he argued that capital levels were still insufficient relative to the potential losses of a major crisis. He cited analyses suggesting that considerably higher equity requirements (well above current Basel III minima) would be needed to truly neutralize the TBTF risk. Vickers also critiqued the heavy reliance on complex risk-weighted metrics, advocating simpler measures like the leverage ratio to ensure banks are “**safe enough**”. His intervention underscores a viewpoint that, while progress has been made in bank safety, the job is incomplete – more ambitious capital buffers or structural measures might be required to protect the system fully.

Huertas (2018) – “*Resolution: Ready to Go?*” by former regulator Thomas Huertas examines whether authorities could successfully handle the failure of a major global bank. Huertas

notes that post-crisis **resolution regimes** (like SPE vs. MPE strategies and cross-border pacts) exist on paper to end TBTF. Banks themselves have been made more “resolvable” through living wills and TLAC debt, and investors are on notice that bail-in is intended to be the norm. However, Huertas expresses concern that effective resolution still hinges on tough **cooperation** among authorities in different countries – which is a “frail foundation”. He points out that national interests may impede cross-border coordination in a crisis, since each jurisdiction is mandated to protect its own financial stability first. Moreover, he highlights a gap in that central banks (providers of emergency liquidity) often have no formal role in resolution decision-making, even though their actions are critical for success. Huertas calls for strengthening commitments to cooperate and creating robust plans for providing liquidity to a bank in resolution. In essence, he finds that **ending TBTF is achievable in principle**, but only if regulators themselves can overcome coordination problems – otherwise, authorities might still resort to disorderly national solutions in a future emergency.

Eggen et al. (2023) – This is the report of an independent Swiss expert group on banking stability (summarized by Weder di Mauro on VoxEU) that reviewed the demise of Credit Suisse in 2023. The report’s findings carry broader lessons about TBTF regimes. A key takeaway is the critical importance of a reliable **public liquidity backstop** for bank. In Switzerland’s case, authorities had long resisted setting up a dedicated liquidity support mechanism for a bank in resolution; when Credit Suisse neared failure, an emergency liquidity assistance package of CHF 250 billion (including a federal guarantee) had to be improvised cepr.org. Eggen et al. argue that an institutionalized liquidity backstop is needed to make resolution credible – without assured funding, even a well-capitalized bank can fail due to a run. They also emphasize the **benefit of flexibility** in crisis tools: Switzerland’s framework did not envision a state takeover, yet having multiple options (including temporary public ownership or forced merger) proved vital when a pure resolution approach was deemed too risky cepr.org. In sum, this analysis of Credit Suisse underlines that TBTF reforms must be complemented by robust liquidity arrangements and pragmatic flexibility, otherwise authorities may still prefer bail-outs or shotgun mergers over untested resolution processes in a pinch.

Admati & Hellwig (2013) – A landmark critique in the book *“The Bankers’ New Clothes,”* which, though written early in the reform process, encapsulates arguments still relevant post-Basel III. Admati and Hellwig argue forcefully that banks should be required to fund themselves with much more equity (on the order of 20–30% of assets) and that the banking

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industry's claims about the costs of higher capital are largely unfounded myths. They view the Basel III levels of capital as far too low and laden with complexity and loopholes. In essence, this work posits that regulators only took half-measures – banks are somewhat safer now, but still dangerously undercapitalized – and it calls for bolder action to truly fix the fragility of the banking system.

Sarin & Summers (2016) – An analysis questioning whether banks are actually safer post-crisis from a market perspective. The authors examine market indicators (such as equity volatility, price-to-book ratios, and credit default swap spreads) for large banks and find little improvement relative to pre-crisis benchmarks. They point out that despite higher regulatory ratios, many banks' market valuations remain low and their CDS spreads did not markedly decline, suggesting investors may still perceive substantial risk. Possible interpretations are that increased regulations have reduced banks' profitability or that markets doubt authorities would impose losses in a future crunch. Sarin and Summers conclude that simply looking at regulatory metrics might overstate true safety – in their words, the system may not be as much safer “as hoped,” implying that TBTF concerns linger.

Finance Watch (2024) – *“Lost Momentum: The Evolution and Challenges of Basel III.”* A civil society report voicing concern that the post-crisis reform drive has stalled and could even be reversing. It argues that while Basel III was a step forward, recent trends – lobbying for simpler rules, delays in implementation, and fragmentation across jurisdictions – risk diluting the hard-won gains. The report highlights that some elements of the final Basel III “endgame” (like output floors for internal models) are being watered down or postponed, and warns that banks and some regulators are suffering “reform fatigue.” Finance Watch advocates for reinvigorating the reform agenda: fully implementing Basel III in letter and spirit, addressing areas still unresolved (like too-low equity levels and exposures shifted to shadow banking), and resisting industry pressure to roll back crucial safeguards.

Regulatory complexity and risk sensitivity

Brookes et al. (2022) – Bank of England research examining the growing complexity of bank regulation. It documents that the text of Basel III and related rules is several times longer and more complicated than Basel II. The paper raises concerns that excessive complexity can hinder comprehension and compliance – even banks and supervisors struggle to fully understand the overlapping requirements. Such complexity might also create opportunities for regulatory arbitrage. The authors suggest that rationalizing and simplifying the regulatory

framework, while maintaining its efficacy, could lower compliance costs and improve effectiveness. This speaks to debates on whether the post-crisis regulatory edifice has become overly intricate, potentially undermining transparency and accountability.

Reiners (2016) – A commentary on the problem of variability in risk-weighted assets (RWA) under Basel II's internal model approach. Reiners explains how banks' use of internal risk models led to inconsistent capital outcomes – similar portfolios could attract very different capital charges across banks, undermining confidence in the ratios. This “RWA variability” problem prompted Basel III's final reforms (e.g. introducing output floors and restricting model approaches for certain risks). The piece underscores that complexity in risk weighting not only made regulation opaque but also allowed some banks to game the system by underestimating risk. It anticipated that Basel III would need to rein in these issues by limiting complexity and ensuring more comparability in capital measures.

Haldane (2012) – A influential speech “*The Dog and the Frisbee*” by Andrew Haldane (Bank of England), arguing that simpler rules can often be more effective than overly complex regulation. Using vivid analogies, Haldane points out that Basel III had ballooned into hundreds of pages of rules, which might be counterproductive: complex rules are harder to enforce and easier to circumvent. He advocates for straightforward metrics like the leverage ratio and simple liquidity ratios, suggesting that simplicity promotes robustness. This perspective was critical in sparking a regulatory rethink that led to introducing a leverage ratio as a backstop. Haldane's work represents the school of thought that Basel's complexity might need pruning, and that sometimes “less is more” for financial stability.

Mariathasan & Merrouche (2014) – An empirical study titled “**Banks' risk-modeling incentives and the pricing of risk-weighted assets.**” It provides evidence that under Basel II, banks with weaker balance sheets systematically abused the freedom of internal models to understate their risks. Weaker banks obtained lower RWAs (and thus lower capital requirements) by optimistic modeling, a phenomenon the authors dub “cherry-picking” of risk parameters. Moreover, those banks that most aggressively lowered their RWAs tended to experience worse ex-post outcomes (i.e. higher actual losses), indicating that the risk-weighted capital framework was being gamed at the expense of safety. This research bolsters the case for the Basel III revisions that constrain model use (like the output floor and standardized approach requirements) to ensure risk weights are not unduly minimized by complexity.

Annex I: Relevant Academic Literature

Behn, Haselmann & Vig (2016) – “*The Limits of Model-Based Regulation*,” a study using loan-level data from Germany to assess the impact of Basel II’s internal ratings-based (IRB) approach. It finds that after banks adopted IRB models, average risk weights on their portfolios dropped significantly – not necessarily because of genuine risk reduction, but due to banks optimizing models. Banks using internal models appeared to hold less capital against a given loan portfolio than under the old rules, and those loans did not actually become less risky. During the financial crisis, the authors note, some IRB banks were less able to absorb losses than their standardized approach peers, calling into question the purported risk-sensitivity benefits of complex models. The paper’s conclusion is that model-based capital rules have intrinsic limits and can undermine stability, thus justifying regulators’ moves to add floors and simplify aspects of Basel III.

Cruzado (2025) – “*Standardized Measurement Approach (SMA) vs Advanced Measurement Approaches (AMA): A Critical Review in Operational Risk*.” Focusing on the Basel framework’s treatment of operational risk, this paper critiques the recent move from banks’ internal AMA models to a standardised approach. The author argues that while the new SMA (part of Basel III’s simplification) is simpler and more comparable, it sacrifices risk sensitivity, potentially underestimating op risk for some banks and overestimating for others. The study highlights the inherent trade-off in regulation between simplicity and risk sensitivity: the AMA was complex and hard to validate, but scrapping it means losing granular risk information. For EU G-SIBs, this debate is relevant to evaluating whether regulatory simplification in areas like op risk might inadvertently weaken risk management incentives or obscure actual risk exposures.

Bank resolution and bail-in challenges

Avgouleas & Goodhart (2015) – “*Critical Reflections on Bank Bail-ins*,” a legal-economic analysis questioning the effectiveness of bail-in regimes in ending TBTF. The authors acknowledge that orderly bail-in (writing down or converting debt to recapitalize a failing bank) can work for idiosyncratic, isolated failures. However, they argue that in a systemic crisis with multiple banks in distress, bail-ins may not be credible – authorities could revert to bailouts to stem panic. They point out potential issues like bail-inable debt being held by fragile institutions (creating contagion) and the difficulty of executing bail-ins over a fast-moving weekend. The paper effectively warns that current resolution tools, while an

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improvement, might not fully prevent taxpayer rescues in a future widespread crisis, meaning TBTF problems linger unless these limitations are addressed.

Grund (2021) – *“Liquidity in Resolution – A Transatlantic Perspective.”* This study identifies a major gap in the post-crisis resolution architecture: access to liquidity for a bank in resolution. Grund notes that both U.S. and EU frameworks largely bar central banks from lending to banks that have entered resolution, due to post-crisis legal constraints. In the U.S., the FDIC’s Orderly Liquidation Fund can provide some temporary liquidity, but in the EU, no comparable common backstop exists – only limited national tools. This creates a risk that even a solvent, successfully bailed-in bank might fail simply for lack of short-term funding (a modern-day bank run). Grund advocates establishing a credible resolution liquidity backstop – e.g. central bank lending secured by government guarantees – to complement TLAC. The comparison highlights that without reliable liquidity support, “resolving” a G-SIB in crisis could prove unworkable, a clear area where reform efforts need to be completed.

Single Resolution Board Working Paper (2024) – *“The 2023 Banking Turmoil: Lessons for EU Resolution.”* This analysis by the Euro-area resolution authority reflects on the failures of Silicon Valley Bank and Credit Suisse in 2023. It concludes that EU G-SIB resolution plans are more robust now than pre-2010, with ample bail-in debt and coordinated planning, but it stresses that a major G-SIB resolution remains untested in practice. The paper notes that in Credit Suisse’s case, despite lots of TLAC, authorities chose a shotgun marriage with UBS rather than a resolution – partly due to speed and confidence concerns. Lessons drawn include the need for (i) even stronger crisis preparedness and governance at banks, (ii) clearer cross-border coordination protocols, and (iii) a credible financial backstop for resolution (echoing the liquidity issue) to give authorities the confidence to actually execute a G-SIB bail-in if needed. In sum, the SRB sees the progress made, but emphasizes that implementing resolution in a real crisis demands further improvements in both banks’ readiness and policy support tools.

Financial Stability Board (2024) – *“2023 Bank Failures: Preliminary Lessons Learned for Resolution.”* An official review of the March 2023 turmoil, reinforcing similar points. The FSB notes that post-crisis reforms did equip banks with much more loss-absorbing capacity – for example, Credit Suisse had massive TLAC, which allowed authorities to impose losses on shareholders and AT1 bondholders. However, the events also exposed challenges: the failures unfolded faster than some resolution plans anticipated (aided by social media and

Annex I: Relevant Academic Literature

digital banking), and authorities resorted to alternative measures to preserve financial stability. The FSB emphasizes two needs going forward: ensuring the **power to bail-in** is operational and credible under pressure, and establishing **effective liquidity facilities** for banks in resolution. These lessons underline that while no taxpayers ultimately bore losses in 2023 (a positive result of reforms), further work is required to make the full resolution framework work as intended under real-world stress.

Future agenda: simplification, fragmentation, and shadow banking

Tarullo (2019) – *“Financial Regulation: Still Unsettled a Decade after the Crisis.”* Former Federal Reserve Governor Daniel Tarullo surveys the post-crisis landscape and finds a mix of accomplishments and unfinished business. He observes that the largest banks are **much more resilient** – far better capitalized and less reliant on unstable short-term funding – validating the core reforms. But he highlights two key issues: (1) important **stability threats lie outside the regulatory perimeter**, especially in the growing non-bank or “shadow bank” sector that largely escaped the new rules; and (2) political momentum has shifted toward deregulation, raising concerns that some hard-won gains could erode. Tarullo argues for vigilance against rollback and for extending appropriate regulatory approaches to non-bank intermediaries. His perspective underscores that achieving a safe financial system is an ongoing task – regulators must adapt reforms to new risks (e.g. in market-based finance) and ensure that global standards are maintained even as memories of the crisis fade.

Hung Tran (2025) – *“Basel III Endgame: The Specter of Global Regulatory Fragmentation.”* A policy analysis warning that the final implementation phase of Basel III is at risk of splintering across jurisdictions. Tran notes that several major economies, including the US and EU, have delayed or tailored the “Basel III endgame” rules (such as revisions to risk models and output floors) in response to domestic industry pressures. While each deviation may be minor in isolation, the collective trend toward **national discretion** threatens to undermine the uniformity of global bank standards. He argues this could re-introduce an unlevel playing field and arbitrage opportunities, potentially weakening financial stability over time. The piece calls for reinvigorated global coordination, urging policymakers to prioritize long-term stability over short-term national competitiveness – lest we return to a patchwork of rules that the Basel framework originally sought to eliminate.

Eurofi (2025) – *“Simplifying EU Banking Regulation.”* A high-level industry and policy forum report that reflects a balanced view emerging in Europe. It acknowledges that as of 2024, EU

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G-SIBs are well capitalized, hold abundant liquidity, and are comfortably meeting Basel III standards, which has helped restore confidence and profitability. Given this success, the report supports **prudent simplification** of the regulatory framework – eliminating needless complexity that doesn't add value. However, it cautions that any simplification must not **weaken core safeguards or diverge from global norms**. Eurofi emphasizes that maintaining alignment with Basel III internationally is critical to avoid regulatory arbitrage and preserve stability. In short, the report suggests the EU can make rules more efficient and user-friendly while still “keeping the guard up,” striking a tone that future reforms should be calibrated to streamline regulation without backtracking on resilience.

Financial Stability Board (2023) – *“Global Monitoring Report on Non-Bank Financial Intermediation.”* This annual FSB assessment highlights the migration of risk to the non-bank sector. It reports that the asset volume of non-bank financial intermediaries (such as investment funds, money market funds, and fintech lenders) rivals that of the traditional banking sector and has been growing in complexity. The 2023 update notes vulnerabilities in areas like open-ended funds (liquidity mismatches), leveraged hedge fund strategies, and the reliance of some markets on lightly regulated entities. These findings underscore that while banks are safer, parts of the financial system remain susceptible to runs and contagion. The FSB's work program on NBFIs is a reminder that **post-crisis reforms must broaden in scope** – regulators are now turning attention to strengthening resilience in non-bank channels to ensure that tighter bank regulation does not simply shift the locus of the next crisis.

International Monetary Fund (2018) – *“A Decade After the Global Financial Crisis: Are We Safer?”* – The IMF's Global Financial Stability Report at the ten-year mark answered this question with “yes, but...” Banks were undeniably stronger: capital levels doubled and liquidity buffers introduced, making a 2008-style collapse of major banks far less likely. However, the IMF pointed out emerging concerns, including rising leverage outside the banking system, cyber risks, and political pressure to ease standards. It recommended **completing the unfinished reform agenda** (for instance, finalizing Basel III implementation and solidifying resolution regimes) and **guarding against deregulation** that could reintroduce vulnerabilities. In essence, the IMF judged that we are indeed safer thanks to post-crisis reforms, yet we may not be safe enough unless authorities remain committed to the reforms, adapt to new risks, and resist complacency as memories of the crisis fade.

Annex II. Post-GFC Reform Scorecard: An Assessment

After examining the evolution from 2010 through 2023 in Chapter 4, we can now step back and assess how successful the post-GFC regulatory reforms have been in achieving their goals for EU G-SIBs. Below is a “scorecard” of key objectives versus outcomes, reflecting a doctrinal and empirical evaluation:

Capital Adequacy & Loss Absorption – *Grade: Very Effective.*

The reforms have unquestionably made EU G-SIBs much better capitalised. Banks more than doubled their core capital ratios on average, building substantial buffers that have proven capable of absorbing large losses (e.g. during COVID) without threatening viability. The introduction of capital buffers (CCB, CCyB, G-SIB surcharges) has created extra layers of protection. In practice, no EU G-SIB has come close to insolvency since the reforms, even under severe stresses, which attests to the adequacy of capital. **Bank resilience in terms of solvency is markedly stronger**, satisfying the primary goal of Basel III. One nuance is *buffer usability*: banks remain reluctant to dip into buffers for fear of market reactions. This means there is still work to be done to ensure buffers can play their countercyclical role fully. But overall, the *quantity and quality* of capital held by EU G-SIBs is a clear success story of the reforms. Market confidence in bank solvency has improved, and rating agencies have removed many “uplifts” that assumed government support, reflecting belief in banks’ own loss-absorption capacity.

Liquidity and Funding Resilience – *Grade: Very Effective.*

The imposition of LCR and NSFR has dramatically improved banks’ liquidity profiles. EU G-SIBs hold large stocks of high-quality liquid assets and rely more on stable funding sources than before. During the 2023 turmoil, for example, EU banks easily met deposit withdrawal demands, and no liquidity support was needed from central banks for G-SIBs (aside from routine facilities). The LCR in aggregate remained well above 100%.

The liquidity reforms essentially ended the practice of extreme short-term wholesale funding that felled banks like Northern Rock in 2007. One caveat is the unprecedented speed of digital-age bank runs, which may warrant even higher buffers or shorter stress horizons in regulation. Nonetheless, EU banks’ strong liquidity position prevented contagion

in 2023 and allowed them to function during COVID turmoil – a clear indication that this aspect of the reforms achieved its goal.

Global Systemic Risk Containment (G-SIB Indicators, Systemic Footprint) – Grade: Effective.

The G-SIB framework (identification and surcharges) has been effective in nudging banks to reduce their systemic risk footprint. Empirical evidence shows G-SIBs have lowered metrics like interconnectedness and complexity, and their probability of default has fallen relative to non-G-SIB peers, partly due to higher capital. The fact that **no G-SIB failure has caused a global crisis post-2008** (CS was resolved without global contagion, and others have not needed rescue) suggests systemic risk is more contained.

Market measures of expected government support for G-SIBs have declined, indicating reduced moral hazard. Academic studies confirm that G-SIB designation and higher buffers correlate with lower systemic risk contributions by those banks. That said, the systemic importance of the very largest EU banks (by absolute size) remains significant – they are still “too big” in absolute terms. The framework has not made, say, BNP Paribas or Deutsche Bank *small*, but it has made them *safer and somewhat less interconnected*. The systemic risk posed by EU G-SIBs is therefore lower than in 2008, but not zero. Ongoing monitoring (e.g. CoVaR, SRISK) is needed, especially as new systemic risks (cyber, climate) emerge.

Continuity of Credit and Economic Impact – Grade: Largely Positive. One of the reform goals was to bolster stability without unduly harming banks’ ability to finance the economy. On this front, the evidence in the EU is encouraging. Aggregate credit growth has been sustained over the cycle; there is **“no indication that the reforms impaired the aggregate supply of credit”**. In fact, through downturns like COVID, banks were able to keep lending, which supported recovery. By making banks healthier, reforms arguably *enhanced* their capacity to lend in bad times (the opposite of the pre-reform pattern where banks would collapse and cut credit in a downturn). The cost of credit did not spike due to reforms either; any increases in bank funding costs from higher capital were offset by lower risk premia.

The Basel Committee found banks’ overall funding costs (debt and equity) actually declined for those that became less risky. From a macroeconomic standpoint, the reforms’ drag on GDP, once feared by some, turned out to be minimal or even positive in the long run due to fewer crises. The EU did experience a slower bank credit expansion in early 2010s as banks

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adjusted, but it's hard to disentangle that from the Eurozone crisis austerity and demand factors. In balance, *higher resilience has been achieved without sacrificing the financial intermediation function* – a notable success.

Too-Big-To-Fail and Resolution – Grade: *Partly Effective (Work-in-Progress)*.

This is a critical area to evaluate: have we put an end to taxpayer-funded bailouts of G-SIBs? The reforms made enormous strides: the legal framework (BRRD/SRM) is in place, and banks have built TLAC/MREL buffers so that resolution authorities can recapitalise a failing bank internally.

By 2024, every major bank in the Banking Union meets its MREL target, and the SRB has affirmed that **banks have “sufficient loss absorption and recapitalisation capacity to support bail-in execution.”** We have seen the example of Banco Popular, where resolution worked as intended with no taxpayer money. We have also seen in the CS case that authorities were willing to impose investor losses of magnitude (shareholders and AT1 wiped out) rather than use taxpayer funds (apart from a limited guarantee). **No G-SIB in the EU has been bailed out by taxpayers in the post-GFC era**, which is a stark change from 2008 when governments spent hundreds of billions on bank rescues. This suggests the potential of the SRM and TLAC to prevent bailouts is being realised.

However, the full credibility of the regime will only be known when a large EU G-SIB actually fails and is handled via resolution or solvent wind-down. There are lingering doubts in some quarters about political will: for instance, would authorities really impose losses on senior bondholders and large uninsured depositors if a truly huge bank were failing, or would there be pressure to intervene with public funds to avoid market chaos? Completing the Banking Union (with a common Deposit Insurance Scheme) would further cement the credibility by ensuring even medium-sized bank failures don't necessitate national bailouts.

Bank Profitability and Sustainability – Grade: *Mixed*.

On stability grounds, banks are viable – they have capital and liquidity. On commercial grounds, however, many EU G-SIBs have struggled with low profitability, as discussed. The reforms, by design, curtailed certain high-risk/high-return activities and required more capital (diluting ROE). So some reduction in headline profitability is an expected side effect of safer

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banking. The question is whether this undermines the goals by creating a different weakness. So far, low profitability has been a chronic issue but has not triggered a systemic crisis; it's more of a structural drag. In 2022–2023, rising interest rates provided relief, showing banks can earn decent profits in a normal rate environment.

Thus, one could argue that profitability issues were partly cyclical. Still, European banks continue to face cost challenges (including compliance costs from regulation). The **high cost-to-income ratios of many EU G-SIBs** point to efficiency problems. This is not directly caused by post-GFC reforms, but heavy regulatory requirements contribute. This aspect is more of a long-term competitiveness issue. If EU G-SIBs remain less profitable than global peers, they may lose relevance or consolidate further, which could impact financial stability (consolidation can reduce systemic risk in some ways but increase it in others if it creates even bigger entities).

On balance, bank profitability remains an *outstanding challenge*, but it does not directly undermine the *financial stability* goals. Regulators are now exploring ways to simplify rules to reduce unnecessary compliance costs without removing essential safeguards.

Unintended Consequences and Residual Risks – *Grade: Manageable.*

No reform is without unintended consequences. In this case, a potential consequence was the migration of risk to the shadow banking sector. We have seen growth in investment funds, fintech lending, crypto-asset markets etc., which may carry new risks (e.g., liquidity mismatches in open-end funds). The banking reforms arguably encouraged this shift by making banks safer and relatively more constrained. The overall financial system might still have vulnerabilities, just outside the banking core. The EU and global regulators (FSB) are now focusing on these non-bank areas – a prudent step so that the resilience achieved in banks is not offset by weakness elsewhere.

Another unintended effect might be that banks have become very risk-averse and could under-serve certain higher-risk sectors (like small business lending) – but the rise of private debt funds has filled some gaps. These side effects are real but so far have not caused systemic instability. They are being monitored and seem *manageable* with targeted policy tweaks.

Competitiveness – *Grade: Moderately effective.*

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Despite significantly improved resilience, EU banks continue to lag behind global counterparts in profitability and market valuation. A recent Oliver Wyman/EBF study notes that EU banks have **failed to earn their cost of capital for over a decade**, in contrast to US peers who returned to pre-crisis margins much more rapidly. Lower ROEs (around 5–7% pre-pandemic) and depressed price-to-book ratios reflect this competitive disadvantage. While concerns over regulatory burdens versus fragile macroeconomic conditions abound, research suggests that regulatory costs—particularly capital and compliance requirements—contribute noticeably to this profitability gap. As interest rates rose in 2022–2023, EU bank profits rebounded, but market valuations remain modest.

EU banks face greater complexity and supervisory intrusiveness than their non-EU peers. The European legislative framework encompasses multi-layered buffer systems (CCyB, P2G/P2R, G-SIB surcharges), overlapping leverage and liquidity ratios, and SSM-led qualitative SREP processes. These demands increase compliance costs, constrain scale-driven and cross-border expansion, and force banks to hold higher **management buffers** to avoid regulatory breaches or market stigma—effectively reducing usable capital. This structural friction limits simplified capital deployment and the economies of scale that underpin competitiveness.

The challenge is more than competitive metrics—it also affects the EU’s broader economic strategy. Powerful voices in the EU argue that **tight regulation limits the financial sector’s ability to support green, digital, and strategic autonomy goals**, especially when capital markets are underdeveloped. The fragmentation of the Banking Union, absence of a fully integrated Deposit Insurance Scheme, and thin securitisation markets further impede scale and resilience. EU regulators emphasise that while regulations should remain robust, they must avoid unnecessary complexity that hampers growth.

In doctrinal terms, the EU finds itself balancing its central legal commitments: **stability and resilience** versus **market efficiency and international competitiveness**. The new regulatory architecture has successfully reduced systemic risk and ended the era of bailouts, but it has come with implicitly higher costs and constraints on bank business models. As the EU proceeds into the final Basel phase and aims to deepen its Banking and Capital Markets Union, it confronts a critical question: *Can regulation be simplified—without diluting key safety standards—to better align Europe’s financial sector with its strategic economic ambitions?* This is the competitiveness-competence dialectic that defines the current regulatory juncture.

Concluding reflections

In light of the above, the **overall assessment is that the post-GFC reforms have been largely successful in strengthening EU financial stability with regard to G-SIBs**. The banking system in the EU today is far more robust than in 2007. Banks are better equipped to absorb shocks, less likely to fail, and if they do fail, we have far better tools to handle it without catastrophic fallout. The *spirit and letter* of Basel III and related EU regulations have, for the most part, fulfilled their purpose: as Finance Watch aptly summarised, **“Stronger, better capitalised banks are better for the EU’s economy, in both good times and bad.”** The events of the past 15 years – including pandemic and recent turmoil – support this claim.

However, “success” does not mean “job finished.” The reforms scored highly on resilience but only mixed on some other metrics like profitability and full elimination of TBTF risk. There remain *open issues*: ensuring that resolution works smoothly in practice, tweaking rules to cover emerging risks, and balancing the regulatory burden to keep EU banks competitive.

The regulatory framework itself will continue to evolve (e.g., implementation of the final Basel III revisions, integrating lessons from 2023 about interest rate risk and deposit flows). A truly balanced scorecard thus notes both **achievements** (e.g., capital strength, no need for taxpayer bailouts to date, maintained lending, reduced systemic risk indicators) and **challenges** (e.g., banks’ low market valuations, some gaps in resolvability and cross-border coordination, and the need to update rules for new risk realities).

In conclusion, **the post-GFC reforms in the EU banking sector, centred on Basel III and its EU implementation, have been effective to a significant extent in meeting their goals for G-SIBs**. They have *materially lowered the probability and impact of G-SIB failures*, contributing to a safer financial system. European G-SIBs in 2025 are not only more resilient by regulatory measures, but also more credible in the eyes of the market as institutions that can withstand stress without public bailouts. Financial stability in the EU has indeed been strengthened: recent crises were navigated without systemic banking collapse.

The remaining areas for improvement do not so much invalidate the success as provide a roadmap for the next phase of regulatory refinement. In the grand scheme, the reforms earn a positive scorecard. The EU’s challenge now is to maintain this stability while fostering a banking sector that can innovatively and profitably support the economy, an equilibrium that continuous doctrinal fine-tuning and vigilant supervision will seek to achieve.

Annex III. Stakeholder and Institutional Views on Implementation Divergence

The comparative approaches to Basel III implementation – especially regarding G-SIB regulation – have elicited significant commentary from international bodies, regional regulators, and industry stakeholders. A *formal legal analysis* must consider these perspectives, as they often influence or reflect the direction of regulatory policy.

Basel Committee / BIS

The BCBS has consistently advocated for full and consistent adoption of the Basel III framework. Its oversight body (GHOS) has emphasised that member jurisdictions should implement **“all aspects of the Basel III framework in full, consistently, and as soon as possible.”** This stance is grounded in the principle that only a level international playing field can prevent regulatory arbitrage and a race to the bottom.

The BIS’s Financial Stability Institute (FSI) published a paper in 2020 warning that differences in Basel III implementation were leading to **“market fragmentation”** and could **“create an uneven playing field and hamper the flow of capital across borders.”** The FSI authors (Restoy et al.) noted that while some variations are inevitable (and even beneficial to tailor rules), significant divergences – for example, in how jurisdictions calculate RWAs or apply certain buffers – risk undermining the *intent* of the international standards. In particular, the FSI pointed out differences in loan valuation and provisioning (like the treatment of NPLs) as one area causing inconsistency.

For G-SIBs, the Basel Committee’s own assessments (through its Regulatory Consistency Assessment Programme, RCAP) have generally found the EU, US, and UK *compliant* with many Basel standards, but the Committee has flagged delays and specific deviations. For instance, the Basel Committee noted with some concern the postponement of the output floor implementation beyond the agreed date.

The **BIS leadership** (including the head of the Basel Committee and BIS General Manager) have diplomatically urged jurisdictions not to “backslide” under industry pressure. In a 2023 speech, a BIS official highlighted that *“the Committee has been actively monitoring and assessing the full and consistent implementation of Basel III and will continue to do so”*, a clear signal to major jurisdictions that their progress (or lack thereof) is being watched. In

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summary, the official Basel view is one of *concerned encouragement*: pleased that EU and UK are finally moving in 2025, and hoping the U.S. will follow suit promptly, all while cautioning that any material divergences (output floor scope, calibration of surcharges, etc.) should be minimised.

EBA

The EU's banking regulatory agency has provided technical input on Basel III implementation and monitored the impact on EU banks. The EBA generally supports rigorous implementation but has also acknowledged industry competitiveness issues. In its quantitative impact studies, the EBA found that full Basel 3.1 would significantly raise RWAs for EU banks (notably due to the output floor), but it viewed this as necessary to reduce unwarranted RWA variability.

The EBA's official line has been that the final Basel III package will **increase resilience** and that EU banks are well-capitalised enough to absorb it. However, the EBA also explored ways to “*maintain a level playing field*.” For instance, the EBA proposed methodologies for O-SII buffers to avoid excessive overlap with G-SIB buffers, and it analysed the stacking order of capital requirements to ensure clarity and usability of buffers.

Notably, the EBA's July 2023 report on capital buffers observed that the UK and US have different buffer structures, but concluded that the **overall resilience achieved is comparable**, even if via different means. This can be read as an EBA reassurance that Europe's system (with Pillar 2 and fixed buffers) is not disadvantaging EU banks relative to the US/UK, but rather achieving similar outcomes by a different route.

Still, the EBA has cautioned EU authorities on **buffer usability** and **complexity** – implicitly recognising that if EU rules are too complex, they might not work as intended in crises. The EBA's Basel III monitoring exercises also feed into the Commission's calibrations; for example, EBA data helped justify the extended phase-ins and transitional arrangements (like not immediately applying the output floor at full force) to mitigate impact on EU banks' lending capacity.

In summary, the EBA's view supports full Basel implementation *with pragmatism*: implement the standards but use EU-specific adjustments where justified (the EBA was supportive of retaining the SME supporting factor and other EU credit risk tweaks to balance Basel's

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impact). Legally, the EBA's role is advisory, but its reports carry weight in the EU legislative process.

SRB

The SRB, responsible for resolution planning in the Eurozone, has a perspective focused on loss-absorbing capacity and resolvability of G-SIBs. The SRB has generally welcomed higher capital and TLAC for systemically important banks, as this facilitates orderly resolution.

The SRB (and national resolution authorities) are stakeholders in ensuring that capital differences do not lead to **regulatory arbitrage in crisis scenarios**, for instance, if an EU G-SIB's subsidiary in the US is less capitalised due to US rules, that could complicate a resolution. Publicly, SRB officials have echoed the need for global coherence. Former SRB Chair Elke König often stressed that *“global standards are only as good as their implementation”* and warned against deviations that could reintroduce fragmentation in supervision and resolution.

The SRB has also noted that EU banks pay significant amounts into the Single Resolution Fund (SRF) – roughly twice as high contributions as U.S. banks pay into the FDIC fund, relative to assets – which the SRB sees as strengthening the system but also as a cost that EU banks bear for public policy.

The **implicit SRB view** is that while EU banks shoulder these extra burdens, it makes the system safer; however, if other jurisdictions do not impose similar burdens (e.g., the U.S. has no ex-ante resolution fund levies), then EU banks face a competitive disadvantage. Legally, the SRB cannot change capital rules, but it can adjust **MREL** requirements to compensate. The SRB has been aligning MREL with TLAC for G-SIBs.

Notably, if EU G-SIBs end up holding higher going-concern capital, the SRB might have slightly lower additional MREL needs (since capital itself counts toward loss absorbency). This interplay is technical, but the SRB certainly supports robust capital for G-SIBs and would be cautious about any jurisdiction giving G-SIBs a free pass, as that could increase the chance or severity of cross-border bank failures.

National Regulators (US & UK)

In the United States, the regulatory leadership has recently shifted to a more stringent tone. The Federal Reserve's Vice Chair for Supervision, Michael Barr, in late 2022 and 2023 indicated that U.S. capital requirements for large banks may need to increase to address shortcomings – effectively **endorsing Basel III endgame reforms**.

In a 2023 speech, Barr noted areas where the US had gaps (like no capital charge for operational risk under current rules, reliance on banks' internal models, etc.) and signaled the Fed would plug those gaps. The banking agencies' 2023 proposal reflects this by introducing standardised operational risk capital and more risk-sensitive approaches, even if industry calls it “gold-plating.” U.S. regulators contend that these changes *enhance consistency* and risk coverage – the NPR stated it would “better reflect underlying risks and increase the consistency of how banks measure risks”.

The U.S. banking industry, however, represented by groups like SIFMA and the Financial Services Forum, has pushed back hard. They argue the proposals would overshoot Basel, citing numbers like an **additional \$250 billion** in capital surcharges across US G-SIBs beyond Basel's intent. They particularly criticise the inclusion of low-risk assets in leverage exposure and the Method 2 surcharge as putting U.S. banks at a *global disadvantage*. Some point out that **U.S. G-SIBs already meet a 100% output floor (Collins Amendment)**, which is more conservative than Basel's 72.5%, implying U.S. banks are not actually enjoying a lenient regime. This view (articulated by, for example, the Bruegel think-tank and some U.S. commentators) is that if you look at total capital to total assets, U.S. banks hold at least as much as EU banks – thus claims of EU banks being “overburdened” might be overstated.

European Institutions and Stakeholders

Within the EU, beyond the EBA and SRB, the European Central Bank (which supervises Eurozone G-SIBs via the SSM) and the European Commission have important views. The ECB's Supervisory Board (led by Andrea Enria until end of 2022) has generally argued against significant deviations from Basel III. Enria repeatedly urged a “full, timely and consistent” implementation and cautioned against carving out too many EU-specific waivers that could undermine credibility. That said, the ECB did acknowledge the need for some flexibility (for example, Enria supported transitional arrangements to avoid a sudden large capital demand that could choke off lending).

Annex III. Stakeholder and Institutional Views on Implementation Divergence

The **European Commission**, which drafted the CRR III/CRD VI proposals, had to balance industry lobbying with Basel commitments. In its proposal, the Commission chose to *maximise* use of discretion allowed by Basel – for instance, Basel allows applying the output floor at consolidated level only, but the Commission initially proposed (and the final law permits) applying it at each subsidiary **unless waived**. This was a more conservative approach aimed at ring-fencing capital within each EU jurisdiction, but it drew criticism from industry and even the EBA.

In the legislative process, the Council and Parliament ultimately included the option for national authorities to not apply the floor at solo level (which gives flexibility to avoid double-counting capital in cross-border banking groups). The *European Parliament's Committee on Economic and Monetary Affairs (ECON)* had some members very concerned with EU banks' competitiveness; they pushed for looser treatments (like permanent partial allowances in the output floor for low-risk mortgages, which indeed made it into the final text as a transition till 2032).

The European Economic and Social Committee (EESC), representing various interests, clearly stated that while **financial stability** is paramount, the Basel implementation should *“ensure [banks'] competitiveness... including from the perspective of a balanced capital requirements framework”*.

It called on legislators to achieve a **“proper balance”** between resilience and the banks' ability to finance the economy. The EESC also explicitly **welcomed** the Commission's focus on ESG risks and also the monitoring of other jurisdictions' implementations, to avoid the EU getting out of sync. This reflects a broader EU concern: they do not want to unilaterally disarm (by watering down Basel) but neither do they want to “go it alone” and put EU banks at a disadvantage if others fail to implement.

The final compromise on CRR III – with its phased output floor, temporary carve-outs (like for certain residential loans), and the ability to delay FRTB – can be seen as the EU internalising these stakeholder views. For instance, **the European Economic and Social Committee's warning** that *lower standards abroad* shouldn't drag Europe into a *“downward spiral”* of delay likely emboldened EU lawmakers to press ahead for 2025; yet its warning about competitiveness also pushed them to include mitigating measures.

Industry and Think-Tanks

Banking industry groups on both sides of the Atlantic have published analyses bolstering their positions. In Europe, the Association for Financial Markets in Europe (AFME) and the European Banking Federation (EBF) sponsored studies (like the Oliver Wyman report) to quantify the cost of EU-specific rules.

They argue that EU's implementation *overshoots* Basel in some areas (for example, applying the output floor at each subsidiary, or the treatment of unrated corporates) and that this will harm credit and growth. Eurofi, a European financial forum, published an article urging **"preserving EU banks' capacity to finance the economy"** while implementing Basel III, hinting that requiring significantly more capital via the output floor might be counterproductive. On the U.S. side, the Financial Services Forum (which represents the largest U.S. banks) has contended that **U.S. banks actually hold higher capital than EU banks** when one considers the full picture, citing a figure that large U.S. banks face an effective 11.3% risk-based requirement vs 9.9% in Europe. (This likely references that U.S. G-SIBs' buffers – CCAR/SCB + surcharge – often add up to around 7% on top of 4.5% minimum = ~11.5%, whereas EU G-SIB buffers often add ~5.5% on top of 4.5% = ~10% total requirement. Oliver Wyman's data above corroborates a similar point.)

Groups like SIFMA have warned that aspects of the U.S. proposal (like fully implementing FRTB and the output floor through the back door) could **undermine U.S. market liquidity** and drive activity to less regulated sectors. This mirrors the EU's fear but in reverse – U.S. banks fear being put at a disadvantage if the U.S. "gold-plates" Basel (e.g., by not recognising EU's extended transitions or by piling on extra surcharges). These arguments are influencing political debates: in the U.S., some Congress members have expressed concern that higher capital will restrict credit (Senator Pat Toomey in 2022 and Senator Tim Scott in 2023, for example). In the UK, industry voices have been somewhat quieter (perhaps because the UK's approach has been moderate), but UK Finance and others have certainly supported the PRA's delays and its proportionality agenda.

Concluding reflections

In synthesising these views, one finds a few common threads: **no one outright opposes strong capital for G-SIBs**, given the consensus that well-capitalised banks are foundational to stability. The disagreements center on *how much is enough* and *how to achieve a level field*.

Annex III. Stakeholder and Institutional Views on Implementation Divergence

The BIS/Basel view is an overarching one focused on stability and uniformity – warning that divergence could recreate problems. European stakeholders emphasise calibrating rules so that EU banks are not unfairly hurt if others fail to keep up. U.S. regulators, after a period of post-2016 deregulation, are swinging back to a stricter stance, whereas U.S. industry is resisting that swing. The UK is somewhat caught in the middle, wanting to remain a global financial hub with high standards but also flexibility to not overburden its banks post-Brexit.

From a **legal standpoint**, these views have manifested in concrete regulatory texts and laws: e.g., CRR III as agreed includes numerous recitals referencing international standards and competitiveness; the PRA's policy statements explicitly cite feedback and global timing; the U.S. NPR contains questions asking if any aspects should deviate from Basel to reflect U.S. markets. The eventual outcomes (laws in force) will effectively codify the compromise between these competing perspectives. It is telling that the EU's law actually *mandates* the Commission to report by 2028 on the impact of reforms and the state of global implementation – essentially a check-in to see if fragmentation materialised. This was likely added due to stakeholder insistence that the EU not blindly hold its banks to higher standards if the rest of the world has not followed by then.