



An Analytical Review of How the CRR3 Reshapes Credit Risk Measurement and Capital Requirements for EU Banks

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Abstract

This article examines the credit risk dimension of the Capital Requirements Regulation 3 (CRR3), which came into effect in the European Union (EU) in January 2025. Building on previous frameworks (CRR1 and CRR2), the CRR3 introduces a series of reforms aimed at enhancing risk sensitivity, particularly for banks using the standardized approach. The paper begins with a literature review that contextualizes the CRR3 within the historical evolution of financial regulation and highlights key academic debates on capital adequacy, regulatory effectiveness, and risk-weight design. It then presents an in-depth analysis of the credit risk-related changes under the CRR3, including the introduction of new exposure classes, revised risk weights, stricter rules on property valuation, internal due diligence requirements, and the updated treatment of off-balance-sheet exposures and currency mismatches. The findings suggest that the CRR3 marks a significant step toward a more risk-sensitive and resilient regulatory framework, while also presenting operational and compliance challenges for European banks. The article concludes by reflecting on the implications of the CRR3 for future regulatory developments and financial stability in the EU.

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1. Introduction

In the aftermath of the 2007–2008 financial crisis, European policymakers introduced regulations designed to make banks more resilient. The first two sets of rules – CRR1 and CRR2 – strengthened requirements around how much capital European banks must hold in proportion to the risks they take on, whether through their lending operations or their investments.

As of January 2025, the EU has enacted the CRR3, which further refines the existing capital requirements to enhance financial resilience and stability in the European banking sector, especially regarding credit risk ^[1].

This article focuses specifically on the credit risk dimension of the CRR3 and its implications for banks using the standardized approach. It aims to assess how the new rules are expected to improve risk sensitivity and address the limitations observed under the CRR2 for European Banks.

The structure of the article is as follows: Section 3 presents a literature review covering the historical evolution of financial regulation, the impact of capital requirements on lending, and academic critiques of the CRR2's risk sensitivity. Section 4 outlines the key changes introduced by the CRR3 with a focus on credit risk, including revisions to risk weights, property valuation rules, treatment of off-balance sheet exposures, and requirements for internal assessment of ratings of external agencies. Section 5 concludes with reflections on the regulatory direction and potential challenges for implementation.

¹ Banks can calculate their capital requirements for credit risk using one of two methods. The first is the Standardized Approach (SA-CR), which relies on risk weights assigned by credit rating agencies. The second is the Internal Ratings-Based (IRB) approach, allowing banks to develop their own models for calculating risk-weighted capital. Since most banks in the EU follow the Standardized Approach, this article focuses on the CRR3 changes affecting this method in relation to credit risk.

2. Literature Review

2.1 Introduction

The design and evolution of capital regulation frameworks have long been central to debates on financial stability, bank behaviour, and credit allocation. As financial systems have grown more complex and interconnected, regulatory regimes have had to adapt in order to ensure that capital requirements remain both prudentially effective and economically efficient. The literature surrounding these developments provides critical insights into how regulatory approaches have shifted over time, and how such shifts have influenced banking practices across jurisdictions.

This section explores key academic and policy-oriented contributions that contextualize the emergence of the CRR3. It begins by tracing the historical evolution of financial regulation, from the post-Depression institutional architecture to the deregulatory wave of the late 20th century, and the re-regulatory response following the 2007–2008 global financial crisis. It then turns to empirical research on the economic effects of capital regulation, critiques of the CRR2 framework, and evidence on how regulatory risk weights influence bank behaviour.

2.2 Background: Evolution of financial regulations during the period of 1930 to 2007

The evolution of financial regulation since the 1930s reflects a shifting balance between market liberalism and state intervention, influenced by economic crises, ideological trends, and institutional developments. The Great Depression of the 1930s convinced nearly all economists and policymakers that an unregulated free market was fundamentally flawed and destabilizing. In response, the United States introduced a series of robust regulatory reforms to stabilize the financial system and prevent excessive risk-taking. The most notable of these was the Banking Act of 1933 (commonly known as the Glass–Steagall Act), which created a clear separation between commercial and investment banking, aiming to prevent the use of bank deposits for speculative activities (MacCarthy, 2016) ^[23]. Mortgage loans, for instance, were guaranteed through the Federal Home Loan Bank system, and the Federal Reserve acted as a lender of last resort, while commercial banks served as lender of next-to-last resort in times of financial stress (Crotty, 2008) ^[8].

In Europe, the Great Depression also spurred financial reform, though the institutional responses varied across countries. In the UK, the reaction was more conservative, focusing on central bank support and informal supervision, rather than sweeping legislative change. By contrast, countries like France, Germany, and the Netherlands adopted more interventionist policies. For example, state ownership or tight control over key banks became common in parts of continental Europe, particularly in the post-war period. After World War 2, many European countries developed bank-based financial systems, where universal banks held both commercial and investment functions under strict regulatory oversight. This reflected a broader post-war European consensus on the necessity of state involvement in financial markets.

This post-crisis regulatory framework contributed to financial stability for several decades. However, starting in the 1970s, this system began to erode due to several factors, including inflationary pressures, the Third World debt crisis,

and increasing success of financial institutions in circumventing regulations. The gradual shift away from Keynesian regulatory principles was also reinforced by the rise of neoclassical financial theories such as the Capital Asset Pricing Model (CAPM), which posited that unregulated markets better reflect risk and return (Caldentey, 2010; Crotty, 2008) ^[7, 8]. As belief in self-regulating markets gained traction, the ideological momentum swung toward deregulation. By the 1980s and 1990s, light-touch regulation had become dominant, particularly in the US and UK.

In practice, this meant reduced oversight for commercial and investment banks and virtually no or minimal regulation for shadow banking and non-bank financial institutions. One of the most consequential policy shifts occurred with the formal repeal of the Glass–Steagall Act in 1999, which allowed commercial banks to operate as part of large financial conglomerates alongside investment banks, hedge funds, and structured investment vehicles (Acharya, 2009) ^[6]. Banks expanded their roles, not only originating loans but also securitizing them into asset-backed securities and distributing them through capital markets.

While these developments contributed to short-term economic efficiency, they also introduced significant financial fragility. This deregulated system was ultimately exposed during the global financial crisis of 2007–2008, which revealed deep systemic vulnerabilities, excessive risk-taking, and weak capital positions. In the aftermath, many studies argued that the regulatory vision of the 1930s had proven more resilient and that the pendulum needed to swing back toward stricter oversight. As a result, international and European policymakers initiated comprehensive post-crisis reforms – including Basel 3 and, in the EU, the CRR and the Capital Regulatory Directive (CRD) – to rebuild trust, stability, and resilience in the banking sector.

This historical trajectory from post-depression regulation to neoliberal deregulation, and back to prudential tightening after 2008 – provides essential context for understanding the regulatory motivations that underpin more recent reforms for capital requirements that banks need to satisfy.

2.3 The impact of capital requirements in the banking sector

The impact of capital regulations on credit supply and pricing has been a central theme in the regulatory literature.

Several studies have shown that stricter capital requirements can reduce credit growth, particularly among banks operating close to regulatory thresholds. For example, Aiyar *et al.* (2014) ^[16] indicated in its study that banks having just above the minimum required capital ratios curtailed lending following macroprudential tightening in the UK. Similarly, in Italy, Vacca and Galardo (2022) ^[17] found that less-capitalized banks responded to Basel 3 by tightening credit conditions and raising loan prices.

At the same time, other research highlights that the negative effects of capital regulation are not universally applicable, but rather depend on factors such as banks' initial capital positions, market structure, and the pace of regulatory implementation. Banks with strong capital buffers are more likely to absorb increases in regulatory requirements without scaling back credit (ECB, 2021) ^[18]. This implies that the effectiveness and economic consequences of capital rules depend heavily on bank-specific factors, such as pre-existing capital levels of banks. Moreover, when new regulations are

implemented gradually and with sufficient lead time, their disruptive impact on credit markets can be minimized (Dagher *et al.*, 2016) ^[19].

Taken together, these findings suggest that the effects of capital regulation on credit supply are nuanced and context-dependent. While tighter requirements may constrain lending for weaker institutions, well-capitalized banks appear better positioned to maintain credit flow.

2.4 Criticism due to lack of risk sensitivity in the CRR2

Following the 2007–2008 financial crisis, banking world has undergone continuous reform to strengthen the resilience of banks and ensure more accurate risk capture. These reforms have largely followed the international standards set by the Basel Committee on Banking Supervision, which provides a framework for capital adequacy, stress testing, and risk management. These standards are not legally binding but are adopted by jurisdictions through national or regional legislation.

In the context of the EU, those elements of the Basel standards that pertain to quantitative requirements – such as capital adequacy, liquidity, and leverage – have been implemented through the CRR. While the EU's adoption of international Basel standards through the CRR has generally been viewed positively in terms of global regulatory alignment, academic literature has also highlighted several shortcomings of the CRR2, which remained in force until 2025.

One major criticism was the CRR2's limited risk sensitivity, particularly due to overly broad exposure classifications that fail to differentiate adequately between varying credit qualities (Finalyse, 2022) ^[1]. Evidence from the literature suggests that the existing exposure ^[2] classifications often led to underestimation of risk in certain segments – such as lending activity with a speculative nature, real estate lending, project finance, and off-balance-sheet exposures, resulting in capital requirements that did not accurately reflect underlying risks. Another area of concern was the CRR2's heavy reliance on external credit ratings, which was criticized for encouraging regulatory mechanistic behaviour and creating systemic vulnerabilities tied to rating agencies (Mariathasan & Merrouche, 2014) ^[13]. Furthermore, the lack of proper treatment for currency mismatches was flagged as weakness, especially in light of lessons from the global financial crisis in 2007–2008 (Eichengreen *et al.*, 2003) ^[14].

Overall, the literature underscores a consensus that while the CRR2 made important strides toward strengthening the regulatory architecture in Europe, it fell short in several areas critical to capturing credit risk more effectively, particularly for banks using standardised approach. These include the need for more granular exposure categorization, a reduced dependence on external credit ratings, and a more robust treatment of risk factors such as currency mismatches and off-balance-sheet exposures. These identified shortcomings may be deemed to be the foundation for subsequent regulatory refinements aimed at improving risk sensitivity and ensuring greater alignment between capital requirements and actual risk exposure.

2.5 Bank behaviour against regulatory risk weights under the standardised approach

For a bank, credit risk represents the likelihood that borrowers or counterparties will fail to meet their contractual obligations. This risk can stem from a variety of exposures, including loans to individuals and businesses, equity and bond investments, and off-balance-sheet items such as guarantees and letter of credit. Because credit losses can directly erode a bank's profitability and capital base, managing credit risk is central to ensuring financial resilience and banks are expected to hold capital in line with the riskiness of their exposures.

For banks using the standardised approach, the credit riskiness of a bank is measured through the assignment of regulatory risk weights, which translate the credit risk of each asset into a capital requirement. The higher the risk weight assigned to an asset, the more capital the bank must hold against it, thereby ensuring that banks maintain adequate buffers to cover potential defaults in their futures.

Recent studies indicate that risk weights play a pivotal role in shaping bank behaviour, as they determine the amount of capital a bank must hold against different asset classes. Assets assigned higher risk weights require more capital, making them less attractive from a return-on-equity perspective. This incentivizes banks to shift their portfolios toward lower-risk, lower-weighted exposures – such as sovereign bonds or prime residential mortgages – which require less regulatory capital. In 2001, a study conducted by a group of researchers from London School of Economics revealed that this dynamic became especially pronounced following the implementation of Basel 2, contributing to portfolio homogenization across banks. It was also argued that banks operating near regulatory capital thresholds tend to rebalance their portfolios in favour of exposures with favourable regulatory treatment, rather than based on underlying economic value or borrower fundamentals (Jones, 2000) ^[21]. Mariathasan and Merrouche (2014) ^[13] also provided evidence that banks may manipulate internal risk estimates or strategically allocate assets to reduce capital requirements.

Furthermore, some studies claim that the standardized approach can distort credit allocation, particularly in segments like small and medium-sized enterprises (SMEs) or infrastructure finance. For instance, Vallascas and Hagendorff (2013) ^[15] demonstrated in their studies that the standardized approach often fails to account for borrower-specific risk characteristics, leading to capital charges that may be misaligned with actual credit risk. This can discourage lending to economically important but capital-intensive sectors. At this point, it is also useful to highlight certain adjustments that already existed under the CRR2. Mechanisms such as the SME Supporting Factor and the Infrastructure Supporting Factor applied lower risk weights to certain qualifying exposures in order to enhance credit access without compromising prudential standards in the EU prior to the CRR3. EBA (2020) ^[32] noted in its report that there was a modest increase in SME credit availability following the introduction of the supporting factor.

² In this article, the terms “asset” and “exposure” are used interchangeably to refer to positions on a bank's balance sheet or off-balance-sheet items

that carry credit risk and are subject to capital requirements under regulatory frameworks.

Overall, literature review suggests that while risk weights are an essential tool for aligning capital requirements with asset risk, their design must strike a balance between simplicity, comparability, and risk sensitivity. Poorly calibrated weights can either create excessive capital burdens or lead to undercapitalization, with broader implications for credit allocation and financial stability.

3. Conclusion

In summary, the literature reflects a growing understanding of the complex relationship between capital regulation, credit risk management, and bank behaviour. While capital requirements play a vital role in ensuring the resilience of financial institutions, their design and calibration have significant implications for credit supply, asset allocation, and financial stability. The limitations of the CRR2 – particularly its insufficient risk sensitivity, overreliance on external ratings, and lack of granularity – have been widely recognized, especially in the context of the standardized approach. Furthermore, the way risk weights shape bank behaviour has raised concerns about potential distortions in credit allocation. These accumulated critiques and empirical insights have paved the way for the CRR3, which aims to refine the existing framework by addressing its key shortcomings and enhancing the alignment between capital requirements and actual risk exposure.

4. Key changes brought by the CRR3

4.1 Introduction

The CRR3 introduces a wide range of credit risk-related changes that aim to enhance the alignment between regulatory capital requirements and the actual risk profile of banks' exposures. These changes are particularly targeted at addressing the limitations of the standardised approach under the CRR2, such as insufficient risk sensitivity, overreliance on external credit ratings, and inadequate representation of certain asset classes and off-balance sheet items. By refining exposure classifications, increasing risk weights where warranted, and requiring more robust internal assessments on the ratings of external rating agencies, the CRR3 seeks to ensure that capital buffers are more accurately calibrated to reflect the underlying credit risks banks face.

This section provides a detailed examination of the key amendments introduced by the CRR3, exploring both their intended benefits and their potential practical implications for banks using the standardised approach, particularly taking into account the insights presented in the literature review section.

4.2 Increase in risk weights

Risk weight is a percentage used to assess the level of risk associated with different assets in a bank's portfolio. It is applied to the value of a loan or investment to measure the credit risk it carries, which then determines the amount of capital the bank must hold. A higher risk weight indicates greater risk for that loan or investment, requiring the bank to hold more capital, while a lower risk weight reflects lower risk, reducing the bank's capital burden.

The CRR3 introduces significant changes to the credit risk framework by increasing risk weights for certain types of assets in two key ways. First, it introduces new categories to better classify previously underrepresented areas, ensuring a more accurate and complete assessment of their associated

risks. Second, it increases risk weights for certain existing categories to more precisely reflect their actual risk profiles. These two adjustments aim to enhance risk sensitivity and strengthen the alignment between capital requirements and the true level of risk banks face.

4.2.1 Introduction of new exposure classes

The first step banks must take in calculating credit risk under the CRR is to determine which of the predefined exposure class within the CRR a loan or investment belongs to, as each exposure class requires the application of different risk weights in calculating credit risk and associated capital requirements.

Although the CRR2 already included certain exposure classes with corresponding risk weights, the framework was criticized for not having enough classifications to adequately cover all types of loans and investments, leaving some areas unrepresented in credit risk calculation or leading to high-risk financial assets being categorized under lower-risk classes. In response to this criticism, the CRR3 has introduced additional classes to better account for previously underrepresented areas, as outlined below.

4.2.1.1 Land acquisition, development and construction exposures (ADC)

Loans backing land acquisition, development, and construction (ADC) projects have historically exhibited significantly higher default rates than other types of real estate lending, particularly during economic downturns. In the 2007–2008 financial crisis, banks across the EU saw ADC loans become non-performing at alarming rates. In Spain, for instance, nearly 40% of all bank loans to the construction and real estate development sector turned non-performing, compared to roughly 6% of residential mortgages (ECB, 2019) ^[26]. This illustrates the vulnerability of speculative development lending, especially when the property market collapses.

In terms of the volume of the ADC exposures in the EU market, the European Commission impact study conducted in 2021 (based on EBA data) found that, under Basel III definitions, ADC loans account for only around 2.9% of total real estate exposures for banks using the standardised approach for credit risk. While the overall EU-level volume of ADC exposures may appear modest (especially when compared to more mainstream housing and commercial real estate loans), their volume at the national level – particularly in countries with large real estate sectors (e.g., Spain) – is often significantly higher (ECB, 2019) ^[26].

Recognizing higher default rates and country-level concentrations associated with ADC lending, the CRR3 establishes a dedicated exposure class with tailored risk weights to strengthen prudential oversight in this area. Under CRR3, banks are required to identify their ADC exposures and assign them a risk weight of up to 150%. However, for certain ADC exposures to residential properties that meet defined safety criteria – such as a low loan-to-value ratio and verified repayment capacity – a reduced risk weight of 100% may apply. While the ADC exposures were already subject to relatively high-risk weights (typically 150%) under the CRR2, the introduction of this dedicated category represents a notable improvement over the previous framework as it provides clearer classification and ensures more consistent treatment of development-related risks across institutions in

the EU. Moreover, the reporting of such exposures under a dedicated category is expected to support the ECB's systemic risk monitoring efforts by improving the visibility and comparability of banks' risk concentrations in the real estate development sector.

Furthermore, ADC exposures are defined under the CRR3 as loans granted to corporations or special purpose entities for acquiring land intended for development and construction, or for financing construction projects – whether residential or commercial. These loans typically fund projects that are not yet completed and where repayment sources are uncertain at origination. Under the CRR2, the regulatory treatment of speculative real estate financing was based solely on the borrower's intention to resell the property for profit, without adequately accounting for the uncertainty in repayment sources (Ashurst, 2024) ^[22]. With the CRR3, however, this uncertainty has become a key factor in identifying the ADC exposures, potentially bringing a wider range of development projects within the scope of this higher-risk classification than was the case under the previous framework.

From a prudential standpoint, the CRR3 changes to ADC ensure that banks hold capital buffers more proportionate to the underlying credit risk and encourages more disciplined lending practices, particularly in property markets that have previously been vulnerable to boom–bust cycles. Furthermore, it is positive that the CRR3 has a lower 100% risk weight for certain residential ADC loans that meet safety conditions as a lower rate can help banks support residential housing projects with less capital pressure.

Despite its positive sides, it is also important to note that the CRR3 adjustment may have negative implications for credit availability, especially in real estate and infrastructure development. The higher capital costs could reduce the appetite of banks to finance such projects, particularly those without stable or immediate cash flows. Smaller banks or those specialized in real estate lending may face constraints in maintaining their portfolio volumes or margins.

4.2.1.2 Specialised lending

Specialised lending exposures refer to loans financing specific large-scale projects or assets where repayment mainly depends on the project's cash flows or the collateral value, rather than a broader corporate balance sheet. Specialised lending is a significant segment of EU banks' credit pool, even though it is concentrated in certain countries and institutions. As of the late 2010s, EU banks held hundreds of billions of euros in specialised lending exposures. For example, an EBA analysis of 66 European banks in 2021 found a total exposure value of about €721 billion classified as specialised lending. Regarding country-level concentration, Germany and France are home to a large share of the EU's specialised lending. In fact, four countries – Germany, France, the UK, and the Netherlands – account for over 80% of all specialised lending exposure among European banks analysed. German banks alone held about €278 billion (roughly 38% of the EU total in the sample), and French banks about €166 billion (~23%) (EBA Report, 2021) ^[28].

Specialised lending exposures tend to exhibit higher credit risk and loss rates than ordinary corporate lending, especially during economic downturns. Empirical evidence showed that these loans have historically had elevated default frequencies, reflecting the dependence on project success and often lower

diversification. For instance, the EBA noted that default rates on project finance loans worldwide were markedly higher than typical corporate loan defaults over a 20-year horizon. In particular, project finance loans in their early, pre-completion phase carry significant risk – if a project fails to complete or reach profitability, defaults can occur. Conversely, once projects become operational and establish stable cash flows, their credit risk falls (EBA Policy Advice, 2019) ^[27]. Also, Moody's research conducted in 2020 supports this life-cycle pattern: marginal default rates on project finance facilities decline substantially after the first 5–7 years of operation, eventually reaching levels comparable to single-A rated corporates (Moody's, 2020) ^[29]. The same research indicates based on a 35-year study of project finance loans that the 10-year cumulative default rate for project finance globally is about 7.1% (using a Basel definition of default), compared to, say, ~2–3% for typical corporate portfolios.

Given these unique risk characteristics and relatively higher risk arising from specialised lending activities, the regulatory treatment of specialised lending has undergone significant revision under the CRR3, in alignment with the final Basel III reforms. Prior to the CRR3, the regulatory treatment of specialised lending in the EU was less granular and was seen as misaligned with the actual risk profile. Under the CRR2, these types of financing were often classified under broader categories, which led to capital charges that were either too conservative, disincentivizing economically productive investments, or too lenient, underestimating project-specific risks. Since specialized lending typically involves long-term commitments, high capital intensity, and repayment uncertainties, a more precise classification framework was needed. Under the CRR3, specialised lending is carved out as a sub-class of the corporate exposure class in line with Basel III final reforms. This sub-class category includes the following:

- Project Finance: Loans to fund large-scale projects (e.g. infrastructure, power plants) where the project's revenues are the primary repayment source;
- Object Finance: Lending for acquiring physical assets (ships, aircraft, satellites, rail, etc.), repaid from the revenue those assets generate; and
- Commodities Finance: Financing of commodity producers or reserves, with repayment tied to commodity sales.

Regarding risk weights, the CRR3 requires unrated specialised lending exposures to be slotted into the above-mentioned subcategories, each with prescribed risk weights (up to 150%) based on asset quality and cash flow certainty. By creating the above sub-categories for specialised lending, banks are now expected to better match capital requirements with the actual risk level of each project. Furthermore, when there is no external credit rating, banks must look at factors such as how stable the cash flow is or how strong the collateral is. This can push banks to do a deeper analysis of project risks and improves their overall risk management practices.

However, the changes may also carry potential drawbacks. More granular classifications and internal assessment requirements may increase operational complexity and place a disproportionate burden on smaller banks with limited risk modelling capabilities. This could lead to a concentration of

specialised lending in larger institutions, potentially reducing competition in key project finance segments. In some cases, banks may shift portfolios away from specialised lending toward more standardised, lower-weighted exposures to optimise capital efficiency, possibly reducing financing for capital-intensive sectors vital for long-term.

4.2.1.3 Subordinated debt

Subordinated debt is a debt instrument issued with a maturity greater than five years and is subordinated to other liabilities in the event of the issuer's insolvency. This lower priority increases the risk for investors in subordinated debt because if the issuer faces insolvency, there might not be enough funds left to fully repay them after satisfying senior debt obligations.

Subordinated debt often receives lower credit ratings (e.g. sub-investment grade) from external rating agencies, reflecting higher default likelihood. For instance, many subordinated or junior bonds issued by banks and corporates are rated in the BBB–BB range or lower, implying elevated default probabilities. During downturns or issuer distress, subordinated debt is much more likely to incur losses since it is legally last in line (before equity). The European crisis experience underscores this – in bank failures (e.g. Banco Popular 2017), subordinated bondholders were either completely wiped out or suffered deep haircuts, whereas senior debt fared better.

Due to the high risk involved in subordinated debt, the CRR3 has introduced this unique category and requires banks to apply higher risk weights up to 150% to their subordinated debt. While subordinated debt does not represent a large share in the European Banks' portfolios (only around 2% of the total portfolio of EU banks based on the EBA data in 2019)^[27], its inherently riskier nature justifies the risk weight increase from 100% to 150%.

4.2.2 Higher risk weights for equities

Equity exposures are composed of banks' direct equity investments typically held in the banking book and make up a relatively small portion of EU banks' total credit portfolios under the standardised approach, averaging around 3% (EBA Letter, 2020)^[32]. Despite their limited volume in the EU, equity investments are considered to be inherently riskier than senior loans, as they are the first to absorb losses when an investee company struggles. In a default scenario, equity holdings can be entirely wiped out, unlike loans which often retain some recovery value.

Historical crises also underscores the volatility of equity exposures. During the 2007–2008 financial crisis, global stock markets lost around 50% of their value, and many banks suffered major losses on equity stakes, particularly in financial institutions. Similarly, during the COVID–19 shock in early 2020, equity markets plunged 30–40% within weeks (Wikipedia). Even though defaults remained low, banks had to recognize substantial unrealized losses, demonstrating that equity losses can materialize rapidly without actual defaults – driven purely by market value swings.

Recognising these risks and the historical loss volatility of equities, European policymakers saw a need for a more risk-sensitive capital framework. Under the previous CRR2 regime, equity exposures were subject to relatively flat capital charges – typically a 100% risk weight, with high-risk equities assigned 150%. This approach often failed to reflect

the true risk of equity holdings, particularly during times of market stress.

The CRR3 has significantly raised capital requirements for equity exposures under the Standardised Approach, introducing a more risk-sensitive and conservative framework. With the CRR3, banks are now required to apply substantially higher risk weights to equity investments, reflecting their greater potential for loss. For most equity exposures – such as general equity holdings and listed shares – the risk weight increases from the previous 100% to 250%. This two-and-a-half-fold rise acknowledges the inherent volatility and loss potential associated with equity markets.

In the case of speculative unlisted equity exposures, such as venture capital, private equity investments, and other high-volatility positions typically held for short-term resale or capital gains, the required risk weight jumps even further to 400%. This represents a substantial tightening of regulatory treatment, as these exposures were previously subject to a 150% risk weight. The new 400% level, the highest under the CRR3's credit risk section (for standardised approach), is designed to capture the elevated risk and illiquidity associated with early-stage or speculative equity investments, particularly those in unlisted or start-up ventures.

From a capital adequacy standpoint, this adjustment compels banks to hold much higher levels of regulatory capital for their equity holdings, strengthening the capital base against potential losses that could arise from sharp declines in stock markets or deteriorating equity valuations. This is particularly important in times of financial stress, when equities tend to underperform and become a source of systemic instability. This change is also likely to influence portfolio compositions of banks. Equities are now more capital-intensive, making them less attractive relative to lower-risk assets like government bonds or high-quality loans.

Despite these positive outcomes, such a big increase in risk weights of equity holdings may also lead to reduced market liquidity or a retreat from equity-related activities that could otherwise support innovation and entrepreneurship, particularly in capital markets with limited investor depth. This concern is especially pertinent given the already underdeveloped state of Europe's equity markets. A study by Oliver Wyman for the European Banking Federation highlights that Europe's capital markets – particularly equity – lag far behind those in the US. The study also notes that the depth of Europe's equity markets would need to expand by ~60% just to reach global average levels and European firms often face a higher cost of capital and may even turn to US markets to raise equity funds as a result of stricter prudential requirements in the EU, which poses risks to Europe's autonomy and the development of a deeper Capital Markets Union (Oliver Wyman Report, 2023)^[31].

4.3 Requirement for internal assessment

Before the implementation of CRR3, some European banks relied on external credit rating agencies to assess the creditworthiness of borrowers and the riskiness of their investments. According to data from the European Banking Authority (EBA Report, 2021)^[35], approximately 10% of risk-weighted assets under the standardised approach in EU banks were based on external ratings, while across all EU banks, the figure stood at around 4%. This reliance has faced

criticism for lacking sufficient risk sensitivity, undermining banks' internal risk assessment capabilities, and potentially creating blind spots in credit risk calculations.

Under CRR3, banks are now required to maintain a thorough understanding of the risks they are exposed to across all areas of their operations. This includes conducting internal due diligence when relying on external credit ratings. Specifically, if a bank uses an external rating to assess the credit risk of a borrower, it must internally evaluate whether the rating is sufficiently conservative. If the bank's internal assessment indicates that the borrower poses a higher risk than reflected in the external rating, the bank is obliged to treat the exposure as riskier and allocate additional capital to cover potential losses^[3].

From a risk management perspective, the requirement for internal due diligence represents a significant shift toward enhanced accountability and in-house risk expertise for banks using the standardised approach. By mandating that banks independently evaluate the appropriateness of external credit ratings, the regulation encourages a more nuanced understanding of borrower-specific risks, particularly where rating agency methodologies may fail to capture idiosyncratic factors. This fosters a more robust internal risk culture and reduces the potential for overreliance on third-party assessments, which had previously been linked to systemic blind spots during the global financial crisis.

In terms of capital adequacy, this change is likely to result in more conservative capital buffers in cases where internal assessments deem external ratings overly optimistic. While this may increase capital requirements for certain exposures – particularly in volatile or opaque sectors – it also ensures that regulatory capital more accurately reflects the true level of risk. Over time, this should lead to a healthier alignment between economic and regulatory capital, supporting long-term solvency.

This added responsibility may also impose significant operational and compliance burdens, particularly on smaller banks with limited resources. Industry surveys highlight the cost implications associated with additional data collection, upgrading IT systems, developing new models, and hiring or training credit risk analysts and modelers (EC Report, 2015). Beyond the financial burden, there is also a concern that more conservative internal assessments may reduce credit availability to lower-rated but viable borrowers, such as SMEs, unless appropriately calibrated. This effect could be particularly pronounced in EU economies that rely heavily on SME-driven growth, where access to credit plays a central role in employment, innovation, and regional development.

4.4 Changes related to the exposures secured by mortgages on immovable property

As per the CRR's definition, the category of "Exposures Secured by Mortgages on Immovable Property" covers any loan, or part of a loan, that is backed by a mortgage on residential or commercial real estate, providing the bank with legal recourse to the property in the event of borrower default. As of the first quarter of 2022, banks operating within the European Economic Area held over €4.1 trillion in loans and advances collateralised by residential real estate, representing approximately one-third of total lending to households and

non-financial corporations. In addition, commercial real estate exposures accounted for an estimated €1.4 trillion, corresponding to roughly 10% of overall lending volumes (Reuters, 2024; S&P Global, 2023)^[37, 38]. Taken together, these figures indicate that approximately €5.5 trillion in credit extended by EU banks is secured by immovable property, underscoring the critical role of this category within the European financial system.

In light of their systemic relevance and material presence on banks' balance sheets, the CRR3 introduces a number of targeted amendments to their regulatory treatment and reporting requirements. These mainly include more granular reporting requirements and stringent valuation standards as detailed in the below sections.

4.4.1 Greater granularity in the treatment of the exposures secured by mortgages on immovable property

Under the CRR3, loans secured by a mortgage on real estate will be classified into more specific subcategories to better reflect the credit risk associated with different types of real estate transactions and loan structures. These new subcategories aim to provide greater granularity, ensuring that regulatory treatment aligns more closely with the risk profile of various real estate-backed loans.

Specifically, the CRR3 framework maintains the CRR2's distinction between residential and commercial mortgages, but introduces greater specificity based on the nature of a loan, particularly whether the mortgaged property generates income – and the property's development stage, distinguishing between those under construction and completed properties. These refinements aim to ensure that capital requirements more accurately reflect the true risk profile of real estate-backed exposures.

While the above-mentioned CRR changes are positive from an overarching perspective, there may also be some unintended challenges in certain markets where residential or commercial mortgage lending forms a significant share of banking activity. For example, the need to distinguish between income-generating and non-income-generating properties may delay loan approvals or restrict access to credit for certain borrower groups. Furthermore, the increased complexity in classification and data requirements could impose administrative and compliance burdens, especially for smaller banks with less sophisticated risk management systems.

4.4.2 New rules on property valuation for properties used as collateral

Accurate property valuations are essential for managing credit risk as values of properties used as collateral in loans are taken into account as a risk mitigant. If valuations are inflated, banks may underestimate the risks associated with loans, potentially leading to inadequate capital. Conversely, if valuations are too low, banks might overestimate the amount of capital they need, limiting their lending capacity and profitability.

Under the CRR2, property valuation requirements were being criticized for failing to accurately reflect true values of properties and leading to an underestimation of credit risk. To address these shortcomings, the CRR3 introduces several

³ If the counterparty is a central government or central bank, a regional government or local authority, a public sector entity, or an international

organization, then the bank would be exempt from the due diligence requirement.

stringent requirements to ensure that property valuations are both accurate and reflective of long-term market trends.

A particularly noteworthy change is the introduction of a rule requiring banks to choose the higher of two values when valuing a collateralised real estate: the original valuation at the time the loan was issued or the average value of the property over a specified period. This new rule aims to prevent banks from artificial valuations, which eventually results in inaccurate calculation of credit risk and capital requirements.

From a capital adequacy perspective, this new rule introduces a more conservative and risk-sensitive approach to collateral valuation. By requiring banks to use the higher of either the original or averaged property value, it reduces the risk of underestimating exposure during market downturns. This leads to more accurate capital buffers and lowers the likelihood of unexpected capital shortfalls in adverse conditions.

However, a potential drawback is that, in rapidly appreciating property markets, the reliance on historical or averaged values may understate the current market value of collateral. This could lead banks to hold more capital than necessary, constraining their lending capacity and reducing profitability in otherwise stable or low-risk scenarios. Additionally, smaller banks without sophisticated valuation models or access to long-term property data may face disproportionate compliance burdens.

4.5 Loans with currency mismatch

When the loan currency differs from the borrower's source of income and the loan is classified as an unhedged retail exposure to a natural person or an exposure secured by immovable property to a natural person, the CRR3 now requires banks to apply a new risk weight multiplier to account for the added risk.

For example, if a European bank grants a mortgage denominated in euros to an individual who earns their salary in U.S. dollars, the bank faces an increased risk due to potential exchange rate fluctuations, which could impact the borrower's ability to meet their repayment obligations. To address this risk, the CRR3 requires the bank to apply a multiplier of 1.5, with a maximum risk weight of 150%, meaning the bank must hold more capital against such loans to cover the added risk.

The introduction of a currency mismatch multiplier under the CRR3 represents a significant step toward enhancing the risk sensitivity of the capital framework as it aims to capture a critical source of credit risk that was previously underrepresented in capital calculations. From a prudential perspective, this adjustment is particularly relevant given the lessons of the 2007–2008 financial crisis, during which several European countries – such as Hungary, Poland, and Romania – experienced widespread distress among borrowers with foreign currency mortgages. In such contexts, local currency depreciation significantly increased debt service burdens, leading to elevated default rates and financial instability. By introducing a mechanism that explicitly recognizes this risk, the CRR3 discourages excessive reliance on foreign currency lending, especially in situations where borrowers do not earn their income in the

same currency as the loan – making them more vulnerable to exchange rate fluctuations.

At the same time, the new multiplier may be presenting challenges for banks with significant cross-currency exposures on their balance sheets. Institutions operating in countries with partially euroized banking systems may face increased capital requirements and potential pressure on profitability unless they restructure their portfolios. In the absence of mitigating measures, this may also reduce credit availability for borrowers who, despite having viable repayment capacity, fall within the scope of the multiplier due to currency mismatches.

4.6 Changes in the treatment of off-balance sheet items (OBS)

OBS items refer to financial commitments and obligations that do not appear directly on a bank's balance sheet but still carry potential credit risk. These include loan commitments, guarantees, letters of credit, and derivatives, which may materialize depending on future events. Since these items can still create risk for banks, the CRR requires banks to incorporate OBS items into their credit risk calculations, which will then help banks determine the amount of capital they must hold.

To quantify the potential risk of OBS items, the CRR requires banks to apply the Credit Conversion Factor (CCF), which estimates the portion of an OBS item that is likely to be drawn and converted into an on-balance sheet item. For example, if a bank's loan commitment of €100,000 has a CCF of 10% according to the CRR, the bank must assume that €10,000 of that commitment will be utilized and should be included in determining the required capital. Different OBS items are assigned specific CCFs based on their risk profile and likelihood of being drawn, ensuring that banks hold adequate capital to cover potential future obligations^[4].

The CRR3 introduces certain changes to the existing CCF framework to enhance risk sensitivity and improve the accuracy of capital requirements. One of the key updates is the introduction of two new CCF levels– 40% and 10% – while the previously available 0% CCF applicable to certain types of OBS items has been eliminated to ensure that all off-balance sheet items carry a minimum level of risk recognition. Furthermore, the CRR3 clarifies the treatment of commitments related to off-balance sheet items, providing clearer guidelines on how their value should be assessed.

The CRR3's CCF adjustments are designed to better align regulatory capital requirements with actual risk exposure, ensuring that banks hold sufficient capital against potential future obligations. This means banks with significant OBS exposure may face a rise in required capital, particularly if their portfolios include large amount of unconditionally cancellable credit commitments that were previously subject to a 0% CCF under the CRR2 framework (Chapman and Cutler LLP., 2023)^[24].

5. Conclusion

The credit risk-related changes introduced under the CRR3 mark a significant evolution in the EU's capital adequacy framework, particularly for banks using the standardised approach. By introducing new exposure classes such as ADC

⁴ CCF differs from risk weight in that it determines the portion of an off-balance sheet exposure to be recognized, whereas applicable risk weights

are separately applied to the converted exposure when calculating capital requirements.

loans and subordinated debt, increasing the granularity of specialised lending, and recalibrating risk weights across high-volatility asset categories, the CRR3 enhances the risk sensitivity of regulatory capital requirements. These changes aim to ensure that capital buffers are more proportionate to actual exposure risks, thereby strengthening the resilience of individual institutions and the broader financial system. Additionally, the new requirements for internal credit assessments, stricter property valuation standards, and revised treatment of off-balance sheet items and currency mismatches represent a clear shift toward a more robust and forward-looking approach to risk management. These reforms are expected to foster a stronger internal risk culture and reduce historical vulnerabilities tied to external rating dependency and under-recognised risk drivers.

However, the increased complexity and potential capital burdens may create operational challenges, particularly for smaller banks or those with riskier or less diversified portfolios. The economic impact of these changes will depend largely on how banks adjust their risk-taking strategies and lending practices in response to the revised framework. Ultimately, while the CRR3 introduces more stringent credit risk rules, its long-term success will depend on effective implementation, ongoing supervisory support, and the ability of banks to adapt without compromising credit availability or innovation across the EU financial system.

6. Concluding Remarks

The CRR3 represents a significant step forward in enhancing the risk sensitivity and robustness of the Standardised Approach to credit risk. By introducing a more prudential approach, it aligns capital requirements more closely with the actual risk profiles of exposures – particularly for institutions that do not use internal models. Rather than being a final destination, the CRR3 should be seen as part of an evolving regulatory journey that reflects broader post-crisis global reforms and the growing complexity of the financial landscape.

For EU banks, particularly those using the standardised approach, the new requirements bring both opportunities and challenges. On the one hand, the revised framework contributes to more risk-sensitive and data-driven credit risk management by introducing stricter eligibility criteria for collateral, enhanced valuation standards, and greater granularity in risk weight differentiation – particularly in areas such as real estate lending, specialised exposures, and off-balance-sheet items. On the other hand, it introduces operational burdens – especially for smaller and mid-sized institutions as they will need to invest in more advanced risk assessment and reporting tools, enhance their data infrastructure, conduct more frequent collateral valuations, and in many cases, hold additional capital in response to higher or more differentiated risk weights.

In this context, the principle of proportionality is expected to gain renewed relevance. To ensure that regulatory compliance does not overwhelm the operational capacity of relatively smaller banks, future reforms may focus on expanding simplified reporting requirements and calculation standards. Such measures would support a balanced approach, maintaining financial stability without undermining the competitiveness or viability of smaller institutions – many of which play a vital role in local credit provision and SME financing across the EU.

Furthermore, several trends are also likely to shape the future evolution of the CRR. One prominent direction is the increasing integration of environmental, social, and governance (ESG) considerations, especially climate-related financial risks. While the CRR3 already introduces initial ESG-related capital requirements, further developments – such as changes in the existing risk weights for climate-vulnerable assets – are likely to emerge as regulatory priorities intensify in response to the EU's green transition.

At the same time, the digital transformation of financial services is accelerating. Emerging exposures related to crypto-assets, digital lending platforms, and technology-driven business models will necessitate ongoing adaptations in risk classification, supervisory methodologies, and prudential treatment.

Ultimately, the success of a regulatory framework depends not only on its initial implementation but also on its ability to evolve in step with the changing nature of financial innovation and systemic risk. As new technologies, business models, and risk drivers emerge – ranging from crypto-assets and decentralised finance to climate-related exposures and macroeconomic volatility – the regulatory framework is likely to face renewed scrutiny and pressure for further refinement. In this context, while the CRR3 introduces meaningful progress in aligning capital requirements with actual credit risk, it is not immune to future criticism, particularly if it is considered too rigid or insufficiently responsive to emerging threats. In this regard, continuous dialogue between regulators, financial institutions, and market participants will be key to ensuring that the CRR3 – and its successors – remain both credible and capable in the face of a rapidly evolving financial ecosystem.

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