COMPARATIVE ANALYSIS OF BANKING SUPERVISION, BASEL STANDARDS, AND FINANCIAL STABILITY: EVIDENCE FROM EUROPEAN COUNTRIES AND UZBEKISTAN

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Abstract. *This paper investigates the interaction between international banking standards, national supervisory frameworks, and financial stability. It compares supervisory approaches in Europe—Italy's PATROL, France's ORAP, Germany's BAKIS, the Netherlands' Kuzatuv, the United Kingdom's risk-based supervision, and Switzerland's "Swiss Finish"—with the Basel I–III framework. Using 2019–2024 indicators such as return on assets (ROA), assets-to-GDP, loans-to-GDP, deposits-to-GDP, and leverage ratios, the study highlights differences across the United Kingdom, Germany, France, and Italy. Case studies of Barclays and Commerzbank illustrate practical supervisory challenges. The analysis is extended to Uzbekistan, where bank ratings remain moderate. Deposits and profitability enhance ratings, while reliance on securities portfolios weakens them. The study concludes that Uzbekistan should gradually align with Basel III, while selectively adapting European supervisory practices to strengthen resilience.*

Keywords: *banking supervision, Basel Accords, capital adequacy, financial stability, risk management, European banks, macroprudential regulation, profitability indicators, stress testing, Uzbekistan*

1. Introduction

Financial stability underpins sustainable economic growth. The global financial crisis of 2008, as well as earlier regional shocks, demonstrated that undercapitalized and weakly supervised banks can rapidly destabilize entire economies. For this reason, capital adequacy, profitability, and risk management are now seen as fundamental components of systemic resilience.

The Basel Committee on Banking Supervision has shaped international regulation through successive accords (Basel I, II, and III), which define capital requirements, supervisory responsibilities, and disclosure practices. At the same time, European countries have built national supervisory systems that integrate Basel principles but adapt them to domestic banking structures.

Uzbekistan is currently reforming its financial sector. By examining European experience and Basel standards, this paper aims to identify lessons for Uzbekistan's banking system. The objectives are:

1. To review supervisory models in Europe.
2. To analyze Basel I–III and their impact.
3. To assess empirical performance indicators across major European economies.
4. To draw policy implications for Uzbekistan.

2. Literature Review

Bank supervision and capital adequacy remain central themes in the literature on financial stability. As financial intermediaries, banks play a unique role in channeling savings into productive

investment, but their exposure to credit, liquidity, and market risks makes them highly vulnerable to shocks. Diamond (1984) emphasized the importance of banks as intermediaries capable of reducing transaction costs and improving capital allocation, while Allen and Santomero (1997) highlighted their role in risk management and diversification. Both perspectives converge on a critical insight: weak supervisory oversight or insufficient capitalization not only undermines individual institutions but can also amplify systemic risks, leading to widespread instability.

The Basel Accords, developed by the Basel Committee on Banking Supervision, have provided the most influential global framework for addressing these vulnerabilities. Basel I (1988) represented the first attempt at international harmonization, requiring banks to maintain a minimum capital adequacy ratio of 8% relative to risk-weighted assets. This accord primarily focused on credit risk and provided a standardized benchmark for national regulators. Basel II (2004) expanded the regulatory architecture by introducing a three-pillar framework: (i) minimum capital requirements to cover credit, market, and operational risks; (ii) supervisory review, which empowered regulators to evaluate banks' internal risk management; and (iii) market discipline, aimed at increasing transparency through enhanced disclosure requirements. The Basel III Accord (2010), drafted in the aftermath of the global financial crisis, introduced further reforms to strengthen resilience. It raised the quality of capital by emphasizing common equity, introduced capital conservation and countercyclical buffers to smooth the credit cycle, and implemented liquidity standards such as the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). Together, these measures aimed to reduce procyclicality, improve loss-absorbing capacity, and address shortcomings exposed during the 2008 crisis.

In parallel, European countries developed supervisory systems tailored to their national banking environments. Italy introduced the PATROL model, focusing on profitability, capital adequacy, liquidity, and organizational efficiency. France created ORAP, a system with 14 indicators encompassing governance, asset quality, and prudential compliance. Germany established BAKIS, a ratio-based methodology designed to standardize quantitative monitoring across institutions. The Netherlands applied the Kuzatuv system, with 53 indicators divided into financial, macroeconomic, and comparative modules. Beyond these, the United Kingdom relied on a risk-based supervisory model under the Prudential Regulation Authority, emphasizing systemic stress testing and forward-looking assessments. Switzerland, hosting globally systemic banks such as UBS and Credit Suisse, introduced the so-called "Swiss Finish" to Basel III, imposing stricter capital and leverage requirements than those mandated internationally.

This diversity demonstrates that while Basel standards provide a global framework for consistency, national authorities adapt their supervisory systems to local risks, institutional structures, and policy priorities. Scholars such as Laeven and Levine (2009) and Demirguc-Kunt et al. (2020) argue that this dual structure—global rules combined with national flexibility—offers the most effective approach. It allows regulators to preserve a common baseline of capital adequacy and risk management, while retaining the capacity to respond to unique domestic vulnerabilities, whether in credit markets, housing exposures, or systemic concentration.

3. Methodology

This study applies a mixed approach, combining comparative and empirical analysis. First, supervisory frameworks in Italy, France, Germany, the Netherlands, the UK, and Switzerland are reviewed and compared to highlight national adaptations of Basel standards. Second, the evolution

of Basel I–III is analyzed, with emphasis on their integration into European regulation. Third, empirical indicators for 2019–2024—including ROA, assets-to-GDP, loans-to-GDP, deposits-to-GDP, and equity-to-assets—are examined for the UK, Germany, France, and Italy. Finally, a case study of Uzbekistan identifies key determinants of bank ratings, focusing on deposits, capital adequacy, profitability, and portfolio structure.

4. Results and Analysis

4.1 European Supervisory Systems

European regulators have designed a variety of supervisory models that reflect national conditions while aligning with Basel principles.

– **Italy (PATROL):** Introduced in the 1990s, assesses capital adequacy, profitability, credit risk, organizational capacity, and liquidity. Similar to CAMELS, with emphasis on organizational quality.

– **France (ORAP):** Developed in 1997, evaluates 14 components, including capital adequacy, liquidity, asset quality, and governance. Assigns ratings from 1 (strongest) to 5 (weakest).

– **Germany (BAKIS):** Built in 1997, applies 47 standardized ratios, focusing on liquidity, credit, and market risks. Provides strong quantitative comparability.

– **Netherlands (Kuzatuv):** Uses 53 indicators in three modules: financial performance, macroeconomic environment, and peer-group comparison. Flexible and modular.

– **United Kingdom (PRA Supervision):** The Bank of England's Prudential Regulation Authority applies risk-based supervision, focusing on systemic importance. Regular stress tests check resilience under adverse scenarios. Since Brexit, the UK has maintained Basel III alignment but introduced more independent rule-setting.

- **Switzerland ("Swiss Finish"):** Applies stricter capital and leverage requirements than Basel III. Designed for global systemically important banks (UBS, Credit Suisse). The Credit Suisse collapse in 2023, however, highlighted the limits of even the toughest rules without effective governance.

Comparative Table 1. European Supervisory Systems

Country	**System / Approach**	**Key Features**	**Relation to Basel**
Italy	PATROL	Capital, profitability, credit risk, liquidity, organization	Basel I/II alignment
France	ORAP	14 factors incl. governance, asset quality	Broad Basel II scope
Germany	BAKIS	47 ratios, coefficient-based	Strong Basel I–II focus
Netherlands	Kuzatuv	53 indicators, modular	Basel II/III elements
United Kingdom	PRA Supervision	Risk-based, stress testing	Basel III core
Switzerland	Swiss Finish	Stricter capital and leverage	Beyond Basel III

4.2 Basel Standards Evolution

The evolution of Basel standards reflects a logical progression in international banking regulation. Basel I (1988) established the first global benchmark by requiring an 8% capital adequacy ratio based on risk-weighted assets.

The Basel II Accord, adopted in 2004, broadened the regulatory framework by extending capital requirements beyond credit risk to include market and operational risks. Its three-pillar approach combined quantitative standards (Pillar I), supervisory oversight (Pillar II), and market discipline (Pillar III), creating a more risk-sensitive and comprehensive model compared to Basel I.

A key innovation of Basel II was the introduction of differentiated risk weights, which tied capital requirements more closely to the creditworthiness of exposures. For sovereign exposures, two options were provided.

Table 2 presents the first option, where risk weights are determined solely by sovereign credit ratings. Highly rated sovereigns (AAA–AA–) carried only a 20% weight, while lower-rated exposures faced progressively higher requirements, rising to 150% for ratings below B. Exposures with no external rating were generally assigned a 100% weight. This option increased regulatory sensitivity to credit risk but also created reliance on external rating agencies.

Table 2. Basel II Risk Weights for Sovereign Exposures (First Option)

Sovereign Credit Rating	AAA– AA–	A+– A–	BBB+– BBB–	BB+– B–	Below B–	Unrated
Risk Weight	20%	50%	100%	100%	150%	100%

Note: In this option, all exposures are weighted according to external credit ratings. Ratings below B are assigned the highest capital requirement, while unrated exposures default to a 100% risk weight.

Table 3.13 illustrates the second option, which added an adjustment for short-term claims. Under this method, exposures with shorter maturities could receive lower risk weights, even for less-than-perfect credit ratings. For example, a BBB-rated sovereign exposure had a baseline weight of 50%, but short-term exposures could be weighted at only 20%. This option provided additional flexibility for banks engaged in short-term financing, reflecting the lower risk associated with shorter maturities.

Table 3. Basel II Risk Weights for Sovereign Exposures (Second Option, Short-Term Adjustment)

Sovereign Credit Rating	AAA– AA–	A+– A–	BBB+– BBB–	BB+– B–	Below B–	Unrated
Standard Risk Weight	20%	50%	50%	100%	150%	100%
Short-Term Claims Weight	20%	20%	20%	50%	150%	20%

Note: The second option differentiates by maturity. Short-term claims are often subject to lower risk weights, reflecting their reduced exposure to default risk.

Together, these two options demonstrate Basel II's central shift: moving from a one-size-fits-all standard toward a more granular and risk-sensitive capital framework. However, the heavy dependence on credit ratings and the complexity of the system were later criticized, especially during the 2008 financial crisis, which exposed limitations in both approaches.In response to the 2008 financial crisis, Basel III (2010) introduced substantial reforms, including stricter capital definitions, conservation and countercyclical buffers, a leverage ratio, and liquidity requirements such as the LCR and NSFR. Phased into European regulation by 2018, these measures significantly reinforced the resilience of the banking system.

Table 2 summarizes this progression, showing how each stage built upon the previous one to address emerging risks and strengthen global financial stability.

Table 2. Basel Standards Overview

Accord	Year	Key Innovations	Implementation Impact
Basel I	1988	8% capital adequacy ratio	Standardized minimum
Basel II	2004	3 pillars: capital, supervision, discipline	Enhanced risk coverage
Basel III	2010	Buffers, leverage ratio, LCR, NSFR	Stronger resilience

4.3 Empirical Indicators (2019–2024)

To evaluate banking performance in Europe, this study focuses on two key indicators over the period 2019–2024: profitability, measured by return on assets (ROA), and the size of the banking sector relative to GDP. Together, these measures capture both the efficiency and systemic weight of banks in the economy, offering a comparative perspective across the United Kingdom, Germany, France, and Italy.

Cross-country differences in profitability are evident. The United Kingdom and Germany maintained average ROA levels between 5–7%, reflecting stable and efficient operations. France showed moderate but steady results, while Italy consistently recorded lower values, highlighting persistent structural inefficiencies in its banking sector.

Table 4. below summarizes these dynamics.

Table 4. Return on Assets (ROA) in Selected European Countries, 2019–2024 (%)

Year	United Kingdom	Germany	France	Italy
2019	5.50	4.73	5.20	5.38
2020	6.34	5.45	5.81	5.40
2021	5.62	5.61	5.28	5.88
2022	6.83	5.94	5.79	6.18
2023	7.02	5.98	5.94	6.49
2024	6.75	6.33	6.59	6.63

The systemic size of the banking sector also reveals striking contrasts. The United Kingdom stands out, with assets exceeding 500% of GDP, confirming London's status as a global financial hub. France and Germany report more balanced figures of around 300–350%, while Italy remains

smaller, averaging near 200%. These differences illustrate how financial intermediation plays a far greater role in the UK economy compared to continental systems.

Table 5. presents the comparative data.

Table 5. Bank Assets as a Percentage of GDP in Selected European Countries, 2019–2024 (%)

Year	United Kingdom	Germany	France	Italy
2019	516.2	300.3	375.7	218.2
2020	454.7	268.2	385.1	209.9
2021	540.0	267.4	367.0	247.5
2022	458.1	252.6	356.9	237.6
2023	562.1	354.3	343.8	223.8
2024	487.3	285.4	344.4	226.3

5. Uzbekistan Case

Uzbekistan's commercial banks on average achieve 63.5 rating points, with performance strongly shaped by structural and financial factors. The most significant positive driver is the growth of deposits, which directly improves stability, while higher returns on assets (ROA) remain the strongest determinant of overall ratings. In contrast, portfolios heavily concentrated in securities reduce ratings, exposing banks to market volatility. A higher credit portfolio relative to capital—around 4.07%—raises ratings, and annual net profit growth above 2% strengthens resilience. Despite these strengths, the system faces challenges including over-reliance on securities and unstable profitability. To address these vulnerabilities, policy priorities should include mobilizing household deposits, increasing liquid assets, reducing dependence on securities, expanding lending and investment banking activities, and implementing early-warning supervisory mechanisms. Collectively, these measures would enhance financial stability and support the sustainable development of Uzbekistan's banking sector.

6. Discussion

The European experience demonstrates that while the Basel Accords provide a common international benchmark, effective supervision requires adaptation to national contexts. Systems such as France's **ORAP** deliver a comprehensive perspective but demand significant supervisory resources, whereas Germany's **BAKIS** offers strong quantitative standardization but risks overlooking qualitative dimensions. The United Kingdom's **PRA model**, centered on stress testing, emphasizes systemic resilience, while Switzerland's **Swiss Finish** illustrates both the benefits and limitations of exceeding Basel requirements, as evidenced by the Credit Suisse collapse in 2023.

For Uzbekistan, these cases suggest that simple transposition of Basel rules would not be sufficient. Instead, gradual adoption of Basel III should be complemented by selected European practices. A modular framework similar to the Netherlands' **Kuzatuv** or a multi-indicator model like **ORAP** could enhance supervision while remaining operationally feasible. This approach would allow regulators to combine international standards with local realities, strengthening resilience without overwhelming institutional capacity.

7. Recommendations

Based on the analysis, three main policy recommendations emerge:

1. **Uzbekistan should consider adopting Basel III standards gradually, with particular attention to strengthening capital quality, liquidity ratios, and conservation buffers. A phased approach would allow banks to adjust progressively, supporting stability while avoiding excessive pressure on credit expansion.**
2. **Uzbekistan could benefit from gradually introducing modular or multi-factor supervisory tools, drawing on the experience of systems such as Kuzatuv and ORAP. These approaches may offer more nuanced oversight of risk, provided that their complexity is adjusted to local regulatory capacity.**
3. **Greater emphasis might be placed on mobilizing household deposits, diversifying funding sources beyond securities portfolios, and supporting the expansion of lending and investment banking activities. In parallel, the gradual introduction of early-warning supervisory mechanisms could help detect vulnerabilities at an earlier stage and improve system resilience.**

8. Conclusion

This study compared the Basel framework, European supervisory models, and Uzbekistan's banking sector. The findings show that:

1. European countries employ diverse systems that, while rooted in Basel principles, are adapted to national structures.
2. Basel III has significantly strengthened global banking resilience through stricter capital and liquidity requirements.
3. Uzbekistan's banks are moderately stable but require improvements in deposit mobilization, profitability, and supervisory capacity.

Uzbekistan should therefore pursue a **phased Basel III strategy**, complemented by selected European supervisory practices, while reinforcing domestic banking fundamentals. Such reforms will not only strengthen financial stability but also support closer integration of Uzbekistan's banking sector into the global financial system.

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