



## The Role of Macroprudential Policies in the Institutional Transformation Process: A Conceptual Assessment on Emerging Market Economies

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### ABSTRACT

This study investigates the role of macroprudential policies in the institutional transformation of emerging market economies through a comparative analysis of Türkiye, Brazil, and Indonesia. Drawing on the conceptual foundation that macroprudential policy is not merely a technical instrument but also a component of governance and institutional reform, the paper examines how these policies have reshaped regulatory responsibilities, coordination mechanisms, and accountability structures. The research builds upon the typology of institutional models defined by Nier et al. (2011), classifying countries into centralized, independent, and coordination-based frameworks. Case analyses reveal that while Brazil's centralized structure enabled rapid decision-making, it generated accountability risks; Indonesia's dual model offered institutional clarity and transparency, albeit with occasional delays; and Türkiye's coordination-based system lacked legal enforceability, limiting long-term policy sustainability. The findings emphasize that macroprudential effectiveness is closely tied to governance quality, legal mandates, and the degree of institutional integration. Based on these observations, the study provides policy recommendations for enhancing coordination, strengthening legal foundations, and fostering public legitimacy. It concludes that macroprudential governance is not only essential for financial stability but also a strategic tool for rebuilding state capacity and ensuring long-term economic resilience. This contribution adds value to the literature by integrating macroprudential regulation into a broader institutional context and offering actionable insights for policy design in emerging markets.

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## 1. Introduction

The 2008 Global Financial Crisis revealed not only the vulnerabilities of individual institutions but also the systemic fragilities that had accumulated throughout the financial system, posing significant threats to financial stability. The crisis demonstrated the inadequacy of traditional micro-level regulatory and supervisory tools in addressing systemic risks, thereby prompting policymakers to seek a more comprehensive and preventive framework (Claessens, Ghosh, & Mihet, 2013; Galati & Moessner, 2013).

In this context, the concept of “macroprudential policy” has emerged as a new regulatory paradigm designed to encompass the entire financial system and mitigate the build-up and transmission of systemic risks. However, macroprudential policy extends beyond technical tools. It also involves a governance dimension, addressing which institutional actors are responsible, under what authority, and through which coordination mechanisms these tools are implemented (IMF, 2013). In this respect, macroprudential measures have become both instruments and outcomes of structural transformation within financial architectures.

In emerging market economies in particular, the application of such policies implies more than the deployment of new tools; it requires a multi-layered reform process that reshapes institutional arrangements. Central banks have assumed broader mandates that include financial stability, and regulatory bodies, fiscal authorities, and other financial actors have increasingly engaged in closer and more structured cooperation (Borio, 2011; Nier et al., 2011).

Nevertheless, the transformation process has not unfolded uniformly across countries. The extent to which policy frameworks have been effective is closely linked to the institutional configuration—whether centralized or fragmented—and the nature of inter-agency coordination and governance quality (Lim et al., 2011; IMF-FSB-BIS, 2016). Hence, the success of macroprudential practices relies not only on the tools themselves but also on their institutional integration, the quality of governance, and the level of coordination among relevant bodies.

This study analyzes how macroprudential policies mediate institutional transformation processes in emerging market economies through a conceptual and comparative framework. The central thesis posits that these policies serve not merely as financial regulatory instruments but as governance elements that transform the duties, authority structures, and interaction modalities of public institutions. It consequently argues that policy effectiveness depends less on technical tools and more on how these instruments become institutionalized within their contexts and integrated into decision-making processes.

The study pursues answers to these specific questions: What institutional models guide macroprudential policy implementation in emerging economies? What types of institutional transformations have these policies generated? How do institutional

structures, coordination mechanisms, and governance quality shape macroprudential policy effectiveness?

To address these questions, the research employs a comparative analysis methodology examining Türkiye, Brazil, and Indonesia as case studies. The analytical framework builds upon the "macroprudential institutional models" typology established by Nier et al. (2011), which categorizes countries into three principal structures: centralized frameworks led by central banks, independent macroprudential authorities, and multi-actor coordination models.

The investigation proceeds along three analytical dimensions: institutional architecture and task distribution, the scope of implemented macroprudential tools, and the effectiveness of coordination mechanisms and governance quality. Data sources include reports from national regulatory bodies (Central Bank of the Republic of Türkiye, Banco Central do Brasil, Bank Indonesia) alongside publications from international organizations (IMF, World Bank, OECD, Asian Development Bank). Annual macroprudential assessment reports from each country constitute key comparative data.

Methodologically, the study employs a qualitative comparative analysis approach. Findings are interpreted through conceptual frameworks and literature-supported evaluations rather than empirical testing. The research acknowledges limitations including its three-country focus and temporal discrepancies in indicator reporting, which may constrain generalizability while offering contextual depth.

## 2. Macroprudential Policy Framework

Macroprudential policies, which target the entire financial system and aim to prevent the emergence of systemic risks, became central to financial governance after the 2008 Global Financial Crisis. While most countries attempted to ensure financial stability through micro-level regulations before the crisis, the global collapse revealed the inadequacy of this approach (Borio, 2011; Galati & Moessner, 2013).

The macroprudential policy approach focuses not only on the soundness of individual financial institutions but also on the interconnections between these institutions, common behavioral patterns, and excesses in financial cycles. The objectives are to prevent financial contagion across the system, slow the spread of crises, and ensure sustainable credit growth (Claessens et al., 2013; IMF, 2013).

These policies typically serve as a bridge between monetary policy and microprudential supervision. While monetary policy focuses on macroeconomic indicators such as inflation and output gaps, microprudential policy supervises risk management in individual institutions. The macroprudential approach provides a

complementary framework at the intersection of these two areas, addressing both the time-varying and structural components of systemic risk (IMF-FSB-BIS, 2016).

The success of policies depends not only on which tools are used but also on how these tools are implemented, the degree of coordination among implementing institutions, and their timing relative to objectives. Therefore, the macroprudential policy framework represents not just a set of technical tools but also a complex institutional and managerial architecture (Nier et al., 2011).

Moreover, each country's macroprudential architecture is shaped by different institutional structures, economic priorities, and policy preferences. While these policies are typically implemented by independent central banks in developed countries, the policymaking process in developing countries involves more actors, is more exposed to political influences, and is often shaped by conflicting objectives (Lim et al., 2011). These differences are among the key factors affecting implementation success.

This section will explain the theoretical foundations of macroprudential policy, its relationship with systemic risk, and the general policy architecture; the detailed components of this framework will be discussed in subsequent subsections.

## **2.1. The Concept of Systemic Risk**

Systemic risk, a cornerstone of macroprudential policy, refers to risks that can affect the financial system as a whole. Unlike the failure of individual institutions, this risk encompasses crises that may spread throughout the system due to interconnectedness among financial institutions, common exposures, similarities in market behavior, and contagion effects (Borio, 2011; De Bandt & Hartmann, 2002).

Systemic risk is analyzed along two key dimensions:

**Time dimension:** The accumulation of risks over financial cycles, such as uncontrolled credit expansion or the formation of asset bubbles.

**Cross-sectional dimension:** The simultaneous exposure of multiple financial institutions or markets to the same shock—for instance, the collapse of a major bank triggering a domino effect (Galati & Moessner, 2013).

This multidimensional nature of systemic risk has rendered traditional micro-level regulatory mechanisms inadequate. While microprudential regulations typically focus on risk management within individual institutions, systemic risk arises from collective behavior patterns stemming from interactions among these entities (Hanson, Kashyap & Stein, 2011). For example, even if each bank perceives its own balance sheet as secure, systemic fragility increases if all institutions simultaneously invest in similar assets.

Moreover, the repercussions of systemic risk extend beyond the financial sector, profoundly affecting the real economy, public finances, and overall economic growth. The global downturn following the 2008 crisis starkly demonstrated its widespread impact on social welfare (Acharya, Pedersen, Philippon & Richardson, 2010).

Consequently, preventing or mitigating systemic risk is not merely a financial regulatory issue but also a critical policy objective for maintaining macroeconomic stability. This is precisely where macroprudential policies come into play—designed as early warning and intervention mechanisms that monitor the entire system, identify risk accumulations in advance, and take preemptive action when necessary (IMF, 2013).

## 2.2. Policy Objectives and Key Tools

The primary objective of macroprudential policies is to establish stability through preventive and mitigating regulations aimed at systemic risks that could impact the entire financial system. These policies focus on intervening against the accumulation of systemic risk over time and its horizontal transmission across financial actors (IMF-FSB-BIS, 2016). Accordingly, both the management of financial cycles and the mitigation of structural contagion effects within the system are key goals.

From a time-dimension perspective, controlling the excesses that arise throughout financial cycles ranks among the foremost priorities of macroprudential policy. During periods of economic expansion, unchecked credit growth, the formation of asset price bubbles, and the imperceptible buildup of risk in the system may signal an impending financial crisis. Therefore, macroprudential tools aim to constrain such expansions and thereby lessen the intensity of potential crises (Borio & Drehmann, 2009).

From a cross-sectional perspective, the simultaneous exposure of multiple financial institutions to similar risks—systemic contagion—is regarded by policymakers as a serious threat. If large institutions or those with highly correlated portfolios are adversely affected at the same time, the risk of systemic collapse rises significantly (Galati & Moessner, 2013). For this reason, policy tools are designed with attention to risk distribution and interconnectivity among institutions.

The intended outcomes of macroprudential policy include smoothing out financial cycles, reducing contagion between institutions, balancing risk perceptions in financial markets, and increasing the overall resilience of the financial system (ESRB, 2014). The effectiveness of these tools depends not only on their technical features but also on the institutional context, policy coordination mechanisms, and the behavioral responses of market participants (Lim et al., 2011).

In practice, macroprudential tools can be broadly categorized into two main groups. The first group targets the banking sector directly and includes countercyclical

capital buffers, debt-to-income (DTI) and loan-to-value (LTV) ratios, liquidity coverage ratios (LCR and NSFR), and reserve requirements. These tools are actively employed—especially in emerging economies—to restrain credit expansion and reduce short-term liquidity risks (IMF, 2013).

The second group comprises sector- or market-based regulations such as sector-specific credit restrictions, financial transaction taxes, large exposure concentration limits, and leverage ratio requirements. These tools are intended to prevent the spread of risks concentrated in particular segments of the financial system. The selection and scope of these tools largely depend on the country's financial structure, regulatory capacity, and macroeconomic environment (Crockett, 2000).

Thus, the macroprudential policy framework is not merely a technical toolkit but also encompasses institutional and strategic choices about the timing, manner, and responsible actors for implementation. This necessitates a dynamic, multi-stakeholder, and context-sensitive approach to policymaking.

### **2.3. Institutional Framework of Macroprudential Policies**

The effectiveness of macroprudential policy implementation depends not only on the content of the tools employed but also on the institutional framework within which these tools are designed and executed. Tackling systemic risk inherently requires a multi-actor approach. Therefore, a successful macroprudential framework necessitates clearly defined mandates, strong inter-institutional coordination, and structures that are both independent and accountable (Nier et al., 2011; IMF, 2013).

Countries adopt macroprudential policies through varying institutional models, which can generally be categorized under three main approaches. The first is the central bank-led model, where macroprudential authority is directly vested in the central bank. This structure strengthens the link between monetary policy and financial stability and allows for swifter decision-making. However, excessive centralization of powers may raise accountability concerns (BIS, 2011).

The second model is based on the establishment of an independent macroprudential authority. Institutions such as the Financial Policy Committee (FPC) in the United Kingdom exemplify this model, operating separately from the central bank and possessing the authority to employ specific policy instruments. This model stands out for its focused and specialized decision-making processes, though it may face limitations in policy coordination.

The third model, commonly observed in emerging economies, is the coordination committee model. In countries like Türkiye, Brazil, and Indonesia, macroprudential policy is implemented through a division of responsibilities among the central bank, banking regulatory authorities, and fiscal institutions. Coordination is

typically facilitated through financial stability committees; however, in many of these cases, such bodies remain advisory in nature without legal enforceability (TBB, 2018; ADB, 2017).

Despite their structural differences, these models often encounter similar institutional challenges. Ambiguities in mandate allocation can lead to conflicts and delays during implementation. Furthermore, inadequate mechanisms for information sharing among institutions may hinder timely detection of systemic risks. Another critical issue is the difficulty of balancing independence with accountability. Institutions vulnerable to political interference may prioritize short-term goals, while overly insulated entities risk drifting away from democratic oversight (ESRB, 2014).

Thus, an effective institutional architecture for macroprudential policy must rest on several core principles: clearly defined responsibilities and authorities, robust infrastructure for information exchange, coordination bodies with the capacity to take binding decisions when necessary, and transparent, traceable decision-making processes. Institutional capacity should not be limited to technical expertise alone but should also align with the principles of sustainability, adaptability, and public accountability.

In conclusion, macroprudential policy is not merely a set of technical tools; it gains significance through the quality of the institutional structures that govern, coordinate, and oversee their application. As such, institutional design is as much a strategic choice as technical capacity and must be carefully tailored to country-specific conditions.

### 3. Institutional Transformation: A Conceptual Approach

One of the core premises of contemporary financial governance is that the financial system cannot be understood solely through market actors; it must also be considered in light of the institutional structures that shape and guide their behavior. In this context, macroprudential policies are not merely sets of technical tools but also represent a structural transformation regarding how these tools are implemented, by whom, and within what kind of institutional framework. Particularly in emerging market economies, the post-crisis period has brought significant changes to the mandates of financial authorities, their institutional relations, and policy-making processes (North, 1990; Mahoney & Thelen, 2010).

Institutional transformation is not limited to the establishment of new institutions; it also encompasses structural evolution in the functioning, authority domains, and decision-making processes of existing institutions. Often, this transformation is accelerated by external shocks—especially financial crises. The 2008 Global Financial Crisis, in this regard, marked a turning point for many countries, redefining not only regulatory frameworks but also the nature of supervisory

institutions. For example, the establishment of the European Systemic Risk Board (ESRB) within the European Union introduced a new layer of institutional architecture with the mandate to monitor systemic risks at the macro level and provide policy recommendations (ESRB, 2014).

### **3.1. Definition and Scope of Institutional Transformation**

Institutional transformation refers to structural changes in the mandates, decision-making processes, and operational methods of public authorities. This process may involve the creation of new institutions, the redefinition of responsibilities of existing ones, and the restructuring of inter-institutional relations (Mahoney & Thelen, 2010). In the specific context of macroprudential policy, this transformation manifests as the expansion of central banks' responsibilities in financial stability, the creation of independent macroprudential authorities, or the development of multi-actor coordination mechanisms.

Structures like the ESRB represent a new institutional paradigm for monitoring systemic risk at the macro level and advising national authorities on policy responses. Similarly, in many emerging economies, the post-crisis period witnessed both the strengthening of existing institutions and the introduction of new coordination bodies.

### **3.2. Inter-Institutional Coordination and Alignment**

Given the inherently multi-actor and cross-cutting nature of macroprudential policies, strong coordination mechanisms among regulatory authorities are essential. Typically, monetary policy is managed by central banks, microprudential supervision is handled by banking regulators, and fiscal policy falls under the domain of finance ministries or treasuries. Within this multilayered structure, ensuring that policy objectives do not conflict—and can be pursued in a coordinated manner—requires institutional alignment and systematic information sharing (Nier et al., 2011).

An effective macroprudential governance architecture depends on three key conditions:

1. Clearly defined mandates: Each institution's area of responsibility should be explicitly outlined.
2. Systematic information exchange: Data and analytical insights must be shared promptly and based on mutual trust.
3. Non-overlapping jurisdictions: Potential conflicts or overlaps in authority must be minimized, and decision-making powers clearly allocated.

Türkiye provides a notable example of how these conditions are met—or not. The Financial Stability Committee (FSC), established in 2011, was intended to enhance

inter-institutional coordination in the realm of macroprudential policy. It includes key regulatory bodies such as the Central Bank of Türkiye, the Banking Regulation and Supervision Agency (BRSA), the Undersecretariat of Treasury, and the Capital Markets Board (CMB). However, the FSC's advisory nature and lack of legal authority have limited its practical effectiveness (TBB, 2018).

Similar bodies in other countries have been structured with stronger institutional mandates. For instance, the UK's Financial Policy Committee (FPC) is an independent entity with legal powers to monitor macroprudential risks and propose policy measures. In South Korea, the Financial Services Commission (FSC) combines regulatory and supervisory functions, enhancing operational coherence.

These cases demonstrate that institutional coordination is not merely a matter of structural design, but also of authority configuration and decision-making engineering. In countries like Türkiye, where multiple actors are involved, committees such as the FSC must go beyond information exchange and be empowered with joint decision-making and implementation authority.

Strengthening inter-institutional alignment would not only enhance the effectiveness of macroprudential policy, but also contribute to building institutional trust, transparency, and public credibility.

### **3.3. Institutional Capacity, Independence, and Accountability**

The effective implementation of macroprudential tools relies not only on technical expertise and institutional capacity but also on the existence of frameworks that are resistant to political interference, and that operate with both independence and accountability (BIS, 2011). In emerging economies in particular, regulatory bodies may be exposed to short-term political pressures, leading to policy inconsistencies, erosion of credibility, and deviation from long-term stability objectives (IMF, 2013).

Accordingly, it is essential to strike a balance between the principle of institutional independence and democratic accountability. On the one hand, authorities must be able to make decisions insulated from political pressures; on the other, they must remain transparent and answerable to the public. This dual requirement should be understood not only as a technical challenge but also as a normative and governance issue.

In conclusion, institutional transformation should not be seen merely as a temporary response to crises but as an evolutionary process through which financial governance capacity is continually reconstructed. The success of this process is closely linked to the presence of clear mandates, robust coordination mechanisms, and sustainable governance principles.

#### 4. Case Studies from Emerging Market Economies

The implementation of macroprudential policies is closely tied not only to countries' technical capacity, but also to the flexibility of their institutional frameworks, the lessons drawn from past crises, and the overall quality of governance (IMF-FSB-BIS, 2016). Emerging market economies, in particular, have become more vulnerable to external shocks due to the fragilities introduced by financial liberalization. This has heightened the need for macroprudential tools to manage systemic risks (Borio, 2011; Claessens, Ghosh & Mihet, 2013).

This section provides a comparative analysis of Türkiye, Brazil, and Indonesia across three dimensions:

- (i) the nature and scope of macroprudential tools used,
- (ii) the integration of macroprudential policy into institutional governance structures, and
- (iii) the contributions and limitations of this integration in maintaining financial stability.

The framework is structured around the institutional models categorized by Nier, Osinski, Jacome, and Madrid (2011).

Despite being exposed to similar external shocks following the 2008 Global Financial Crisis, these countries adopted varied institutional responses and developed different macroprudential policy architectures. Türkiye represents a multi-actor, coordination-based model; Brazil exemplifies a centralized, central bank-led approach; and Indonesia features a dual institutional structure based on a division of responsibilities (Lim et al., 2011; IMF, 2013). This diversity supports the view that macroprudential policy cannot be governed by a "one-size-fits-all" model and must be adapted to context-specific national conditions (Nier et al., 2011).

International organizations such as the IMF (2014), World Bank (2016), OECD (2023), and Asian Development Bank (ADB, 2017) regularly publish sectoral reports and indicators that allow for an analytically grounded comparison of these countries. As a result, institutional transformation can be observed not only at the conceptual level but also through empirical evidence.

The following subsections address, for each country:

- The macroprudential toolkit and its implementation,
- The content of institutional transformation,
- The operation of decision-making processes, and
- The assessment of impacts using quantitative indicators.

These elements are evaluated against the “good practice standards” suggested in the literature (BIS, 2011; ESRB, 2014).

#### 4.1. Türkiye

Following the 2008 Global Financial Crisis, Türkiye emerged as one of the emerging market economies that actively deployed macroprudential policy tools to manage systemic risks and control credit expansion. Under the coordination of the Central Bank of the Republic of Türkiye (CBRT) and the Banking Regulation and Supervision Agency (BRSA), measures were introduced to limit credit growth, apply flexibility to reserve requirements, and implement sector-specific interventions such as the “asset ratio” (CBRT, 2012; BRSA, 2014). These tools were heavily employed between 2010 and 2013 and contributed to managing financial risks arising from domestic demand.

One of the most notable developments in Türkiye’s macroprudential framework was the establishment of the Financial Stability Committee (FSC) in 2011. Designed as a coordination mechanism bringing together the CBRT, BRSA, Undersecretariat of Treasury, Capital Markets Board (CMB), and the Insurance Supervisory Authority, the FSC lacked legal authority and binding decision-making capacity, functioning merely as an advisory body (TBB, 2018). This limitation serves as a concrete example of the “risk of mandate overlap and institutional conflict” emphasized by Nier et al. (2011).

The CBRT's formal inclusion of financial stability as part of its monetary policy mission was an important step in Türkiye’s institutional transformation (CBRT, 2012). However, unlike many Western cases where such mandates are defined by law, this shift was shaped by practice rather than legislation, rendering the institutional structure vulnerable in terms of long-term sustainability (OECD, 2023). For instance, tools such as the “asset ratio” introduced in 2020 were implemented through regulatory discretion rather than formal legislative backing, drawing criticism regarding transparency (IMF, 2020).

In terms of institutional capacity, both the CBRT and BRSA possess strong technical expertise and human resources. However, the collaboration between them has largely relied on informal channels and personal networks, undermining institutionalized coordination in decision-making (Lim et al., 2011). Moreover, the limited level of public information sharing has led to shortcomings in accountability and transparency (ESRB, 2014).

Quantitative indicators show that credit growth was partially curbed in Türkiye between 2010 and 2013 through macroprudential tools. However, from 2017 onward, financial leverage increased again due to weakened policy coherence (OECD, 2023). This underscores that policy effectiveness depends not only on the toolset but also on the strength of the institutional framework.

In conclusion, although Türkiye's macroprudential framework demonstrated effective use of tools during certain periods, its long-term institutional transformation remained limited due to gaps in governance quality, legal foundations, and coordination mechanisms. Macroprudential policy becomes sustainable only when supported by clear mandates, binding coordination structures, and robust governance (IMF-FSB-BIS, 2016).

#### **4.2. Brazil**

Brazil stands out as one of the leading emerging market economies that systematically adopted macroprudential policy tools and rapidly enhanced its institutional capacity in the aftermath of the 2008 Global Financial Crisis. The Banco Central do Brasil (BCB) has played a central role not only as the authority responsible for monetary policy, but also as the country's primary financial regulator and supervisor in charge of implementing macroprudential measures (IMF, 2014).

Among the key instruments introduced by the BCB in the post-crisis period were countercyclical capital buffers, restrictions on credit growth, limits on large credit exposures, and liquidity regulations—such as differentiated reserve requirements. These tools were actively employed between 2011 and 2016 to support macro-financial goals such as curbing excessive credit expansion and enhancing resilience to foreign exchange shocks (World Bank, 2016).

A defining feature of Brazil's institutional framework is the centralization of macroprudential authority within the central bank. The BCB holds responsibility for both micro-level supervision (e.g., bank soundness) and macro-level financial stability objectives (BIS, 2011). This centralized structure reduces the need for inter-agency coordination in decision-making and expedites implementation processes (IMF-FSB-BIS, 2016). However, it also opens the system to criticisms concerning accountability and the lack of multilateral oversight mechanisms. In particular, blurred lines between political authorities and independent institutions can limit effective public scrutiny (World Bank, 2016).

In terms of institutional transformation, an important milestone came in 2013 when the BCB explicitly articulated financial stability as part of its institutional mission in strategic policy documents. From that point onward, the use of macroprudential tools became more embedded within a formal policy framework, and impact assessments were incorporated into central bank reports (IMF, 2014). In this respect, Brazil belongs to the group of countries where a formal institutional “convergence” between monetary and macroprudential policies has taken shape (Claessens, Ghosh & Mihet, 2013).

Data from the period show that macroprudential measures helped reduce bank leverage ratios between 2011 and 2014, while guiding credit growth onto a more sustainable path. However, the economic contraction and political uncertainty that

followed in 2015 introduced new risks to financial stability (OECD, 2023). This experience underlines the fact that macroprudential policies alone are insufficient; their effectiveness depends on complementary factors such as political stability, rule of law, and fiscal discipline.

In conclusion, the case of Brazil demonstrates that centralized institutional models can generate fast and effective responses during periods of crisis. Nonetheless, in the long term, such frameworks must be carefully designed to ensure democratic oversight and accountability. While this model delivers high efficiency in terms of policy integration and information sharing, it also carries risks such as reduced policy diversity and weaker mechanisms for critical review (Lim et al., 2011; BIS, 2011).

### 4.3. Indonesia

Indonesia drew significant lessons from the devastating effects of the 1997 Asian Financial Crisis, undertaking a comprehensive restructuring of its financial system and reinforcing its institutional foundations. The regulatory framework established in the aftermath of the crisis initiated not only technical reforms but also a broader transformation that included the division of responsibilities among institutions and enhanced supervisory processes (ADB, 2017).

In the post-2008 period, this framework became further institutionalized, allowing for the systematic implementation of macroprudential policies. Bank Indonesia (BI) assumed responsibility for overseeing financial stability at the macro level, while microprudential supervision was delegated to the Financial Services Authority (OJK), an independent and integrated regulator established in 2011 (Bank Indonesia, 2013). The clear division of responsibilities between these two bodies created a dual institutional structure, providing organizational clarity and reducing the risk of jurisdictional conflicts (IMF-FSB-BIS, 2016).

Indonesia's macroprudential toolkit has included capital buffers, debt-to-income (DTI) ratios, loan-to-value (LTV) limits, sector-specific credit restrictions, and constraints on risk-weighted asset growth for banks (ADB, 2017). These tools aimed particularly at limiting bubble risks in housing and consumer lending, and at enhancing the system's resilience to external shocks. However, the scope and timing of their deployment have been influenced by political and cultural factors, such as electoral cycles, societal sensitivity to household debt, and public pressure regarding interest rate policies (Lim et al., 2011).

To ensure coordination among multiple actors, the Financial System Stability Committee (KSSK) was established, playing a pivotal role in institutional alignment. Comprising representatives from Bank Indonesia, OJK, the Ministry of Finance, and the Deposit Insurance Corporation (LPS), KSSK operates with a legal mandate as a stability oversight mechanism (ADB, 2017). Unlike advisory bodies such as Türkiye's Financial

Stability Committee, KSSK is a formalized institution with authority not only to facilitate information sharing but also to conduct risk assessments and make binding preventative decisions within a transparent framework (IMF, 2013).

From the standpoint of institutional transformation, Indonesia’s model aligns well with the principles of functional separation and accountability. Both BI and OJK publish annual reports and strategic documents to fulfill their responsibilities to the public. Additionally, decisions taken by the Committee are disclosed transparently, in line with democratic oversight norms (Bank Indonesia, 2013; ESRB, 2014).

Nonetheless, this model is not without limitations. Inter-agency coordination has at times been sluggish, particularly during periods of rapidly evolving systemic risk. Furthermore, the OJK’s mandate to regulate a wide range of markets—including banking, insurance, and capital markets—has introduced risks of institutional overload and conflicting priorities (World Bank, 2016).

In terms of outcomes, Indonesia experienced balanced credit growth between 2012 and 2016, and banks maintained stable capital adequacy ratios throughout the post-crisis period. However, beginning in 2018, rising external debt and increased exchange rate volatility limited the effectiveness of macroprudential tools and tested the flexibility of institutional responses (OECD, 2023).

In conclusion, Indonesia’s case illustrates that a dual-structure model based on a clear division of responsibilities can offer advantages in terms of clarity and accountability. However, for such a model to function effectively, it must be supported by rapid decision-making, horizontal coordination, and political stability. This example suggests that institutional diversity should be evaluated not only in structural terms but also with regard to governance dimensions (Mahoney & Thelen, 2010; Nier et al., 2011).

## 5. Comparative Analysis

Macroprudential policy is a multidimensional policy domain that extends beyond the mere application of technical instruments. Its effectiveness is shaped by the quality of the institutional framework in which these instruments are embedded, the standard of governance, and the strength of coordination mechanisms. Although Türkiye, Brazil, and Indonesia pursue similar macroeconomic objectives—such as financial stability and the mitigation of systemic risk—they exhibit substantial differences in the institutional models they adopt and the practical approaches they implement to reach these goals.

This section compares the three countries based on several dimensions: institutional structure, diversity of instruments, coordination capacity, response time during crises, sectoral impact, and implementation challenges.

The following table provides a comparative summary of the macroprudential governance systems in Türkiye, Brazil, and Indonesia:

**Table 1: Comparative Features of Macroprudential Governance Systems in Türkiye, Brazil, and Indonesia**

Criteria	Türkiye	Brazil	Indonesia
<b>Institutional Model</b>	Multi-actor, coordination-based committee (FSC, advisory)	Centralized authority under central bank	Dual structure with functional separation (BI and OJK)
<b>Key Institutions</b>	CBRT, BRSA, Treasury, CMB, Insurance Supervisory Authority	Banco Central do Brasil (BCB)	Bank Indonesia (BI), Financial Services Authority (OJK), Ministry of Finance, Deposit Insurance Agency (LPS)
<b>Legal Mandate Strength</b>	Weak (no binding authority for coordination body)	Strong (central bank holds full authority)	Moderate-strong (legal foundation for coordination via KSSK)
<b>Tool Diversity</b>	Reserve requirements, credit limits, asset ratio	Capital buffers, credit exposure limits, liquidity regulations	LTV/DTI ratios, sectoral credit caps, capital buffers
<b>Coordination Mechanism</b>	Financial Stability Committee (FSC) – advisory and non-binding	Not needed due to centralization	Financial System Stability Committee (KSSK) – binding, with legal authority

As seen in the table above, Türkiye follows a multi-actor coordination model with limited institutional binding capacity. Structures such as the Financial Stability Committee (FSC) have remained largely advisory, rather than serving as robust institutional decision-making platforms. The policy-making process has often been shaped by informal relationships and administrative discretion. Notably, the implementation of measures like the “asset ratio” outside of a formal legal framework weakened both transparency and predictability. Between 2012 and 2015, the credit-to-GDP ratio increased from 55% to 71%, highlighting the limited effectiveness of the tools used during that period (OECD, 2023). Additionally, the asset ratio regulation introduced during the 2020 pandemic was withdrawn shortly after its introduction due to its lack of transparency and the absence of an accompanying impact assessment, despite being activated as a rapid policy response.

In contrast, Brazil employs a centralized model in which the Banco Central do Brasil (BCB) holds regulatory authority at both the micro and macro levels. This structure enabled Brazil to reduce credit growth to below 20% between 2011 and 2014 and maintain a capital adequacy ratio of around 17% in its banking sector (IMF, 2014). During crisis periods, tools were activated swiftly for instance, during the 2015–2016 recession, credit limits and reserve requirements were applied concurrently. However, as Claessens, Ghosh, and Mihet (2013) warn, such high levels of centralization may weaken accountability mechanisms and pose risks of policy monopolization. Parliamentary oversight is limited, and the number of decisions publicly disclosed is relatively low.

Indonesia, on the other hand, has established a dual-headed structure with a clear division of responsibilities between Bank Indonesia and the Financial Services Authority (OJK), underpinned by institutional coordination. The Financial System Stability Committee (KSSK) plays a central role in this arrangement by monitoring systemic risks through regular meetings and publishing its decisions via public reports. Between 2012 and 2016, credit growth was maintained at around 13%, while the capital adequacy ratio remained above 20% (ADB, 2017). The use of LTV and DTI ratios in the housing loan market proved particularly effective: these tools helped contain housing price bubbles and contributed to more equitable credit access for low-income households. However, the OJK's broad supervisory mandate—covering banking, insurance, and capital markets—has at times slowed decision-making due to regulatory overload and priority conflicts.

In terms of governance quality, Indonesia clearly exhibits a more institutionalized and accountable framework. Over 80% of KSSK decisions are made publicly available, and more than two macroprudential reports are published annually. By contrast, Türkiye has released only four such reports in total, and FSC decisions are not publicly disclosed. Brazil maintains a moderate level of transparency, with six published reports. Evaluated through the lens of North's (1990) concept of institutional continuity, Türkiye's reliance on personalized coordination weakens institutional memory and introduces vulnerabilities in the sustainability of reforms.

Quantitative indicators demonstrate how these differences are reflected in macroeconomic outcomes. Between 2010 and 2020, Türkiye's credit-to-GDP ratio rose by 21 percentage points, compared to 9 in Brazil and 13 in Indonesia. Indonesia also adopted a more systematic approach to communication by publishing 11 macroprudential reports, thereby enhancing the public legitimacy of its policy decisions.

**Table 2: Quantitative Indicators of Macroprudential Policies in Türkiye, Brazil, and Indonesia (2010–2020)**

Indicator	Türkiye	Brazil	Indonesia
Credit-to-GDP Ratio Increase (%)	21	9	13
Capital Adequacy Ratio (avg., %)	16	17	20+
Average Credit Growth (2012–2016, %)	18	<20	13
Number of Macroprudential Reports Published	4	6	11
Transparency of Coordination Body	Low (FSC not public)	Moderate	High (KSSK decisions public)

The table illustrates a clear connection between institutional structure and policy outcomes. In particular, the case of Indonesia demonstrates that in countries where governance quality is high, macroprudential policies tend to be implemented in a more

sustainable and transparent manner. This underscores the decisive role of institutional design in determining policy effectiveness—beyond the technical composition of the policy toolkit itself.

In conclusion, the success of macroprudential policy is not solely a function of the instruments chosen, but is deeply tied to the governance environment and institutional capacity within which these tools are deployed. Rather than proposing a “one-size-fits-all” model, it is more appropriate to design tailored frameworks that account for each country’s historical context, political structure, and institutional strength. Building a balanced foundation that includes institutional flexibility, transparency, functional separation, and accountability not only enhances resilience in times of crisis but also contributes to the establishment of a sustainable and inclusive financial stability regime.

## 6. Discussion and Policy Recommendations

The cases of Türkiye, Brazil, and Indonesia analyzed in this study illustrate that the effectiveness of macroprudential policies depends not only on the technical instruments employed but also on the institutional frameworks within which these instruments are implemented. The adoption of different institutional architectures has led these countries to pursue diverse paths in achieving their financial stability objectives. However, a shared conclusion emerges: the quality of institutional governance is one of the key determinants of macroprudential policy effectiveness.

In Türkiye, a multi-actor structure is in place. However, coordination mechanisms such as the Financial Stability Committee (FSC) have remained advisory in nature, limiting the degree of institutional integration. Although institutions like the Central Bank of the Republic of Türkiye (CBRT) and the Banking Regulation and Supervision Agency (BRSA) are technically strong, the lack of institutionalized cooperation between them undermines policy continuity and transparency. Türkiye’s experience highlights that the effectiveness of coordination mechanisms depends not only on their existence but also on their legal foundations and binding authority.

Brazil, by contrast, has adopted a centralized model in which the Banco Central do Brasil holds combined powers in both monetary and macroprudential policy. This structure has enabled faster decision-making, especially during times of crisis. However, the concentration of authority has also created structural risks, including limited accountability mechanisms and the potential for policy monopolization. The Brazilian case demonstrates that the pursuit of efficiency in governance must be balanced with democratic oversight.

Indonesia’s dual-institutional structure, based on a clear division of responsibilities between Bank Indonesia and the Financial Services Authority (OJK), has provided institutional clarity. Nevertheless, the multi-actor nature of the system has

occasionally led to delays in decision-making, especially during periods requiring rapid policy response. Despite this, the presence of a formal coordination body such as the Financial System Stability Committee (KSSK), along with high levels of transparency, has fostered public legitimacy and institutional trust in macroprudential policies.

Based on these findings, several policy recommendations can be made for emerging market economies:

- 1. Strengthening Legal Mandates:** Clearly defining the legal foundations of macroprudential frameworks—including the mandates and jurisdictions of relevant institutions—is critical. Overlapping responsibilities not only hinder coordination but also weaken public confidence in the system.
- 2. Institutionalizing Coordination Mechanisms:** In multi-actor systems, coordination bodies such as financial stability committees should have binding decision-making powers rather than serving solely in an advisory capacity. Institutional trust should be fostered through mechanisms for information sharing, coordination, and joint goal-setting.
- 3. Balancing Independence and Transparency:** Institutions must operate free from political interference while remaining accountable to the public. Regular publication of macroprudential reports enhances public awareness and ensures the functioning of democratic oversight.
- 4. Designing Context-Specific Models:** Since there is no universal institutional model, each country should design a governance framework tailored to its political structure, administrative capacity, and socio-economic conditions. Structural reforms should consider historical experiences and prior crisis episodes.
- 5. Enhancing Legitimacy and Social Participation:** The success of macroprudential policies depends not only on their technical soundness but also on their societal acceptance. Particularly for policies directly affecting households—such as borrowing constraints—design processes must consider social sensitivities.
- 6. Developing Institutional Learning and Feedback Mechanisms:** The effects of implemented policies should be regularly evaluated to foster institutional memory through feedback loops. Such monitoring and evaluation processes enable policy frameworks to evolve flexibly over time.

In summary, the success of macroprudential governance is as much a function of institutional quality as it is of technical capacity. The cases of Türkiye, Brazil, and Indonesia demonstrate that the effectiveness of macroprudential instruments is largely determined by the institutional context in which they are deployed. For emerging economies, achieving sustainable and inclusive financial stability requires attention not

only to the selection of tools, but also to the conditions under which these tools are implemented, by whom, and through what kind of governance structures.

## 7. Conclusion

The 2008 Global Financial Crisis revealed that financial stability cannot be ensured through micro-level regulations alone and that preventing systemic risk requires a more comprehensive and integrated policy framework. In response to this need, the emerging approach of “macroprudential policy” has made it clear that beyond the development of technical tools, a fundamental issue lies in determining the institutional arrangements, the distribution of authority, and the principles of accountability and coordination under which these tools are to be implemented.

In this context, macroprudential policy is not merely a collection of regulatory measures such as credit restrictions or capital buffers but a complex field of institutional reform that encompasses which entities will implement these measures, under what degree of independence and transparency, and within which governance architecture. Policy effectiveness depends not only on the presence of tools but also on the institutional context in which they are designed and applied.

This study has conceptually and comparatively examined how macroprudential policies mediate institutional transformation processes in emerging market economies, using the cases of Türkiye, Brazil, and Indonesia. The analysis shows that despite employing similar tools, different institutional models (multi-actor, centralized, functionally divided) yield diverse outcomes in terms of policy sustainability, governance quality, and public legitimacy. Türkiye has faced challenges related to weak legal frameworks and lack of coordination; Brazil, to accountability deficits; and Indonesia, to occasional delays in decision-making due to its multi-agency structure.

The key lesson from these cases is that the success of macroprudential policy depends not only on technical soundness but also on governance quality, institutional clarity, and embedded coordination mechanisms. Clearly defined mandates, institutionalized information-sharing, democratic accountability, and broad societal acceptance are indispensable elements of a sustainable macroprudential architecture.

This study contributes to the literature in three ways: (i) by assessing macroprudential regulation not only through technical instruments but within the broader framework of institutional arrangements; (ii) by offering a comparative analysis of different institutional models through the lens of three country cases, highlighting contextual variation; and (iii) by providing policy recommendations that serve both theoretical and practical audiences.

Future research may explore the interaction between macroprudential frameworks and monetary policy, as well as the effects of such policies on the real


economy, income distribution, and investment behavior. Moreover, their capacity to adapt to new risk domains—such as digital finance and shadow banking—deserves deeper investigation.

Ultimately, macroprudential governance is not simply a technical effort to maintain financial stability; it is a strategic domain of reform that rebuilds the state's economic governance capacity, strengthens institutional reflexes in the face of crises, and enhances public trust. Successfully building this domain can not only prevent future financial turmoil but also lay the groundwork for a more sustainable and inclusive economic order.

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