

ARTICLE

Unfolding macroprudential mechanisms: central bank-led mechanisms during the post-Global Financial Crisis Turkish experience

Sinan Akgünay

Middle East Technical University, Ankara, Turkey
Email: sinan.akgunay@metu.edu.tr

Abstract

The Global Financial Crisis of 2008 was followed by an increased volatility in capital flows, posing considerable macro-financial risks, especially for emerging markets. Turkey addressed these macro-financial risks between 2010 and 2011. Principal decision makers at the Central Bank of the Republic of Turkey took policy actions by introducing policy mixes that trigger causal mechanisms informing the behaviour of bankers and their customers at the macro level to contain such risks. Utilising insights from causal mechanisms theory, critical realism, and realist evaluation, this article explores how the Central Bank implemented the policy mix. Our central argument is that at the macro level (i.e., structural and institutional contexts), causal mechanisms link actions with micro-level contexts (i.e., perceptions and reasoning of the target audience), whilst at the micro level, multiple causal mechanisms link policy outcomes with actor behaviour through non-linear feedback mechanisms. Our article contributes to the causal mechanisms literature by linking policy mixes and policy outcomes via causal mechanisms that informed agential actions and outcomes containing macro-financial risks.

Keywords: Causal Mechanisms; Context; Monetary Policy; Macro-Prudential Regulations; Policy-Mix

Introduction

Mechanism-based thinking has played an important role in the philosophical development of social sciences. This approach has evolved within the theory of causation, establishing causal linkages between actions and outcomes. How do policy actions produce policy outcomes through introducing policy instruments that trigger causal mechanisms? How do multiple contingent contexts relate to agential action, causal mechanisms, and policy outcomes? There has been renewed interest in these intriguing questions among political scientists and policy scholars (Capano and Howlett 2021).

While causal mechanisms illuminate the relationships within the mechanisms that lead to causal processes (Kuorikoski 2009), they also reveal the interactions of mechanisms arising from the contextual factors in which they are embedded (Bakır and Jarvis 2017; Bakır 2022; Capano and Howlett 2021; Falletti and Lynch 2009). Notably, the adoption of the causal mechanism paradigm implicates an important shift away

from prior regression-dominated studies based on static variables (Davis and Marquis 2005). In causal mechanisms research, the static nature of variables has been replaced with persistent processes, making it possible to explore the interplay among actors and contexts (Bakır 2021; Buechler 2011; Hedström and Wennberg 2016). This dynamic nature of processes is primarily due to the counterintuitive nature of actor-level behavior (Hedström and Wennberg 2016; Schelling 1978). Moreover, along the lines of critical realist ontology and epistemology, causal mechanisms expand our understanding of distinct but all interdependent *real*, *actual*, and *empirical* levels of reality. While events, actions, and outcomes occur at the actual level and are sensed at the empirical level, reasoning and causality of these events occur at the real level. Causal mechanisms are chains that link actions with outcomes that create a bridge across multiple levels of reality (Bhaskar 1979; Hinds and Dickson 2021).

As analytical instruments, causal mechanisms have received significant attention in (re)considering a wide range of intellectual debates in social science. The interaction between various causal mechanisms and contexts has been addressed in political science, philosophy of science, and public policy (Capano and Howlett 2021). The dynamic- and context-dependent nature of public policy has also offered fertile ground for expanding the understanding of mechanisms. For example, while Kuorikoski (2009) has functionalized the interaction of multiple causal mechanisms as interrelated processes through which a Central Bank influences monetary supply, Bakır has operationalized mechanisms as linkages between actions that relate to policy instruments operating in contingent structural and institutional contexts and specific policy outcomes within the scope of Turkey's macroprudential experience during the aftermath of the 2008 Global Financial Crisis (GFC) (Bakır 2021).

However, the literature on causal mechanisms within the scope of public policy is still limited. Firstly, while we know that mechanisms operate within multiple contexts (Bakır 2017, 2021; Bakır and Jarvis 2017; Fallei and Lynch 2009), the interdependence of the financial system calls for an understanding of macroactions at international level (e.g., developed economy central banks' collective implementation of quantitative easing) that influence the context at the macro-national level (e.g., the high capital inflows into emerging markets). Secondly, although interactions and feedback effects between mechanisms are well understood (Hedström and Swedberg 1998), the dynamic loops in which policy outcomes (re)inform the implementations of policy instruments to produce new policy outcomes remain a black box. Thirdly, there is very little that has been written from a critical realist perspective that deals with central banking. By focusing on central banking, this article identifies causal mechanisms as essential social products that operate at not only the deepest, "real" level of reality but also at the actual and empirical levels of reality. Finally, although we understand that multiple mechanisms operate within componential causal systems (Bakır 2017, 2021; Bakır and Jarvis 2017; Kuorikoski 2009), it is not clear how and why multiple causal mechanisms are entangled with each other. This article seeks to unpack how and why causal mechanisms are articulated to complement one another, creating feedback loops that collectively contribute to desired policy outcomes.

From a methodological perspective, with the intention of exploring causal mechanisms along the contingent contexts in which mechanisms operate within, this research benefits from an exploratory case study method. It has an epistemological

perspective that reality is not limited to the observed phenomenon. In this respect, this article also takes advantage of the mechanistic approach in adapting a probabilistic understanding of causality. Hence, outcomes produced by causal mechanisms differ in relation to the different underlying temporal and nontemporal contexts.

Drawing on causal mechanisms research and insights from the macroprudential policy practices in Turkey from January 2010 to June 2011, this article operationalizes causal mechanisms to revisit the utility of mechanism-based approach in policy design and implementation. Turkey's macroprudential experience offers a distinctive setting: The causal mechanisms that have been triggered by the policy actions of developed country central banks (i.e., quantitative easing) produced individual financial outcomes at the domestic level (e.g., excess liquidity of these countries). As a result of the entangled financial system, these macrofinancial outcomes informed the context in the emerging market (EM) economies, including Turkey (i.e., excess credit and surge of capital flow). In the Turkish case, these contextual aspects decoupled with the preexisting macrofinancial contextual aspects to fuel the accumulation of macrofinancial risks (e.g., widening current account deficit, excessive bank credit growth, overappreciation of local currency, and/or increased household debt/outcome). Accordingly, the Central Bank addressed these risks through policy actions (i.e., reserve requirements and reserve option mechanism [ROM]) that produced causal mechanisms informing the reasoning of bankers and their customers (change in loan demand/supply) and consequently macrofinancial outcomes (containing macrofinancial risks).¹ Each outcome informed the Central Bank's actions through dynamic feedback loops and enabled the Central Bank to revisit the policy actions. Thus, Turkey proactively addressed such risks through dynamic activations of simultaneously operating mechanisms.

In the post-GFC context, there has been renewed interest in the political economy of central banking and macrofinancial stability-related policies in Turkey (Akçelik et al. 2013; Bakır and Çoban 2018, 2019; Başçı and Kara 2011; Kara 2016; Yağcı 2017, 2018). Moreover, while we know that multiple mechanisms have operated through regulatory practices informing macrofinancial stability following the institutionalization of macroprudential ideas during the June 2011–July 2016 period (Bakır 2021), our article complements this growing literature by conceptualizing Turkey's transition to the macroprudential framework and decoding the Central Bank's policy practice leading to the establishment of the Financial Stability Committee (FSC) in June 2011. Our aim is to contribute to the growing literature on causal mechanisms by identifying the causal mechanisms that collectively target macrofinancial stability at the national level and the context within which these causal mechanisms are embedded. Specifically, we bridge critical realism with realistic evaluation through introducing a conceptual model. In so doing it shows how multiple mechanisms are nested in multiple contingent contexts and multiple levels of

¹ Following the establishment of the FSC in 2011, the regulatory implementations of the Banking Regulation and Supervision Agency (BRSA) has also triggered causal mechanisms that inform the reasoning of bankers and their customers (see Bakır 2021). However, as the scope of this study is limited to January 2010–June 2011 time interval prior to the establishment of the FSC, the discussion has been limited to the policy practices of the Central Bank.

reality operate. Specifically, we use causal mechanisms to bring together multiple levels of reality while unfolding the dynamic interactions between actions, structural, and institutional contexts and outcomes.

Based on the Turkish experience, our central argument is that causal mechanisms are dynamic social products operating across multiple levels of reality and contingent contexts that bridge policy actions with policy outcomes through interactions among multiple mechanisms and persistent feedback loops. Bridging “critical realist” perspective (Bhaskar 1979, 2008; Hinds and Dickson 2021), the “realist evaluation” (Pawson and Tilley 1997), and the analytic eclectic structure, institution, and agency framework (Bakır 2017, 2022), we show that the causal mechanisms operate across multiple levels of reality and contexts. Hence, we make three central contributions to the existing knowledge on causal mechanisms. First, by approaching structures, institutions, and agents as separate but interrelated factors that interact with each other (Bakır 2017, 2022), we show that the interplay among causal mechanisms implies a dynamic linkage between actions and outcomes. Hence, in persistent loops, causal mechanisms link actions to outcomes and then link produced outcomes to changes in actions. As such, we offer a deeper (nonobservable and noninterpretable) understanding of an observable and interpretable phenomenon widely discussed within the literature. Second, building on the first insight, we show that multiple causal mechanisms complement each other in bridging various actions to a common outcome. Third, while we acknowledge the realist critique of the realistic evaluation concerning the difficulties of distinguishing contexts, mechanisms, and outcomes within multiple levels of reality, we operationalize causal mechanisms as fundamental social products that crosscut and bridge multiple levels of reality. We go beyond the understanding in the literature that argues that reasoning and causality occurs at the deepest “real” level of reality. We suggest that, as causal mechanisms are social products linking actions with outcomes, they also link multiple levels of reality.

The remainder of this article is organized as follows. In the second part of the article, we critically discuss the literature on causal mechanisms, with particular emphasis on mechanisms, contexts, and behaviors. In the third part, we discuss our methodological approach. Fourth, we discuss the “actual” and “empirical” levels of reality shaped by policy actions and policy outcomes in the Turkish post-GFC experience. In the fifth part, we discuss the “real” level of reality, where causal mechanisms link policy actions with policy outcomes. Finally, we summarize the novel findings of the article, its limitations, and directions for future research.

Causal mechanisms: contexts, actions, and outcomes

The common understanding is that causal mechanisms are chains that link actions with outcomes that operate within a contextual realm (Gerring 2008; Hedström and Swedberg 1998; Kuorikoski 2009). Accordingly, Bechtel and Abrahamsen define a mechanism as “a structure, performing a function in virtue of its component parts, component operations and their organization. The orchestrated functioning of the mechanism is responsible for one or more phenomena” (Bechtel and Abrahamsen 2005, 423). Hence, mechanisms are social products which bridge actions with outcomes.

A dynamic approach: causal mechanisms as a path toward reality

The ideal mechanism-based explanation operates through a dynamic process. Although we do not intend to offer an extensive comparison of causality in analytical sociology, realist sociology, and realist evaluation, we position our argument vis-à-vis these perspectives (Bhaskar 1979). From a theoretical perspective, analytical sociology (Hedström 2005; Hedström and Bearman 2009), critical realism (Bhaskar 1979), and realist evaluation (Pawson 2006, 2013; Pawson and Tilley 1997) take a common stand in framing mechanisms as the link between actions and outcomes. Accordingly, a mechanism is defined by the type of outcome it produces (Hedström and Ylikoski 2010). However, there are fundamental differences among philosophical positions of analytical sociology and critical realism. Analytical sociology prioritizes the positivist epistemological position over ontology, focusing on the empirical level of reality, whereas in realist sociology and realist evaluation, ontology does not reduce reality to human knowledge (i.e., that which can be observed and measured). Both critical realists and realist evaluation scholars share more of “a concern for uncovering mechanisms acting at a deeper level of reality than the levels of experience and events” (Hinds and Dickson 2021, 4). Yet, unlike realist evaluation, the critical realist perspective discusses the interactions between structure and agency (Hinds and Dickson 2021). However, the drawback of the critical realist view is that it conflates and combines structures with institutions, overlooking their interactions (see Bakir 2022). This limits our capacity to understand interactions among these distinct but interrelated contextual factors. Thus, our analysis spells out structural and institutional contingencies in its analysis of macrocontexts. Hence, a key issue in understanding the operational function of causal mechanisms is the relationship between contingent contextual factors, causal mechanisms, and reality.

Drawing from critical realist ontology, an understanding of causal mechanisms also entails a greater knowledge of reality (Bhaskar 1979; Fletcher 2017). According to critical realists, events are experienced, interpreted, or sensed at the empirical level and occur at the actual level, but it is at the deeper “real” level where unobservable entities with causal properties or “causal mechanisms” act to produce these events (Coleman 2019; Hinds and Dickson 2021). Hinds and Dickson offer a critical realist critique of the realistic evaluation, noting that: “the configuration C [context] + M [mechanism] = O [outcome] confuses researchers since it does not separate out the empirical, actual and real levels clearly enough so that they can engage in the iterative and retroductive theorizing that should take place between the different levels” (Hinds and Dickson 2021, 9). Furthermore, realistic evaluation scholars rightly note that a mechanism “is described as an amalgam of resources and reasoning which implies that it is both structure and agency” (ibid., 4–5).

Is it possible to reconcile the insights of critical realist theory and realistic evaluation on causal mechanisms in an understanding of policy outcomes? We propose a conceptual model that links both. In doing so, we show that causal mechanisms are dynamic products that reach beyond the limitations of both approaches. As illustrated in Figure 1, causal mechanisms operate across multiple contexts and levels of reality and are time-dependent social products that link actions with outcomes. Hence, we suggest that causal mechanisms do not operate solely at the deepest “real” level of reality. Instead, while operating at the “real” level of reality they bridge

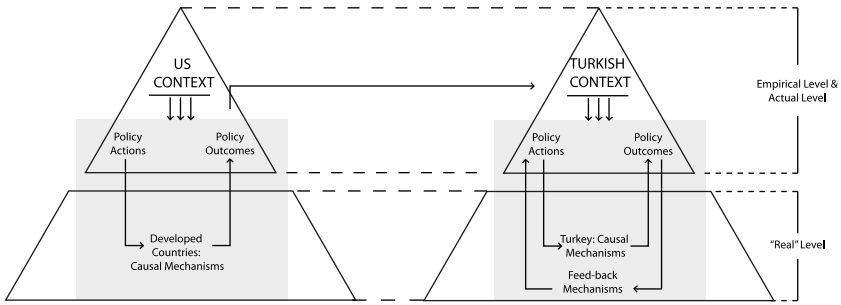


Figure 1: Causal mechanisms in multiple levels of reality.

observable actions with observable and nonobservable outcomes, at the empirical and actual levels of reality. In sum, causal mechanisms are social products that operate across multiple levels of reality.

Causal mechanisms, context, and analytical sociology

Our analysis is also informed by the realistic evaluation approach's argument that desired or preferred outcomes are the social products of causal mechanisms operating within appropriate contexts. The central claim of this approach is that "an action is causal only if its outcome is triggered by a mechanism acting in context." (Pawson and Tilley 1997, 58). Hence, to identify the causal mechanisms that operate within multiple layers of contexts, the contextualization of causal mechanisms is necessary (Falleti and Lynch 2009; Gerring 2010; Mahoney 2001; Pawson and Tilley 1997; Tilly 2001).

Unlike realistic evaluation, however, our analysis does not conflate structures, institutions, and agents. Furthermore, unlike the approach used in realist sociology, we do not reduce structures to institutions. Instead, we benefit from analytic eclectic view of interactions among structural, institutional, and agential factors in underlying causal processes (Bakır 2017, 2022). In "Instrument + Mechanism + Context = Outcome" (IMCO) pattern configuration, Bakır (2021, 225) argues that "the success of a policy program is due to (1) its appropriate contextualization in defining policy content and policy objectives and selecting their instruments; and (2) policy instruments triggering desired mechanisms which are able to operate in appropriate multiple temporal and non-temporal [structural and institutional] contexts, whereby the reasoning and responses of the target audience are influenced." Here, agential actions by the Central Bank introduce policy instruments in appropriate structural and institutional contexts that trigger causal mechanisms that inform the behavior of the target audience through influencing their reasoning, thereby producing desired or preferred outcomes. In other words, the effectiveness of policy instruments is a function of whether they trigger multiple complementary causal mechanisms generating desired or preferred outcomes. We adopt this perspective in our analysis.

Scholars of mechanisms in analytical sociology have recently used statistical approaches (namely "agent-based simulation models") (Hedström and Ylikoski 2010). More specifically, causal mechanisms research uses quantitative methods.

Hedström and Ylikoski argue that “to explain macro-level change, rigorous theorizing is needed that explicitly considers the micro-level mechanisms at work and the dynamic processes that they give rise to” (Hedström and Ylikoski 2010, 64). Meanwhile, there are also critiques of this positivist view of causal mechanisms and its methodological approach. Little suggests that this positivist view implies “that only agent-based simulations will provide acceptable explanations of ‘macro-macro’ effects” (Little 2012, 143). Moreover, analytical sociology “has a deductive logic in the positivist analysis of causal mechanism. It focuses on “a typology of social mechanisms” (Hedstrom and Swedberg 2010, 59). As Bakır (2021, 208) noted, this view “emphasizes micro-level causal relations rather than macro-level causal mechanisms.”

Our analysis takes a different ontological (i.e., there are multiple contexts, agential actions, and mechanisms nested in the interrelated domains of stratified reality), epistemological (i.e., reality is not limited to what we observe empirically), and methodological stance (i.e., follows an iterative rather than a linear process when examining mechanisms that generate observable patterns of phenomenon) than these positivist versions based on statistical methods. In contrast to deductive methodological interest aimed at testing a theory and making predictions about outcomes in universal explanations, our analysis takes epistemological interest in inductive, rigorous, and transparent interpretive research to generate hypotheses about causal mechanisms. In contrast to a deterministic view of causality, our analysis’ ontology defends a probabilistic conception of causality where mechanisms vary in their operation in different contexts (Mayntz 2004).

Identifying causal mechanisms

The process of identifying a causal mechanism involves the task of tracing an outcome to an action or behavior. However, mechanisms do not necessarily produce the general applicable laws associated with the causal relationship. Therefore, causality is sometimes perceived through inference rather than through an observable relationship (Anderson et al. 2006). For example, actor-level actions driven by experience are considered “learning” mechanisms (Heclo 1974), institutional changes due to new goals or functions are considered “conversion” mechanisms, and institutional changes due to amendments or revisions are considered “layering” mechanisms (Falleti and Lynch 2009, 1150; also see Streeck and Thelen 2005).

Moreover, the relationship between actions and outcomes is not always linear. While, actions produce outcomes, outcomes may also (re)inform actions. Accordingly, feedback loops create continuity between actions and outcomes. The nonlinearity of these feedback loops illustrates the continuous nature of social actions (Hinds and Dickson 2021). Moreover, “developing feedback loop diagrams could be an analytic strategy to synthesize material from reviews of evidence to map out pathways of change in complex interventions and to identify generative mechanisms” (ibid., 10).

While mechanisms have explanatory value for many outcomes, the outcome of an action is not necessarily the result of a single mechanism. Rather, outcomes of actions can be produced through the operationalization of multiple mechanisms (Kuorikoski 2009, 147). Importantly, while actions and outcomes are individual, observable, or

interpretable entities, causal mechanisms shed light on the nonobservable or noninterpretable causal components of the same reality. This approach is particularly useful in the domain of public policy. More significantly, mechanisms are operationalized to illustrate how the implementation of multiple public policy instruments collectively trigger complementary causal mechanisms that reinforce similar reasoning among the target audience generating desired or preferred policy outcomes. We show that it was not the policy instrument per se that generated the policy outcome. Instead, these causal mechanisms, operating in contingent contexts, were triggered by the policy actions that introduce and implement policy instruments (Bakır, 2021, 207). Yet, the literature lacks an empirical understanding of how *multiple* mechanisms interact to link actions with outcomes, as well as an understanding of how a policy outcome informs the policy actions it produced. Indeed, if a causal mechanism is the link between action and outcome, then the mechanism between the outcome and action is equally important.

Why does context matter?

Keeping in mind the emphasis on micro-level interactions among actors (Hedström 2005), mechanisms act within systems and are shaped by their context (Bunge 1997, 2004). Falleti and Lynch note that “unit homogeneity in mechanistic explanations requires that mechanisms, and not just variables, be portable and comparable across contexts” (Falleti and Lynch 2009, 1144–1145). Hence, context is framed by the analytical, temporal, and institutional components of a setting. Depending on its contextual components, similar mechanisms may produce different outcomes. Therefore, as the contextual realm has explanatory value in how outcomes are produced, it is just as essential to identify the contextual realm as it is to decode the mechanism (Falleti and Lynch 2009). A context, therefore, informs how mechanisms are activated or collapsed (Biesbroek et al. 2014). Therefore, contexts, actions, and outcomes are all observable or interpretable aspects coexisting within the empirical and actual levels of reality. Operating within this context, causal mechanisms display the interplay among different levels of reality, shedding light on the unobservable and uninterpretable “deeper” parts of the same reality.

Interestingly, a causal mechanism is not necessarily subject to a single context (Falleti and Lynch 2009). In fact, “a variety of contextual layers” (such as “input,” “exogenous shocks,” “critical junctures,” and “other relevant institutions and structures”) “inform the actions and functioning of mechanisms” (ibid., 1155–1157). Such layers may act simultaneously. The “contextual realm” therefore implies a collective, institutional, and structural framework within which the causal mechanism operates and therefore may specify the beginning and ending points of the causal mechanism. The varying types and multileveled nature of mechanisms create different levels of influence and potential boundaries (Anderson et al. 2006). To accurately assess complex contextual realms in multilayered contexts, Falleti and Lynch (2009) offer a historical periodization of competing contextual components within a specified time interval. In consideration of the background environment, time interval, tempo, critical junctures, and exogenous shocks, the contextual realm of a causal mechanism is illustrated by layering each of the contextual components with respect to their effective time interval.

In sum, while we identify causal mechanisms as processes that explain behavioral interactions leading to outcomes (Mahoney 2001, 2016; Pawson and Tilley 1997; Tilly 2001), we also know that causal interactions depend on and operate within contextual realms (Falleti and Lynch 2009; Pawson and Tilley 1997). Therefore, causal mechanisms require contextualization (Falleti and Lynch 2009). Thus, in a historical analysis, periodization of the layered context is only possible within consideration of the different contextual processes that occur at different speeds and in different layers. In this manner, both critical junctures (which delineate the beginning and end of mechanisms) and exogenous shocks (which lead to contextual changes) are considered (*ibid.*). The conceptualization of mechanisms and contexts adopted in the remainder of this article is informed by the combined perspective of the components within mechanisms (leading to a causal process) (Hedström and Swedberg 1998; Kuorikoski 2009) and the interactions or influences of mechanisms arising from the contextual factors in which they are embedded (Bakır 2017; Falleti and Lynch 2009).

Methodology of the study

We use an exploratory case study method in this article. This method enables us to tackle a phenomenon within its real-life context (Yin 1994). In contrast to the distinct method of process tracing that is used “to operationalize the mechanistic view in search for plausible causal mechanisms” (Bennet and Checkel 2015; Biesbroek et al. 2014, 109) mechanistic research is concerned with the causal chain that connects micro- and macro-level phenomena, as well as with the interactions between the micro and macro (Capano and Howlett 2021). Process tracing, however, “emphasizes the sequence of events in time, not interaction between levels of reality” (Mayntz 2004, 2016). Our analysis takes an epistemological interest in qualitative research to explore and explain causal mechanisms, and in contrast to a deterministic view of causality, its ontology uses a probabilistic conception of causality where mechanisms vary in their operation in different contexts (*ibid.*). Our unit of analysis is a causal mechanism that links policy actions, related to policy instruments, with policy outcomes. We use Turkey as our primary example because it is one of the first developing countries to have a central bank that adopted macroprudential policy tools for macrofinancial stability, as well as because the authors had access to key senior-level informants from the central bank, regulatory institutions, and commercial banks. Also, the Turkish case offers a distinctive setting in which to observe unconventional policy mixes aimed at targeting financial stability (Alper et al. 2013a, 351; Başçı 2011, 2012; Başçı and Kara 2011; Kara 2012, 2015, 2016).

For data-collection purposes, we mainly rely on qualitative data such as interviews and official written resources of the domestic and international organizations. To understand the causal mechanisms operating within a specified contextual period, we collected related data from each of the actors associated with the mechanism at either the macro or micro level. We used “purposeful sampling” to select interviewees, basing our selection on the criteria of the interviewee’s role within the mechanism and/or their ability to contribute to the specified research question.

The interview data are based on elite interviews with seven senior public- and private-sector officials considered to be actors of the macroprudential mechanism

in the Turkish experience. They include three senior central bankers (a former Central Bank governor, a deputy governor, and a former director general of the Research and Monetary Policy Department), three senior bankers (a head of the Credit Risk, Budgeting and Reporting Department and two vice presidents of assets and liabilities management), and one senior banking regulator (former deputy head of the Risk Management and Surveillance Techniques Department at the Banking Regulation and Supervision Agency).

A series of 60-minute, semistructured elite interviews using open-ended questions were conducted between 2013 and 2018. The process of data collection and analysis was continuous, involving several rounds of interviews; these interviews continued until they produced no new information. An in-depth review of primary and secondary written sources supported the data set obtained from the interviews. These sources included newspapers, academic publications, and official reports of public bureaucracies and international intergovernmental organizations.

“Actual” and “Empirical” Layers of Reality: Transition to the Macroprudential Framework

In Turkey’s GFC experience, contingent contextual conditions that gave rise to these linkages between the three domains of reality were shaped at the domestic and international levels. To understand the contextual layers within which the mechanisms operate, as well as the agent-level actions triggering the mechanisms in the Turkish context, one must not conflate structures, institutions, and agents. Accordingly, we analyze the interactions among structural factors that are not reduced to institutions. In the Turkish case, structural (material) contexts that include observable aspects of reality have bank-based financial systems and high current account deficits at the domestic level. Meanwhile, institutional contexts (the nonobservable aspects of reality) refer to the institutional logic of macroprudential regulation that informed the causal mechanisms informing perceptions and preferences of agents during the institutionalization process at the national level (Bakır, Akgünay, and Çoban 2021).

While the causal mechanisms that operate at the global level (mechanisms that link the policy actions of developed country central banks with outcomes) are not within the scope of this article, it is important to highlight their significance in the Turkish context. As illustrated in Figure 2, at the global level, the fear of worldwide depression among the principal decision makers located in the transnational financial policy network (i.e., real level of reality) give rise to the introduction of monetary policy tools by developed country central banks such as purchases of long-term securities from financial markets (i.e., the quantitative easing policies of developed country central banks). Through causal mechanisms, this policy action activated patterns of surge in capital inflows (i.e., actual level of reality), which in turn, led to transition to excess bank credit in developing countries that gave rise to increased borrowing, consumption, and spending (i.e., the experience of actors at empirical level of reality). Meanwhile the outcomes of the policy actions of the developed country central banks shaped the contextual factors in Turkey. These contextual factors included increased macrofinancial risks such as widening current account deficit, unsustainable household debt, and overvaluation of the Turkish lira (i.e., patterns



Figure 2: How macromechanisms impact microcontexts.

observed in actual domain). These risks would trigger capital flight that was at the epicenter of homegrown past financial crises in Turkey. They informed the perceptions and reasoning of the then Central Bank senior officials that a new monetary policy mix to tackle capital flows should be introduced to prevent another crisis in the real domain to constrain hot money inflows in the actual domain, and constrain economic actors borrowing, lending, consumption, and investment behavior in the empirical domain (more in the following text).

What are the specific contingent conditions that give rise to these linkages between the three domains of reality and agential action? At the domestic level, the bank-based financial system is a key structural contextual condition for the Central Bank's policy mix (Bakır 2021). This is because commercial banks (traditional deposit taking, loan making) are dominant organizational actors in this context. Thus, financial regulation has a strong potential to influence the behavior of commercial banks. More specifically, the banking sector has translated global liquidity into domestic lending, thereby boosting domestic consumption and current account deficit (ibid.).

At the international level, the surge in capital flow is another observable layer of reality informing the context of the Turkish experience. In response to the stagnating macrofinancial context in advanced economies, central banks (the US Federal Reserve [Fed], Bank of England [BoE], and European Central Bank [ECB]) implemented Quantitative Easing (QE) policies. QE entailed lowering interest rates and injecting liquidity into the global economy through episodes of asset purchases. The goal was to increase promoting lending and investment through liquidity injections, with the aim of boosting economic activity. The relatively high interest rates of EM economies observed at the actual level of reality was interpreted as favorable macrofinancial conditions for foreign capital at the empirical level. Thus, QE led to a surge of unproductive and speculative capital flows (hot money) to EM economies.

In relation to macrofinancial conditions at the actual level of reality, the reasoning and risk assessment associated with the macrofinancial conditions that took place at the real level of reality resulted in the adoption of programmatic macroprudential ideas. Following the GFC, the role of macroprudential programmatic policy ideas as informal institutions has gained momentum within the international financial regulatory framework (Baker 2013). With rising risks in the financial system, it has been clear that a micro-level focus on the soundness of individual banks was not sufficient to support financial stability (Bakır 2021). Unsurprisingly, global central banks and regulatory authorities internalized such macroprudential ideas to address systemic risks in the financial system (IMF 2011, 2012, 2016). Meanwhile, due to the policy and institutional entrepreneurship processes, a similar ideational shift occurred in Turkey (Bakır, Akgunay, and Çoban 2021). Experiencing a surge of capital flows,

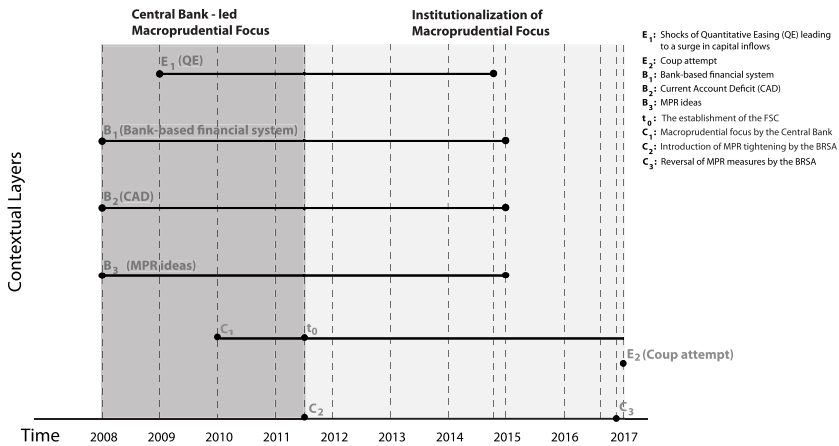


Figure 3: Contextual layers for Turkey’s macroprudential experience.

the Central Bank determined that the accumulation of macrofinancial risks was the primary problem. Hence, in addition to its formal price stability objective, it pushed for an ideational shift and informally incorporated financial stability as a new policy objective (Yılmaz 2011).

How and why did context influence agent behavior in the Turkish experience?

Indeed, the observable and nonobservable contextual layers played a key role in influencing agent-level behavior in the Turkish case. Regarding the temporal context during the period leading to the establishment of the FSC in June 2011, Turkey, like most EM economies, attracted significant capital inflows, leading to an excess amount of liquidity within its domestic economy (Aysan et al. 2015; Kara 2016). Although the liquid economic environment associated with QE was partially disrupted by reverse capital movements caused by the Eurozone debt crisis beginning in 2011 (Başçı 2012), the cumulative appetite of global capital flow remained strong. This resulted in a widening current account deficit and an economy vulnerable to short-term, speculative, and unproductive capital flows (Kara 2016). Coupled with the institutional contextual layers, the contextual layer created by the surge of capital flow led to a rapid expansion of domestic bank credit and an overvaluation of the Turkish lira (Aysan et al. 2015; Bakır 2021; Kara 2016). The temporal context ends with the establishment of the FSC. This is considered as a critical juncture in the Turkish experience. Drawing on Bakır (2021), contextual periodization of the MPR in the Turkish experience, Figure 3 operationalizes the contextual layers targeting financial stability and leading to the institutionalization of macroprudential ideas.

In sum, in the Turkish case, preceding all other contextual layers, the “high capital inflow” economic environment in EM economies (E1) is considered an exogenous shock. Accordingly, one senior central banker identified the surge in capital inflows at the international level as the primary contextual component that both initiates and ends the mechanistic system (Interview no. 7, CB2, February 14, 2018).

Along with the surge of capital inflows, the bank-based financial system (B1), material conditions of the current account deficit (B2), and macroprudential ideas (B3) acted as background conditions occurring at the actual level of reality. However, the Central Bank interpreted these conditions at the empirical level of reality. Accordingly, the macroprudential mindset initially emerged within the institutional framework of the Central Bank. By early 2010, in response to the macrofinancial risks associated with the surge of capital inflow, the Central Bank began to use its conventional and unconventional policy tools to address financial stability (C1). However, it did not have the macroprudential policy toolkit to address macrofinancial risks. Nonetheless, up until the establishment of the FSC, the Central Bank solely addressed financial stability and acted on the institutionalization of macroprudential ideas (Kara 2016). The FSC's establishment began a new era for coordination between the Central Bank and the BRSA, implicating a change in the context for the Turkish experience and hence an end in the temporal period for the mechanistic framework.

The contextual layers for Turkey's macroprudential experience have incorporated as observable, nonobservable, experienced, and interpretable aspects of reality. These layers informed the unobservable reasoning of agents at the real domain, which in turn gave the rise of borrowing, lending, consumption, and investment patterns at the actual level and translated into observable actions of the individual and organizational actors at the empirical level. Most importantly, the policy actions of the Central Bank were affected. One senior central banker made the following point on this matter:

With the rapid decrease in interest rates and increase in loan terms, consumption increased, resulting in an increase in consumer loans and current account deficits. This eventually led to economic growth we believed to be unsustainable. However, due to the strength of this financial cycle, we believed that monetary policy tools such as interest rate tools would be insufficient in dealing with such issues. Therefore, we started thinking about whether additional tools could be designed/used to smoothen the effects of these financial cycles. As the Central Bank, we had certain tools which we used for this purpose. However, our main objective was to influence the Banking Regulation and Supervision Agency [BRSA] in acting toward the same goals. (Interview no. 2, CB1, November 8, 2016)

Turkey's current account deficit by December 2010 was almost fully financed through short-term flows that resulted in strong domestic demand and economic growth (Kara 2016). This was interpreted as a significant macrofinancial risk by the senior bureaucrats of the Central Bank. Thus, managing capital flows was their main concern (Interview no. 1, CB3, December 7, 2013; Interview no. 3, CB3, November 15, 2016; Interview no. 5, B1, October 25, 2016). Theoretically, while a surge of capital flow may create economic growth (Interview no. 5, B1, October 25, 2016), it can also appreciate local currency, making imports cheaper and creating excess liquidity within the domestic economy, thus resulting in a current account deficit and an overheating economy (Interview no. 4, B2, November 1, 2016). More importantly, the economy could become increasingly dependent on short-term capital flows, eventually leaving it vulnerable to the risk of a sudden reversal of capital flows

(“sudden stop” risk) (Calvo and Reinhart 2000). All interviewees shared the view that this was the Central Bank’s main concern (Başçı and Kara 2011). Thus, by the end of 2010, “due to the lack of a formal institutional setup to contain macro-financial risks in Turkey” (Interview no. 2, CB1, November 8, 2016), the Central Bank identified the situation as risky and unilaterally stepped in to implement a new policy approach (Yılmaz 2011). The Central Bank had the perception that capital flows were a threat to Turkey’s financial stability. Meanwhile, in addition to its formal objective of price stability, the Central Bank informally incorporated financial stability as a new objective (Alper et al. 2013a; CBRT 2011a, 2011b, 2012). As most of the central bankers and bankers noted, the policy implementations aimed to diminish the destabilizing effects of short-term, speculative, and unproductive capital flows. Such effects are among some of the underlying factors that led to financial crises in the Turkish economy during the 1990s. Thus, the contextual realm influenced the Central Bank’s behavior in pursuing new policies at the micro level.

As a response to the rising macrofinancial risks associated with the capital surge, Turkey implemented two policy packages through the Central Bank. Implemented in 2010, the first package included the introduction of new monetary policy mix that was the individual effort of the Central Bank, while the second included the establishment of the FSC that was an avenue for the institutionalization of the macroprudential ideas in June 2011. To “incorporate the financial stability objective into the implementation of monetary policy without diluting the price-stability objective,” (Akçelik et al. 2013, 16) the Central Bank introduced an innovative new policy mix. We show that this new approach aimed to achieve its goals through causal mechanisms that have been triggered through the implementation of a set of policy instruments (more in the following text). Along with traditional policy instruments such as required reserves (RR), the Central Bank’s agential actions also included a policy mix formed from a mixture of unconventional policy instruments such as ROM and asymmetric interest rate corridor (AIRC).

The goal was to contain excess credit growth and volatility in domestic currency. To this end, although policy actions that have been informed by multiple instruments employed individual policy strategies, they collectively addressed macrofinancial risks (Kara 2016). Accordingly, the Central Bank’s policy implementations were informed by the following four reasonings: (1) increase the banking system’s resilience to foreign exchange (FX) liquidity shocks and smooth the exchange rate volatility through the mechanism, (2) manage domestic liquidity, (3) contain excess growth in consumer loans through increasing funding costs, and (4) institutionalize macroprudential ideas through the establishment of the FSC. We discuss each of these reasonings in the following text.

Operating across the layers of reality: causal mechanisms

Macrofinancial conditions are observed at the actual level but are experienced/interpreted at the empirical level. For example, when interest rates are increased at the actual level, consumers will have a reasoning in the real domain that identify loans as more costly and less desirable, constraining their borrowing and spending behavior at the empirical level. In return, the pattern at the actual level will be a decreasing demand for loans. Yet it is at the deeper, “real” level of reality where these aspects

interact and are linked to one another through causal mechanisms. The Central Bank's policy actions correspond to its interpretations, triggering causal mechanisms that inform the reasoning of bankers and their customers. In turn, this leads to policy outcomes at the empirical level of reality.

Increasing the resilience of the banking system

With the goal of increasing the banking system's resilience, multiple causal mechanisms were operationalized through multiple policy actions during the two different stages of the policy implementation process. At the actual level of reality, the Central Bank aimed to manage FX liquidity and exchange rate volatility by increasing the banking system's resilience to FX liquidity shocks and smoothening the exchange rate volatility through RR and ROM. As Kara (2016, 132) notes, "RR ratios and remuneration rates were differentiated across several dimensions, providing incentives for the banking system to prefer (i) core liabilities over non-core liabilities, (ii) long-term over short-term liabilities, and (iii) Turkish [l]ira over FX liabilities."

Hence, RR was an important tool in differentiating the currency structure of banking liabilities. This policy complemented RR because it enabled banks to keep a specific ratio of their TL reserve requirements as FX and/or gold. With the implementation of the ROM, the Central Bank aimed to push banks to hold a larger proportion of their RR in FX and decrease the exchange rate volatility (Alper et al. 2012, 2013a, 2013b). However, the process was not smooth. As suggested by a senior level commercial bank professional, "banks tend to implement the most profit-maximizing internal strategy" (Interview no. 4, B2, November 1, 2016). Therefore, banks assessed the Central Bank interest rates to be undesirable. Meanwhile, banks proactively followed the Central Bank's rates, but instead of converting their FX borrowings to TL, they maintained their FX positions until the rates became more favorable (*ibid.*). At the "real" level of reality, the Central Bank's policy measures (actions) were linked with commercial banks' FX positions (outcome) through "profit seeking" mechanisms enforced by banking behavior. Meanwhile, unintended policy outcomes informed the Central Bank's policy measures through continuous nonlinear "feedback" mechanisms at the "real" level of reality. In 2011, driven by policy outcomes, the Central Bank increased weighted average RR ratios four consecutive times, further differentiated the currency structures of the RR, and proactively revisited ROM rates (CBRT 2011a).

Unsurprisingly, the Central Bank's reestablished rates created an incentive for banks to hold a higher ratio of their TL reserve requirement liabilities in foreign currency. "This [would] not only contain the appreciation pressure of TL but also limit the conversion of the [foreign currency] inflows into bank lending" (Akçelik 2013; Alper et al. 2012, 5). Both policy instruments informed the actions of the target audience in the context of credit and exchange rate, thereby contributing to the policy goals of reaching financial stability (outcome). One senior banker noted that "during episodes of domestic currency sales in other EM, the ROM had been a tool which protected both the Turkish banking system and Turkey's FX position against external shocks" (Interview no. 5, B1, October 25, 2016; Interview no. 6, B2, October 18, 2016).

At the actual level of reality, following the adoption of the ROM, while "banks adjusted their reserves endogenously in the face of external shocks" (Alper et al.

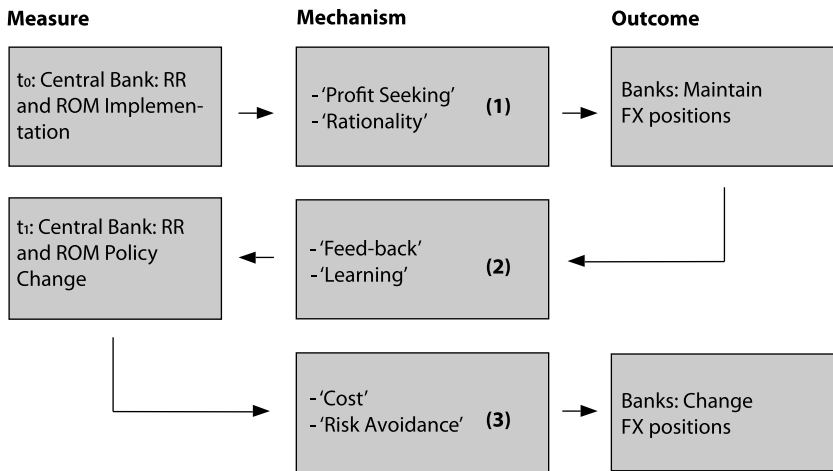


Figure 4: Causal mechanisms addressing FX positions.

2012, 13), the Central Bank’s gross reserves gradually increased, contributing to the resilience and efficiency of the financial system (Alper et al. 2012). As illustrated in Figure 4, implementations of the RR and ROM made holding Turkish lira less desirable for banks. As a result, due to the rising relative costs of holding reserves in TL (“cost” mechanism) and the ability to navigate FX fluctuations (“risk avoidance” mechanism) at the real level of reality, this policy collectively reduced market demand for holding Turkish lira (outcome) at the actual level of reality.

Managing domestic liquidity

With the aim of managing domestic liquidity, the Central Bank’s actions triggered another set of causal mechanisms. At the empirical level of reality, and based on experience, the Central Bank viewed excess liquidity and short-term unproductive capital flows as sources of macrofinancial risk. At the actual level of reality, and as a policy action, the Central Bank proactively used the AIRC to address this risk. An interest rate corridor is a window between the repo rates and reverse repo rates, in which repo rates act as the ceiling and reverse repo rates act as the floor. By actively using this instrument, the Central Bank no longer announced a single interest rate but rather announced the upper and lower boundaries of the interest rate corridor, giving the Central Bank flexibility in responding to capital flows in a timely manner. The AIRC stipulated that “market interest rates can be changed, if needed, on a daily basis, by adjusting the quantity of funds provided through one-week repo auctions. The overnight rate can be targeted anywhere inside the corridor” (Alper et al. 2012, 8). The goal of the Central Bank was to discourage short-term, unproductive capital flows and eventually contain excess credit growth. Accordingly, the lower boundary of the interest corridor was cut, and interest rate volatility increased (Alper et al. 2012). Additionally, the Central Bank supplied overnight funds to banks that needed liquidity at repo rates and borrowed from those that had excess liquidity. The interest rate

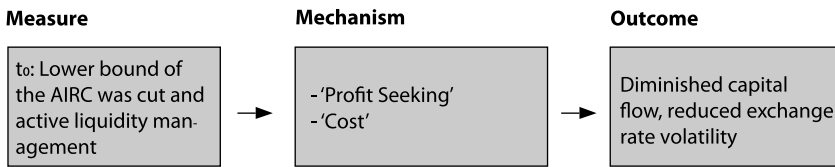


Figure 5: Causal mechanisms addressing exchange rate volatility.

corridor was thereby used in collaboration with liquidity management policies to prevent any future depreciation of the TL due to capital outflows.

At the “real” level of reality, and with respect to causal linkages between policy actions and outcomes, the Central Bank’s policy goals informed policy measures through “feedback” mechanisms. Depending on the changing dynamics of global capital flows and domestic macrofinancial developments during this period, the Central Bank proactively revisited and changed AIRC rates. More precisely, during 2010 and 2011, the Central Bank changed AIRC rates eight times (Alper et al. 2013a; CBRT 2011; IMF 2012). Consequently, and as an observable outcome, “the Turkish lira has become one of the least volatile currencies among EM economies [in the post-GFC era]” (Alper et al. 2013a, 351; see also Kara 2012).

Figure 5 illustrates that the AIRC and RR made the Turkish market less favorable for capital flows and collectively discouraged unproductive flows. This reduced market demand for TL to foreign currency conversion by creating volatility with the short-term interest rates. Hence, at the “real” level of reality, the Turkish financial system became less profitable for hot money holders due to a constrained “profit-seeking” mechanism.

Containing consumer loan growth

The Central Bank also aimed to control the level of excess loan growth through implementation of RR, which consisted of reserve requirements and leverage instruments. The Central Bank actively increased the minimum percentage of the amount of deposit liabilities held by banks as RR at the Central Bank at the empirical domain to slow down rapid credit growth at the actual domain. Unlike the policy rate, the importance of RR stemmed from its ability to affect deposit and credit interest rates through funding costs and available liquidity to commercial banks.

Through the RR, the Central Bank increased the cost of deposits for banks. More precisely, “the Central Bank terminated remuneration of RR ratios as of September 2010 and pulled the weighted averages of RR ratios to 13.3 percent until April 2011. As an observable outcome, this led to a direct cost effect of around 100 basis points” (Alper et al. 2012, 12). The expectation was that, as the cost for deposits would be higher, banks would reduce their loan growth. However, banks anticipated that interest rates would further increase. As noted by a senior central banker, “it was observed that once the [RR] were increased, the loan growth in the banking sector . . . increased . . . as banks understood that the requirements were going to be further increased, they tried to increase their loan portfolios under the current, profitable, margin rates” (Interview no. 2, CB1, November 8, 2016).

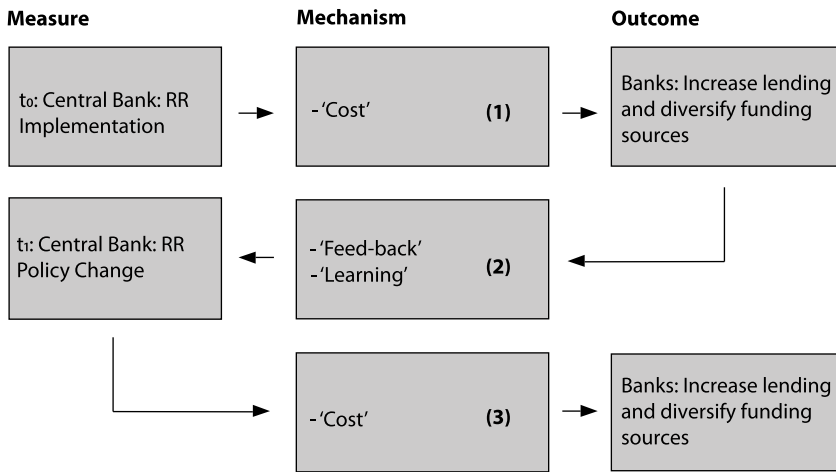


Figure 6: Causal mechanisms addressing lending behavior.

Banks continued to increase their lending rates. They also began financing their lending through off-balance sheet swaps and other sources of funding (e.g., security issuances), which demonstrated further credit growth (Akkaya and Gürkaynak 2012).

As illustrated in Figure 6, the Central Bank’s RR implementations triggered a “cost” mechanism among bankers at the “real” level of reality. At the actual level, this resulted in further deepening of growths in loans. From the last quarter of 2010 (when the Central Bank began implementing this “policy mix”) to June 2011, private-sector loan growth and total loan growth continued to rise by approximately 40 percent (IMF 2012).

Institutionalization of macroprudential ideas

The ineffectiveness of the Central Bank in containing credit growth, cannot be explained solely by the responses of the banking sector. Importantly, the Central Bank did not have the macroprudential policy toolkit with which to address macro-financial risks, while the BRSA was preoccupied with micro-level bank-specific issues from a regulatory perspective (Bakır, Akgunay, and Çoban 2021). One senior central banker noted that:

The BRSA has a direct influence on the credit growth due to its banking tools. In contrast, the monetary tools used by the Central Bank are very limited. Nevertheless, we tried to influence the loan growth through instruments such as the interest rate corridors and the RR. However, the effects were limited and were not as intended. As innovative new instruments were being used, it was not easy to set an expectation for the behavior of banks. As a result, we primarily tried to enable the BRSA to act in accordance with our objectives on financial stability. (Interview no. 2, CB1, November 8, 2016)

In addressing macrofinancial risks, the primary goal of the Central Bank was to initiate coordination among government organization. Therefore, along with its

policy mix, the Central Bank's policy solution and bureaucratic agenda also included complementary macroprudential policy tools to be implemented by the BRSA (Bakır, Akgunay, and Çoban 2021). Hence, the Central Bank channeled macroprudential ideas to governmental agenda, resulting in the establishment of the FSC, and institutionalization of MPR ideas through interbureaucratic discursive interactions and powering strategies (*ibid.*). It was through this action that the BRSA and other regulatory bureaucracies began acting in accordance with the financial stability objectives (Interview no. 4, B2, November 1, 2016).

Macroprudential policy instruments triggered effective mechanisms within the conducive Turkish bank-based financial system to contain excessive bank credit growth and household leverage [Figure 4]. They reduced private credit growth to reasonable levels because of their ability to directly influence the supply and demand for bank loans within the bank-based financial system of Turkey. (cited in Bakır 2021, 20)

Concluding remarks

By utilizing a mechanistic approach to examine the macroprudential policy implementation process, this article highlights the neglected interactions among individual-level causal mechanisms during the post-GFC era. Drawing on the Turkish experience from January 2010 to June 2011, this article identifies the multiple causal mechanisms linking policy actions with policy outcomes. Accordingly, the Central Bank's policy implementations (actions) have triggered multiple causal mechanisms ("cost" mechanism, "risk avoidance" mechanism, and "profit-seeking" mechanisms) that inform the reasoning of bankers and their customers at the real level of reality. These mechanisms led to macrofinancial outcomes, including containing credit growth, institutionalization of macroprudential ideas, and diminishing volatility in the foreign exchange rates. Meanwhile, these outcomes, which have been produced by the initial mechanisms, triggered a "feedback" mechanism that (re)informed the policy actions of the Central Bank. As previous research has shown (Bakır 2017, 2021; Bakır and Jarvis 2017; Kuorikoski 2009), causal mechanisms incorporate an understanding of a chain of action-outcome sequences at the micro level, along with the contextual realm in which they operate (Falleti and Lynch 2009). Yet the literature has not fully explored whether causal mechanisms can be articulated to complement one another, creating a persistent sequence. Along the lines of critical realist ontology, causal mechanisms identified within the Turkish experience offer deeper knowledge of Turkey's macroprudential experience during the 2010–2011 period.

This article offers three important contributions to the growing literature on causal mechanisms. First, we offer a deeper understanding of causal mechanisms and show that they are dynamic social products. As such, there are persistent loops between actions and outcomes. While causal mechanisms link actions to outcomes, feedback mechanisms activate new mechanisms among produced outcomes and actions. Hence, the outcomes of actions may also be the causal force behind new actions. Second, we show that individual causal mechanisms act together in linking multiple actions with a single outcome. Third, we link critical realism with realistic evaluation through the introduction of a conceptual model based on multiple causal mechanisms operating in multiple levels of reality.

Hence, we show that causal mechanisms are social products that not only operate across the different levels of reality but also bridge them.

The primary limitation of this study is that the discussion on causal mechanisms focuses on the Central Bank's policies during the January 2010–June 2011 Turkish macroprudential experience. However, in line with critical realism, we acknowledge that there are varieties of causal mechanisms that produce the same or similar effects; we also acknowledge that the same causal mechanisms can generate different effects in different temporal and nontemporal contexts. Indeed, future research focusing on causal mechanisms may shed more light on why the policy implementations of similar policy instruments trigger different causal mechanisms that generate divergent outcomes across time, policy sectors, and countries. An operationalization of causal mechanisms within the field of public policy that bridges critical realist and realist evaluation perspectives with explicit engagement between the interactions among structures, institutions, and agents is more likely to become the progressive research agenda in understanding policy outcomes (Bakır 2022).

Acknowledgement Author thanks Caner Bakır for his valuable input, guidance, and support. The author also thanks editors and three anonymous referees for their constructive comments on the first draft of the manuscript.

References

- Akçelik Y, Aysan AF and Oduncu A (2013) Central Banking in Making during the Post-crisis World and the Policy-Mix of the Central Bank of the Republic of Turkey. *Journal of Central Banking Theory and Practice* 2, 5–18.
- Akkaya Y and Gürkaynak R (2012) Cari açık, bütçe dengesi, finansal istikrar ve para politikası: Heyecanlı bir dönemin izi. *İktisat İşletme ve Finans* 27, 93–119.
- Alper K, Kara H and Yörükoğlu M (2012) Rezerv Opsiyon Mekanizması. *CBT Economic*
- Alper K, Kara H and Yörükoğlu M (2013a) Alternative Tools to Manage Capital Flow Volatility. *BIS Papers* 73, 335–352.
- Alper K, Kara H and Yörükoğlu M (2013b) Reserve Option Mechanism. *Central Bank Review* 13, 1–14
- Anderson PJJ, Blatt R, Christianson MK, Grant MA, Marquis C, Neuman EJ, Sonenshein S and Sutcliffe MK (2006) Understanding Mechanisms in Organizational Research Reflections from a Collective Journey. *Journal of Management Inquiry* 15, 102–113.
- Aysan AF, Fendoglu S and Kilinc M (2015) Macroprudential Policies as Buffer against Volatile Cross-border Capital Flows. *The Singapore Economic Review* 60, 1–6.
- Baker A (2013) New Political Economy of the Macroprudential Ideational Shift. *New Political Economy* 18, 112–139.
- Bakır C (2017) How can interactions among interdependent structures, institutions, and agents inform financial stability? What we have still to learn from Global Financial Crisis. *Policy Sciences* 50, 217–239.
- Bakır C (2021) Actions, contexts, mechanisms and outcomes in macroprudential policy design and implementation. *Public Policy and Administration* 36, 205–231.
- Bakır C (2022) Why do comparative public policy and political economy scholars need an analytic eclectic view of structure, institution and agency? *Journal of Comparative Policy Analysis: Research and Practice* 5, 430–451.
- Bakır C and Çoban MK (2018) Policy analysis and capacity in the Central Bank of Turkey. In Bakır C and Ertan G (eds), *Policy Analysis in Turkey*. Bristol: Policy Press, 215–233.
- Bakır C and Çoban MK (2019) How can a seemingly weak state in the financial services industry act strong? *New Perspectives on Turkey* 61, 71–96.
- Bakır C and Jarvis DSL (2017) Contextualising the context in policy entrepreneurship and institutional change. *Policy and Society* 36, 465–478.

- Bakır C, Akgünay S and Çoban MK** (2021) Why does the combination of policy entrepreneur and institutional entrepreneur roles matter for the institutionalization of policy ideas? *Policy Sciences* **54**, 397–422.
- Bhaskar R** (1979) *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*. Brighton, UK: Harvester Press.
- Bhaskar R** (2008) *A Realist Theory of Science*, 2nd ed. London: Verso.
- Başçı E** (2011) The Turkish Experience. Bank of Indonesia and IMF Joint Conference, 11 March.
- Başçı E** (2012) Monetary Policy of CBRT after GFC. *Insight Turkey*, 2 February.
- Başçı E and Kara H** (2011) Finansal İstikrar ve Para Politikası. Working Paper no. 11/08. Ankara: Central Bank of the Republic of Turkey, May.
- Bechtel W and Abrahamsen A** (2005) Explanation: A mechanist alternative. *Studies in History and Philosophy of Biology and Biomed Science* **36**, 421–441.
- Bennet A and Checkel J** (ed) (2015) *Process Tracing: From Metaphor to Analytic Tool*. Cambridge: Cambridge University Press.
- Biesbroek R, Termeer CJAM, Klostermann J and Kabat P** (2014) Rethinking barriers to adaptation: Mechanism-based explanation of impasses in the governance of an innovative adaptation measure. *Global Environmental Change* **26**, 108–118.
- Buechler MS** (2011) *Understanding Social Movements: Theories from the Classical Era to the Present*. Paradigm Publishers.
- Bunge M** (1997) Mechanism and explanation. *Philosophy of the Social Sciences* **27**, 410–465.
- Bunge M** (2004) How does it work? The search for explanatory mechanisms. *Philosophy of the Social Sciences* **34**, 182–210.
- Calvo GA and Reinhart MC** (2000) Fear of floating. *Quarterly Journal of Economics* **107**, 379–408.
- Capano G and Howlett M** (2021) Causal logics and mechanisms in policy design: How and why adopting a mechanistic perspective can improve policy design. *Public Policy and Administration* **36**, 141–162.
- Central Bank of Republic of Turkey** (2011a) *Finansal İstikrar Raporu Aralık 2010*. Ankara: TCMB.
- Central Bank of Republic of Turkey** (2011b) *Finansal İstikrar Raporu Aralık 2010*. Ankara: TCMB.
- Central Bank of Republic of Turkey** (2012) *Yıllık Rapor 2011*. Ankara: TCMB.
- Coleman P** (2019) An examination of positivist and critical realist philosophical approaches. *International Journal of Caring Sciences* **12**, 1218–1224.
- Davis G and Marquis C** (2005) Prospects for organization theory in the early twenty-first century. *Organization Science* **16**, 332–343.
- Falletti, TG and Lynch JF** (2009) Context and causal mechanisms in political analysis. *Comparative Political Studies* **42**, 1143–1166.
- Fletcher A** (2017) Applying critical realism in qualitative research methodology meets method. *International Journal of Social Research Methodology* **20**, 181–194.
- Gerring J** (2008) The mechanistic worldview: Thinking inside the box. *British Journal of Political Science* **3**, 161–179.
- Gerring J** (2010) Causal mechanisms: Yes, but . . . *Comparative Political Studies* **43**, 1499–1526.
- Hecho H** (1974) *Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance*. New Haven, CT: Yale University Press.
- Hedström P** (2005) *Dissecting the Social: On the Principles of Analytical Sociology*. Cambridge and New York: Cambridge University Press.
- Hedström P and Bearman P** (eds) (2009) *The Oxford Handbook of Analytical Sociology*. Oxford: Oxford University Press.
- Hedström P and Swedberg R** (1998) Social mechanisms: An introductory essay. In Hedström P and Swedberg R (eds.) *Social Mechanisms: An Analytical Approach to Social Theory*. Cambridge: Cambridge University Press, 1–31.
- Hedström P and Wennberg K** (2016) *Causal mechanisms in organization and innovation studies*. Linköping, Institute of Analytical Sociology Working Paper Series.
- Hedström P and Ylikoski P** (2010) Causal mechanisms in the social sciences. *Annual Review of Sociology* **36**, 49–67.
- Hinds K and Dickson K** (2021) Realist synthesis: A critique and an alternative. *Journal of Critical Realism* **20**, 1–17.

- International Monetary Fund** (2011) *Recent Experiences in Managing Capital Flows: Cross-Cutting Themes and Possible Policy Framework*. Washington, DC: International Monetary Fund. <http://www.imf.org/external/np/pp/eng/2011/021411a.pdf>.
- International Monetary Fund** (2012) Turkey financial system stability assessment. Report 12/261.
- International Monetary Fund** (2016) Turkey's experience with macroprudential policy. *BIS Papers* **86**: 123–139.
- Kara H** (2012) Monetary policy in Turkey after the global crisis. *Working Paper* **12**(17). Ankara: CBRT.
- Kara H** (2015) Faiz Koridoru ve Para Politikası Duruşu. TCMB: Ekonomi Notları.
- Kara H** (2016) Turkey's Experience with Macroprudential Policy. *BIS Papers* **86**. Basle: BIS.
- Kuorikoski J** (2009) Two concepts of mechanism: Componential causal system and abstract form of interaction. *International Studies in the Philosophy of Science* **23**, 143–160.
- Little D** (2012) Explanatory autonomy and Coleman's Boat THEORIA. *An International Journal for Theory, History and Foundations of Science* **27**, 137–151.
- Mahoney J** (2001) Beyond correlational analysis: Recent innovations in theory and method. *Sociological Forum* **16**, 575–593.
- Mahoney J** (2016) Mechanisms, Bayesianism, and process tracing. *New Political Economy* **21**, 493–499.
- Mayntz R** (2004) Mechanisms in the analysis of social macro-phenomena. *Philosophy of Social Sciences* **34**, 237–259.
- Mayntz R** (2016) Process tracing, abstraction, and varieties of cognitive interest. *New Political Economy* **21**, 484–488.
- Pawson R** (2006) *Evidence-Based Policy: A Realist Perspective*. London: Sage.
- Pawson R** (2013) *The Science of Evaluation: A Realist Manifesto*. London: Sage.
- Pawson R and Tilley N** (1997) *Realistic Evaluation*. London: Sage.
- Schelling CT** (1978) *Micromotives and Misbehaviour*. New York and London: W. W. Norton and Company.
- Streeck W and Thelen K** (Eds.) (2005) *Beyond Continuity: Institutional Change in Advanced Political Economies*. Oxford: Oxford University Press.
- Tilly C** (2001) Mechanisms in political processes. *Annual Review of Political Science* **4**, 21–41.
- Yağcı M** (2017) Institutional entrepreneurship and organisational learning: Financial stability policy design in Turkey. *Policy and Society* **36**, 539–555.
- Yağcı M** (2018) The political economy of central banking in Turkey: The macroprudential policy regime and self-undermining feedback. *South European Society and Politics* **23**, 525–545.
- Yilmaz D** (2011) Revisiting the Tinbergen Rule: Use the macroprudential tools to maintain financial stability. *Banque de France, Financial Stability Review* **15**, 159–163.
- Yin RK** (1994) *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage.

Interviews

- Interview 1** Former Governor of the Central Bank, Ankara, 7 December 2013
- Interview 2** Former Director General of the Research and Monetary Policy Department of the Central Bank, Ankara, 8 November 2016
- Interview 3** Former Deputy Governor of the Central Bank, Ankara, 15 November 2016
- Interview 4** Vice President of ALM and Money Markets at a Commercial Bank, Istanbul, 1 November 2016
- Interview 5** Senior Vice President of Assets and Liabilities Management at a Commercial Bank, Istanbul, 25 October 2016
- Interview 6** Budgeting and Reporting Department Senior Executive at a Commercial Bank, Istanbul, 18 October 2016
- Interview 7** Former Director General of the Research and Monetary Policy Department of the Central Bank, Ankara, 14 February 2018

Cite this article: Akgünay, Sinan (2022). Unfolding macroprudential mechanisms: central bank-led mechanisms during the post-Global Financial Crisis Turkish experience. *New Perspectives on Turkey* **67**: 83–104. <https://doi.org/10.1017/npt.2022.23>