How can interactions among interdependent structures, institutions, and agents inform financial stability? What we have still to learn from global financial crisis

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How can interactions among interdependent structures, institutions, and agents inform financial stability? What we have still to learn from global financial crisis

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Abstract How national financial systems can avoid costly banking crises is a persistent and intriguing question for institutional scholars and policymakers worldwide. In this context, although considerable research has recently focused on structural, institutional, and agency-level factors in explaining the global financial crisis, it mostly offered each of these explanatory factors in isolation, thus leaving interactions among these interrelated factors incomplete. Building on a deviant case study on Australian exceptionalism examined in a comparative perspective, this paper introduces an integrative framework that views financial stability as a function of these interactions that reinforce prudent financial behavior. In doing so, it offers an insight into the previous research on institutional complementarity and how to guard against similar crises in the future. It suggests that financial stability (instability) is more likely when interactions among structural and institutional complementarities and agents reinforce conservative (opportunistic) banking.

Keywords Global financial crisis · Structure · Institution · Agent · Bank · Regulation · Australia · Research transparency

Introduction

Why were Australia and Canada the pillars of financial resilience among liberal market economies (LMEs) in the lead-up to the global financial crisis (GFC) but not the USA and the UK?[1] How national financial systems can avoid costly banking crises is a persistent and

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intriguing question for institutional scholars and policymakers worldwide. Scholars have highlighted three main explanations that relate to excessive risk taking in finance and financial instability. These are structural, institutional, and agency-based explanations. Structural explanations emphasize the importance of global imbalances (Greenspan 2010) and neo-liberal ideology (Gamble 2009). Institutional explanations highlight institutional failures (Barth et al. 2011; G-30 2008). Agency-based explanations emphasize the role of investment bankers with their business models that generate market failures (Brummer 2009, chps. 2, 3). One area that has not received much attention, however, is the linkages among various structures, institutions, and agents.

Only recently have scholars of institutional theory started to analyze the relationship between various institutional complementarities (i.e., institutions that reinforce each other's incentives and compensate for each other's shortcomings) that influence actors' behavior and financial stability (Campbell 2011). They suggest that 'different types of institutional complementarity can coexist together and are necessary in order to ensure market stability over time' (Ibid. p. 213). As a result, this research has tended to focus on how various institutional complementarities inform the behavior of agents rather than complementarities arising from structures. The interactions between complementary structures and institutions and agents largely remain a 'black box' (Bakir 2013). The central argument of this paper is that these interdependent interactions need to be understood if we are to draw theoretical, empirical, and policy-relevant practical lessons from the GFC.

If structural, institutional, and agency-level factors, as the past literature suggests, are important for understanding bank behavior and financial soundness, a central theoretical challenge for institutional theory, therefore, is to show how and why these interdependent explanatory factors, often analyzed in isolation, interact with one another in the lead-up to the GFC. This article aims to develop an inductive integrative framework that unpacks interactions among these interdependent constructs.

Following the GFC that could have brought down the entire world financial system, there has been worldwide theoretical, empirical, and practical interest in what caused it and lessons learnt from *what went wrong*. Moreover, the current political economy scholarship is still searching for 'the right intellectual questions of the crisis and to guide us toward appropriate responses' (Green and Hay 2015). This article offers an opportunity to getting what went wrong right and *learn* from *what went right* from the Australian case examined in a comparative perspective. Indeed, the Australian financial system, particularly the banking sector, and economy have been one of the most resilient in the OECD during the GFC. Focusing on the Australian success story, on what went right, is as important as examining the spectacular failures elsewhere in the quest for financial reform in the post-GFC era. Thus, policymakers can also draw insights from this analysis. As a former senior adviser to the Australian treasurer rightly noted in *The Guardian,* '[t]he most important lesson about the global financial crisis [GFC] is not about what happened after it hit but in what happened in the lead-up' (Alexander 2013).

This article draws on findings from a deviant case study on how Australia weathered the GFC better than most other advanced economies. It finds that financial stability (instability) is more likely when interactions among structural and institutional complementarities and agents reinforce one another for conservative (opportunistic) banking.

This article makes a number of contributions. First, it develops an inductive integrative framework that identifies the interactions among various factors that reinforce prudent bank behavior and financial stability. In doing so, it contributes to institutional theory by complementing and expanding upon the previous research on institutional complementarity in the financial industry (Campbell 2011). Not only does this paper show the ways in which various *institutional* complementarities influence agent behavior—a well-recognized body of the literature in institutional theory—but also show how they interact with *structural* complementarities and agents. Thus, it also contributes to the previous literature on the GFC which has neglected such linkages. Second, the insights developed here are relevant to other areas of related research, such as those concerned with varieties of national financial systems (Zysman 1983; Allen and Gale 2000; Coleman 1996) and varieties of capitalism (Hall and Soskice 2001). Third, following recent methodological advances in management and organization studies, this study is the first to adopt a rigorous qualitative research design, the so-called Gioia methodology (Gioia et al. 2013; Gioia and Thomas 1996; Gioia et al. 1994) in policy sciences and political sciences. This allowed it to move beyond a rather narrow call for '*active citation* [as] the core instrument of qualitative research transparency' in rigorous political science research (Moravcsik 2014, p. 50, my emphasis).[2] Finally, it balances methodological rigor with practical relevance, clarifying our understanding of the complex interactions that inform financial stability. Policymakers and regulators should carefully consider how time- and context-dependent complex interactions among these structural, institutional, and agent dimensions that inform agency behavior evolve over time when they design and implement financial regulatory policies for the post-GFC era.

This paper is organized into several sections. In the following section, it offers a literature review. Subsequently, it describes its research methodology. Finally, it presents findings and a framework of linkages among the key concepts followed by a discussion where I offer some comparative applications of the framework and conclusion.

Literature review

Previous research on why some countries were affected by the GFC more than some other comparable economies produced many structural, institutional, and agency-level explanations. These three streams of research bring to mind the old Indian story of the blind men seeking to describe an elephant. There is a need for a piercing logic in bringing the disparate explanations together. Hence, it is useful to consider some of these explanations to gain a better appreciation of how the inductive integrative framework of this research helps to understand the phenomenon.

The first stream is based on the *structural context*. There are two clearly discernible strands in this stream. Those in the first strand pay particular attention to global imbalances 'as the source of the crisis,' as net foreign capital inflows to the USA reduced real interest rates and inflated asset prices (Portes 2009, p. 20; Greenspan 2010). The second strand highlights the importance of an ideological faith in self-regulatory and efficient markets (Krugman 2009; Gamble 2009, chp. 3). This literature emphasizes that anti-regulation and pro-market beliefs based on neoliberal ideology, especially in the USA and UK, limited prudential supervisors' and central bankers' discretion to lean 'against the winds of exuberance' leading to the GFC (The House of Commons Treasury Committee 2009a, p. 12;

[2] Active citation refers to 'a technologically enabled citation standard, according to which any citation in a scholarly paper, article, or book chapter that supports a contestable empirical claim is hyperlinked to an excerpt from the original source and an annotation explaining how that excerpt supports the empirical claim, located in a 'transparency appendix' attached to the document' (Moravcsik 2014, p. 48).

Gieve and Provost 2012; Mason 2009, chp. 7; Augar 2010, 30–33, chp. 1; Brummer 2009, chp. 7).

The second stream focuses on the behavior of various *agents* that generate market failures. It emphasizes how the business models of investment bankers contributed to the GFC. There are three main complementary strands. The first strand highlights the disintermediation and securitization activities of investment banks in shifting the traditional originate-and-hold model (i.e., hold loans to maturity) to the originate-and-distribute model (i.e., securitized loans) in the USA and UK (Financial Stability Forum 2008; G30 2009; Brummer 2009, chp. 6; Mason 2009, chp. 4). The second strand argues that 'one fundamental cause of the crisis was a change in the business model of banking, mixing credit with equity culture' (Blundell-Wignall et al. 2008, p. 1). This is because the 'bonus culture' of investment banking promoted increased risk taking to boost share prices and earnings (The House of Commons Treasury Committee 2009a, p. 8; Augar 2010, chp. 1; Mason 2009; Brummer 2009, chps. 2, 3). In line with this view, past research highlights the importance of corporate governance failures in remuneration systems guided by shareholder value, which did not safeguard against excessive risk taking in banking (Kirkpatrick 2009; Davis 2009; Bebchuk 2010; Augar 2010, chp. 3). The third strand highlights the failures of bank regulators in effectively supervising the banking sector (FSA 2009) and the failures of central bankers in implementing a pre-emptive monetary policy that would deflate asset price bubbles (Gali 2014).

The third stream of research points up the causal role played by *institutions* in the GFC. There are three strands in this literature. A key argument of the first is that the main sources of the GFC are the failures of financial regulatory institutions arising from their inability to keep pace with major changes in financial markets, firms, and products (Barth et al. 2011; G-30 2008). The second strand emphasizes the importance of informal institutions in prudential regulation and monetary policy. Whereas in the UK, informal regulatory institutions called for a 'light touch' approach (i.e., cooperative and consensual approach to regulation), in the USA the preferred approaches were those based on the tradition of adversarial legalism (i.e., adversarial confrontation with actors in regulated markets). Both courses, operating in the frame of neoliberal ideology, were regarded as the key causes of regulatory failures (FSA 2009; House of Commons Treasury Committee 2009b; Froud et al. 2012). Informal institutions also informed monetary policy. This included dominant central banking ideas that focused on achieving and maintaining price stability while ignoring asset price bubbles that contributed to financial instability and the GFC (Gali 2014; Taylor 2009).

In contrast to the two strands reviewed above, the third strand makes more substantive connections among various institutional and agency-related factors. This strand benefits from institutional analysis in order to draw theoretical, empirical, and policy-relevant lessons from the GFC for the comparative political economy literature. For example, Campbell applies the institutional complementarity concept (i.e., 'interdependence of institutional influences on people's behavior') to an analysis of the US financial crisis (2011, p. 212). He argues that the US financial crisis occurred because there had been an imbalance among institutional complementarities, which essentially gave preferential treatment to high-risk ventures over prudent practices. Some of these complementarities, for example, included an investment banking culture and business model that 'exacerbated the incentives for riskier but potentially lucrative investment decisions' and regulatory 'incentives for lenders to make more credit available to prospective borrowers—even borrowers with poor credit histories' (Campbell 2011, pp. 220, 221; for institutional complementarity and socioeconomic performance, see Crouch 2005, 2010; Campbell and

Pedersen 2007; Deeg 2007). Prior institutional reforms in the USA did not prevent the financial crisis; institutional incentives in US financial markets that might have *compensated* for excessively risky behavior were undermined over time, while incentives which *reinforced* such behaviors were strengthened at the same time. The main lesson from the US financial crisis for institutional theory, as Campbell argues, is that the beneficial effects of institutional complementarity may deteriorate rapidly over time when there is no balance among various complementarities. Indeed, '[c]omplementarities can go wrong because they are historically and contextually contingent' (p. 214). Thus, there is an empirical lesson for the post-GFC reforms that 'economic crises may arise organically from the nature of institutional complementarities themselves' (ibid.).

My paper benefits from Campbell's valuable insights. However, while we understood from his analysis that institutional complementarities are at the center, rather than the periphery of institutional theory and the financial crisis literature, especially in the comparative political economy field, we did not understand how interactions among structural and institutional complementarities and agents inform actors' behaviors and financial stability. There is a need for building a bridge among structural, institutional, and agency-based factors that inform various agents' behaviors. That is exactly what this paper does to generate theoretical, empirical, and policy-relevant lessons from the GFC. Specifically, in contrast to Campbell, it does not combine structural and institutional concepts; instead, while appreciating their conceptual and analytical values, it adopts the institutional complementarity concept to structural influences and brings interactions among the structure, institution, and agent dimensions back into analysis. More significantly, in doing so, it develops an inductive integrative framework that unpacks interactions among these interdependent constructs.

Calomiris and Haber (2014) offer comparative research on banking system outcomes such as bank intermediation, prudent bank behavior, and financial stability in England, the USA, Canada, Mexico, and Brazil. They argue that the 'fragility of banks and the scarcity of bank credit reflect the structure of a country's fundamental political institutions. The crux of the problem is that all governments face inherent conflicts of interest when it comes to the operation of the banking system, but some types of government—in particular democracies whose political institutions limit the influence of populist coalitions—are better able to mitigate those conflicts of interest than others' (p. 12). The authors' main focus is on the significant role of political institutions that inform coalitions of interests among politicians, bankers, and other societal actors over bank regulation and supervision (Bakir 2015). In regard to the representativeness of their five cases, they also note that credit-abundant and systemic financial crises-free Australia, Canada, and New Zealand share three common features: 'they were all part of the British Empire'; 'they are among the world's most stable and long-lived democracies'; and 'like Canada and New Zealand—and unlike the United States—Australia had a constitution that granted the national government centralized control over economic and banking policy: populists could not form coalitions with bankers and then enact policies to their liking by wining successive victories in individual states, as happened in the United States throughout much of its history' (pp. 455–457).

Such studies are of great value, but they pose a risk—the danger of ignoring interactions among various interdependent structures, institutions, and agents. Here the emphasis is on *formal* political institutions that are only one of those many institutions that inform actor behavior. Moreover, pragmatic political and policy traditions as informal structures also play such significant roles. For example, in regard to Australia's outperformance of other states, Kelly notes that

> The crisis highlights the *exceptionalism* of the Australian model; drawing on Australia's political and policy traditions…There has never been a neoliberal model in Australia. …The key to grasping Australian policy is to realize that while Australia absorbed global intellectual currents, *it implemented its own solutions according to its own values*. (Kelly 2009, pp. 270, 271, my emphases; see also Wanna and Weller 2003).

Similarly Garnaut refers to 'ideological difference,' 'Australian banks' conservative culture,' and 'the differences in business and political culture' as factors that explain the well-regulated and resilient banking sector in Australia in comparison to the USA and UK (2009, pp. 142, 143). Senior officials of the Australian Treasury rightly note that '*a number of mutually reinforcing factors* helped Australia outperform other advanced economies during the downturn, albeit some more important than others' (McDonald and Morling 2011, 27, my emphasis): 'These include the strength and stability of the Australian financial system; a strong regulatory environment; prudent fiscal and monetary policies pursued by Governments of different political colors over a significant period that have avoided public debt issues while maintaining non-inflationary growth; the flexibility of the exchange rate; and the performance of Australia's major trading partners, particularly China' (Martin 2012, pp. 2, 3; McDonald and Morling 2011; Kennedy 2009). These observations are helpful in alerting readers to these mutually reinforcing factors. However, no specific attempt was made to offer a broad theoretical framework showing linkages among these interdependent factors.

Bell and Hindmoor (2015) offered a comparative analysis of 'banker agency' in Australia, Canada, the USA, and the UK. They found 'a significant intra-country and inter-country variation in bank performance in 2007 and 2008' (Ibid. p. 155). Specifically, the composition of the largest banks' balance sheets in these countries show that banks that emerged from 'the crisis in the strongest position had either lower leverage, a lower dependence upon wholesale funding, fewer trading exposures to securitized assets, or some combination of [the] three' (ibid). They argue that this is because the banks operated on 'different business models' (ibid): 'the combination of incentives and ideas is the key difference between banks that crashed and the more prudent banks…the differences in question clearly stem from the banks themselves – from their internal assessments of markets and their corporate strategies and cultures' (ibid., p. 157, see also p. 236). In regard to Australian and Canadian bank behavior, they wrote, '[M]arket structures and conditions that limited competition and takeover threats and that supported high profits through conventional banking emerge as major factors that explain Australian and Canadian conservatism' (ibid., p. 286). 'Yet market structure,' they concluded, 'did not *determine* behavior,' but the 'banker agency' (p. 270, emphasis in the original). In my research, however, complementarities arising from various structures, including market structure, are also critical in informing bank behavior.

Moreover, my research complements this perspective through its theoretically explicit and methodologically rigorous engagement with various structural and institutional complementarities and the actions of agents in informing the behavior of politicians, central bankers, and bureaucrats, not just banker agency. Specifically, authors note that they '*get inside* the major banks in these countries through [an] analysis of their balance sheets…[as well as] through interviews and other accounts of how bankers thought and acted at the micro level' (ibid., p. 10, my emphases). They 'draw on institutional theory, especially historical institutionalism' in their analysis (p. 6). However, such micro-level analysis of 'banker agency' requires utilizing theory and method of organizational institutionalism

(Lawrence et al. 2009) rather than historical institutionalism. Further, we do not know the details of their research design, especially data collection, analysis, and presentation, which could have enhanced qualitative rigor in inductive interpretive research and theorizing. Thus, in the absence of transparent and rigorous research design, we cannot see how the research progressed from raw data to analyze which precede the theorizing process.

These methodological weaknesses, especially in data analysis and presentation, albeit to a lesser degree, were also evident in my own earlier work on this topic (Bakir 2013). Unsurprisingly, some of the explanatory factors that I put forward to explain conservative bank behavior in Australia, such as the lack of having a top international currency or the role of tax policy in financial services industry, were not confirmed by the current methodological approach. Further, in addition to bankers, regulators, central bankers, and politicians emerged explicitly as the key additional theme of 'agents' dimension. Similarly, fiscal policy emerged as an additional theme.

Methodology

'One of the fundamental characteristics of scientific research is transparency' which is an integral part of the 'renaissance of case research as a scientific method' (Ketokivi and Choi 2014, p. 1). In contrast to previous qualitative studies in politics, public policy, public administration, international political economy, and international relations fields, this paper engages with a systematic approach to presentation of both 'first-order' and a 'second-order' data and searches for relationships between and among these categories to reach transparent, plausible, and convincing conclusions (for the merits of this methodological approach, see Gioia et al. 2013). Thus, this section offers a rather detailed account of the paper's methodological approach. It gathered similar themes and evidence endorsed by a majority of the interviewees toward overarching dimensions, which together create the framework of analysis. At the same time, the researcher, who is a former banker, offered further interpretation and structuring of the statements of these interviewees, which consider both contextual factors and prior literature, in order to build the framework of analysis (see Strauss and Corbin 1990). In doing so, my research considers data theoretically, not just methodologically.

Using a deviant case study-based research design (George and Bennett 2005, chp. 11), this paper benefits from an interpretive approach (Glaser and Strauss 1967). It considers the Australian setting appropriate to its research purpose because the '[Australian] financial system—particularly our banking system—was more resilient than [those in] virtually any other OECD country' (Macfarlane 2009, p. 42). In a similar vein, OECD (2010b, p. 89) declared that Australia 'weathered the crisis more successfully than any other OECD country' (see also OECD 2010a, p. 8; Martin 2012, p. 23; Kelly 2009, chp. 20; Kennedy 2009). Indeed, between 1992 and 2008, Australia had been the only OECD country that enjoyed 17 uninterrupted years of economic expansion 'with robust real GDP growth compared with other countries, resulting in significant improvements in per capita incomes and living standards' (OECD 2010b, p. 34). In contrast to the G7 countries, which all contracted in the last part of the first quarter of 2009, the Australian economy managed to grow by 0.4 %; out of 33 advanced economies, it was one of two which managed to do so during this time (Kennedy 2009, p. 1). In the words of two senior Treasury officials, '[t]he Australian economy slowed, but did not fall into recession, performing better during [the GFC] than most other advanced economies on nearly all relevant indicators' (McDonald and Morling 2011, p. 1). Further, 'In international comparison, business investment in Australia since the turn of the century has also been among the highest in the OECD' (OECD 2010b, p. 35). In regard to the financial system, 'Australian financial institutions had little exposure to complex structured instruments collateralized by US sub-prime mortgages' (Laker 2009, p. 3). Further, unlike the USA (13 per cent) and Canada (5 per cent), sub-prime lending makes up a very small share of the Australian mortgage market (one per cent of the mortgage loans) (Stevens 2009, p. 42). When compared to the banks in the USA, UK, and Canada in 2007, Australian banks, with 0.2 %, had the lowest non-performing loan to total loans ratio (IMF 2009, pp. 213–230). The Canadian ratio runs at three times that of Australian banks. Also, Australian banks had the highest bank loan book provisioning ratio for bad and doubtful debts (184 %), indicating highly conservative provisioning against loan defaults before the GFC. This ratio runs at over four times that of Canadian banks. More significantly, in contrast to US and UK banks, Australian banks, like Canadian banks, had strong capital quality (ibid.).

The interpretive research approach is adopted because it is based on 'constant comparison,' where data are collected and analyzed simultaneously (Glaser 1992, p. 43), and 'theoretical sampling' (Glaser and Strauss 1967, pp. 45, 47), where decisions about which data should subsequently be collected are determined by the model under construction (Suddaby 2006). Further, it makes a distinction between 'first-order data' (those offered by the interviewees) and 'second-order data' (induced by the researcher) as suggested by van Maanen (1979). While the researcher will organize and interpret interviewees' statements, with reference to contextual factors and theorizing (Strauss and Corbin 1990) and written data, this approach ensures the voices of those who experienced events first-hand are heard and consulted with in regard to the interpretation of those events (van Maanen 1988), and casting them in theoretical terms to develop an emergent inductive framework. In doing so, this paper adopts a rigorous qualitative research method (Gioia et al. 2013; Gioia and Thomas 1996; Gioia et al. 1994).

This research design is also compatible with a 'backward-looking' research strategy (Scharpf 1997). In contrast to a 'forward-looking' strategy, it is interested in causal chains evolving over time and context. A 'backward-looking' design has methodological advantages in that it 'can handle or reduce relatively large sets of independent variables; and by focusing on combinations of variables, it not only accommodates multicausality but also has no need to assume that variables are independent one from another' (Scharpf 1997, p. 27).

Sampling

In regard to sampling, this research used 'purposeful sampling' (Lincoln and Guba 1985) in choosing its interviewees. Initial interviewees were selected based on who would be able to best contribute to the paper's main research question concerning how and why the Australian banking system survived the GFC. Interviewees were then asked for their recommendations on who else might be able to discuss Australian exceptionalism in a comparative manner, thus utilizing a snowball technique.

Data collection

Multiple data sources were used in this paper, which included semi-structured interviews as well as written primary and secondary sources. The interviews, with open-ended questions, took about 60 min (each) with 10 interviewees and were conducted in Sydney and Melbourne in July 2010. The participants included top prudential regulators, central bank governors, senior Treasury officials and finance professionals who experienced and observed monetary and financial governance in Australia over a span of 40 years at different times and from different vantage points. During the interviews, to increase the credibility of the data, participants were asked for specific examples which could offer evidence for their beliefs on Australian exceptionalism during the GFC in a comparative perspective. Furthermore, when an interviewee recounted a causal belief, the researcher made it a point of discussion with other interviewees. This allowed the paper to achieve confidence in the trustworthiness of the interviewees' views.

In addition to the interviews, the written data (e.g., Senate Economics References Committee in Australia, and UK House of Commons Treasury Committee reports, press releases, reports and articles) served not only to supplement understanding of events, adding additional perspectives on key issues, but also allowed for 'triangulation' in comparing and contrasting interviewees' views (Jick 1979; Miles and Huberman 1994).

Data analysis

The data analysis involved step-by-step development of a data structure consisting of 'first-order analysis' and 'second-order analysis' leading to the generation of 'aggregate dimensions' informed by theoretical insights (Corley and Gioia 2004; Gioia et al. 2013). As a preliminary step, the researcher identified emergent concepts from the database, which enabled him to identify emerging interpretations of the Australian exceptionalism within its historical and institutional context. In the second step, a 'causation coding' method was applied to preliminary coding. The aim was to 'extract attributions or causal beliefs from participant data about not just how but why particular outcomes came about' (Miles et al. 2014, p. 79). This involved 'in vivo' words (i.e., the interviewees' own words) (Strauss and Corbin 1990) to identify *concepts* and a combination of variables that were connected in the causation sequence and to discern first-order codes (van Maanen 1979). The aim was to understand how these concepts are related to similar ideas, issues, and relationships. Coding continued until the point at which no further explication of a given category or theme was yielded by data collection and analysis, what Glaser and Strauss (1967, pp. 61, 63) referred to as 'theoretical saturation.' When evidence collected from interviewees did not support a given code, it was excluded to ensure a more robust analysis (Strauss and Corbin 1990, p. 7). Data coding was systematized through the use of Nvivo 7, a computer-based qualitative analysis program, which enabled researchers to record and cross-reference the codes that emerged from interviews. The case study interviews yielded a database of 30 causation coding constituting categories. Categories were then analyzed for similarities and differences, collapsing them into *second-order categories* (the point of 'axial coding'; Strauss and Corbin 1998, 123). These categories were assigned labels (i.e., macroeconomy, pragmatic political and policy tradition, regulation, monetary policy, fiscal policy, retail bankers, prudential regulators, central bankers, and politicians) based on a more general description of second-order themes. Finally, the researcher assembled similar themes into the *aggregate dimensions* (i.e., structures, institutions, and agents) that constituted the basis for the article's theoretical framework. The entire process of sampling, collecting, and analyzing data as well as pursuing new labels on the basis of emerging themes was highly iterative.

Findings: aggregate dimensions of financial system stability

In its exploratory analysis, this research iterated between insights from the existing literature and those emerging from in-depth analysis of interview data. Three aggregate dimensions pivotal to actor behavior and financial system stability were found. These are *structures, institutions*, and *agents*. Figure 1 shows the data structure, including first-order concepts and second-order themes, leading to the generation of the 'aggregate dimensions.'

Structures

The first aggregate dimension identified in my data was 'structures,' which are the broader material and cultural contexts within which institutions and agents are embedded (Giddens 1979; Archer 1995). The structures had three main themes: (1) macroeconomy; (2) market; and (3) pragmatic political and policy traditions. Macroeconomic structure subsumes two constituent second-order sub-themes—higher investment ratios than savings ratios, and reliance on offshore markets. All of the interviewees collectively believed that high investment ratios that relate to strong domestic demand for credit and high return on domestic assets were critical to Australian banks' sectoral concentration in housing loans and geographic concentration in domestic markets before the GFC. They also noted that Australian banks' reliance on offshore wholesale markets encouraged banks to concentrate on profitable domestic assets and imposed market discipline. The second theme of structure is market structure. Interviewees noted that oligopolistic market structure, where the largest four Australian banks dominated the banking sector, offered highly profitable domestic lending opportunities, and these banks did not engage in excessive risk taking. The third theme is political and policy pragmatism. It represents cultural artifacts based on pragmatism rather than dogmatism that inform institutions and the behavior of various agents.

Institutions

The second aggregate dimension identified in these data was 'institutions,' which are formal and informal rules that guide the behavior of actors through logic of appropriateness and logic of instrumentality (Campbell 2004; Campbell and Pedersen 2001). The institutions had three main themes: (1) regulation; (2) monetary policy; and (3) fiscal policy.[3] The regulation theme of institutions subsumes two constituent second-order sub-themes. One of the most prevalent sub-themes in the interviews was Australia's prudential regulation and supervision. The emphasis here is on the key features of prudential regulation and supervision (i.e., intrusive, consistent, tough, and risk-based) that contribute to the stability of its financial system. The second sub-theme of regulation concerns the competition regulation that informs the 'four pillars' policy, the *de facto* prohibition of mergers among

[3] Policy is 'an instrument of government' and arises from within an 'institutional framework' (Howlett and Lejano 2012, p. 347). It also informs institutions' and actor behavior by 'influencing the allocation of economic and political resources, modifying the costs and benefits associated with alternative political strategies, and consequently altering ensuing political development' (Pierson 1993, p. 596). This section locates 'policy' theme under the 'institution' dimension of the emerging framework. This is due to difficulty in separating, for example, prudential regulation from prudential policy, or competition regulation from competition policy in informing actor behavior, and the limited analytical value of doing so in the current research context.

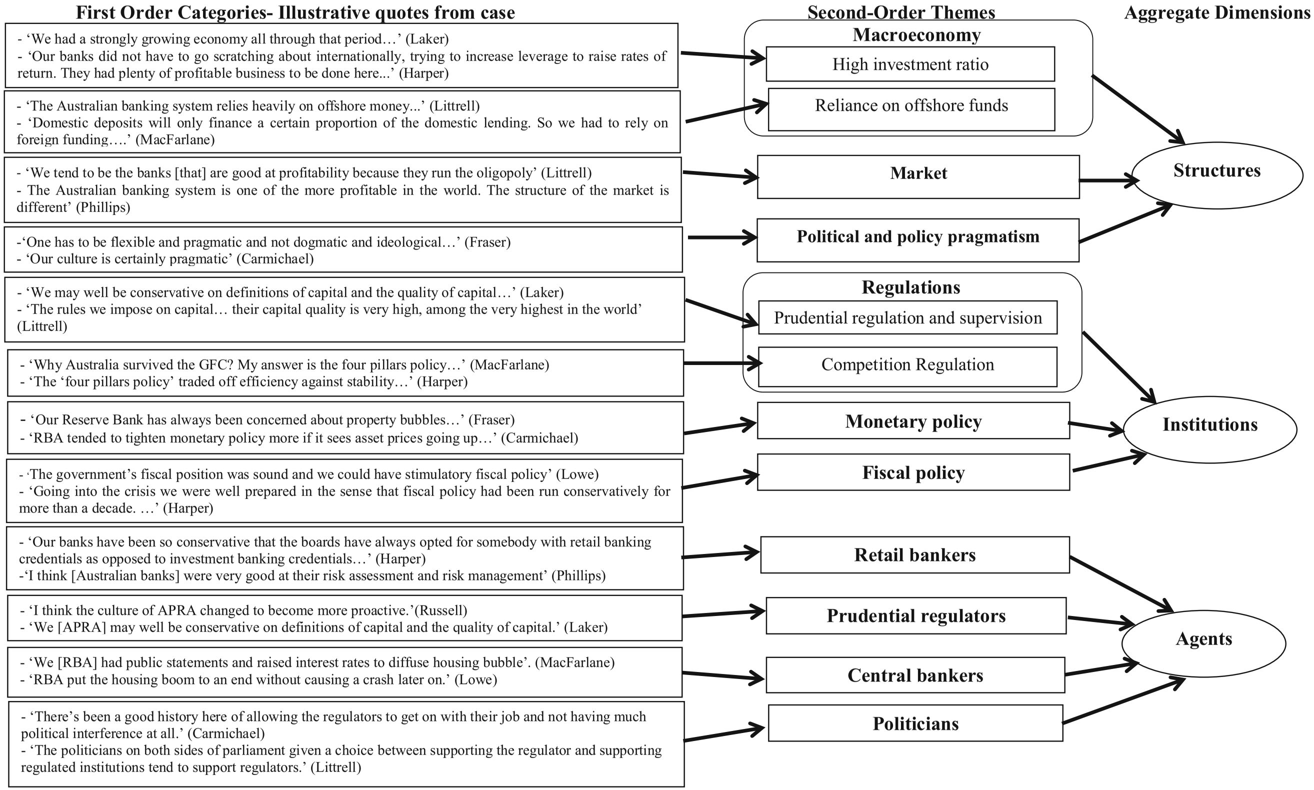

Fig. 1 Data structure

the largest four Australian banks.[4] The second theme of institutions includes monetary policy that captures the significance of central bank intervention to moderate asset price bubbles that contributed to financial system stability. The third theme of institutions refers to fiscal policy, which was instrumental in stimulating the economy during the GFC and avoiding recession and financial instability.

Agents

The third aggregate dimension from the data was 'agents'—individual and organizational actors embedded in structural and institutional environments. The data show that this dimension had retail bankers, prudential regulators, central bankers, and politicians as its main themes. It highlighted the significance of retail bankers' commitment to a credit culture and the traditional originate-and-hold model that contributed to financial stability, as well as the pragmatism of politicians and the commitment of the prudential regulators and central bank officials to proactive, intrusive, and judgment-led decisions and actions.

Linkages among the key concepts

If 'theory is a statement of concepts and their interrelationships that shows how and/or why a phenomenon occurs' (Corley and Gioia 2011, p. 12), then the dynamic relationships among the main concepts have to be illustrated. By integrating the themes and dimensions shown in Fig. 1 (i.e., the data structure), the relationships among the emergent concepts become apparent. Figure 2 depicts these major concepts and their relationships. It suggests that interrelations among structures, institutions, and agents affect financial system stability. To explore these relationships and their consequences in more depth, this section presents how second-order themes and sub-themes of structures, institutions, and agents, as specific elements of the model, are linked.

Structural factors interacted with various institutions and agents, contributing to the financial stability in Australia. The interviewees ascribed great importance to 17 years of consecutive GDP growth in the lead-up to the GFC. This led to increased bank lending and strong asset quality, coupled with improved access to cheaper offshore funding, thereby increasing banks' profitability. In this respect, most of the interviewees emphasized how high investment ratios and low savings ratios influenced banks' assets and liabilities respectively. High investment ratios pointed to a strong demand for bank credit and lucrative domestic business opportunities. It contributed to Australian banks' sectoral concentration in low-risk residential housing loans and a geographic concentration in Australia. As Glenn Stevens, Governor of the Reserve Bank of Australia (RBA), commented:

> The underlying strength of the economy has been the driving force for volume growth and balance sheet growth. The nature of that balance sheet growth has been very much to the safer asset class, housing lending. That in itself has helped to support growth so it's been certainly reinforcing…. [Banks'] underlying strength is the quality of assets they hold and [the fact that] they are basically quite conservatively run institutions on the whole. (interview 2 July 2010, Sydney)

[4] Section 63 of the *Banking Act 1959* established an institutional framework requiring the Treasurer's approval before any party may purchase more than a 15 % share of bank's voting rights.

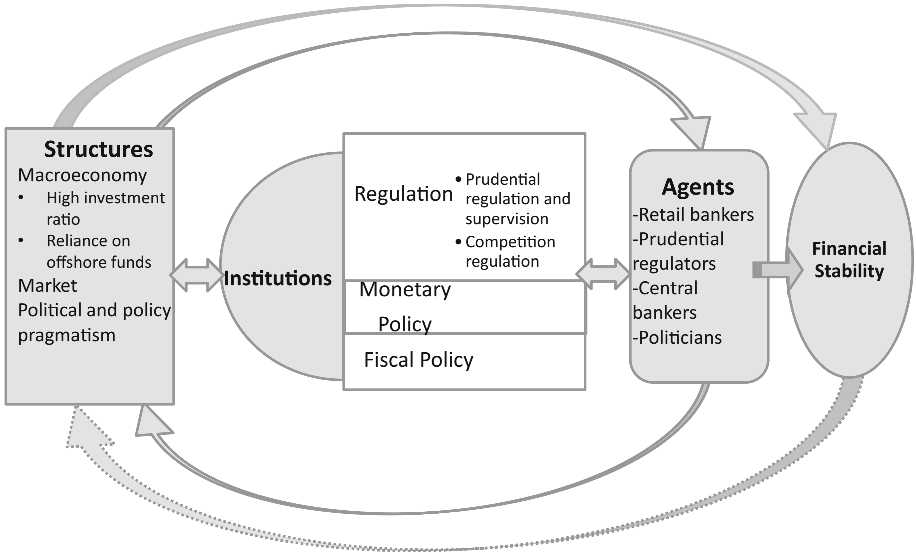

Fig. 2 Emergent organizing framework of the linkages among structures, institutions, and agents

Several complementarities arising from global macroeconomic structure also complemented this domestic macroeconomic structure. This mainly included 'rising commodity prices' in its resource-oriented economy' and 'growth of the markets in China': '[a] big factor in [the outperformance of Australian banks and economy] was the fact that the Chinese buy everything we dig out of the ground,' as remarked by Charles Littrell, the then Deputy Chairman of Australian Prudential Regulation Authority (APRA) (interview 9 July 2010).

Further, higher investment ratios than savings ratios in Australia also pointed to a funding gap. The banks' reliance on offshore capital markets for funding 'imposed market discipline over banks to maintain good credit rating,' remarked John Phillips, former RBA deputy governor (interview 5 July 2010, Sydney). Accordingly, Australian banks have had to be prudent and manage their risk effectively to maintain good credit ratings to access offshore wholesale funds at reasonable costs.

John Laker, chairman of APRA at the time, compares Australian growth and saving dynamics and its impact on prudent bank behavior with those of Europe and USA:

> The Australian banks have not been able to meet the demand for lending from businesses and households from domestic sources. …That's a very different dynamic than the European banking system where domestic savings are higher and the banks have found themselves with a slow growing economy with surplus funds. Then they were looking for outlets for those surplus funds in the US, being complex structured instruments, in the search for yield. (interview 9 July 2010, Sydney)

These macroeconomic structural complementarities also contributed positively to prudential regulation and financial system stability. In the words of Littrell,

> Australia's banks have been successful not just because APRA is such a brilliant supervisor. We have had not nearly as much stress in this market so there is no big

> recession here. No recession at all compared to the UK or US. And when there is not a recession it's very hard for a big bank to fail. (interview 9 July 2010)

In regard to oligopolistic market structure, interviewees noted that limited competition encouraged the largest banks to focus on highly profitable domestic lending, rather than opportunistic risk taking, which contributed to financial stability. As Ian Harper, a Partner at Deloitte Access Economics and former member of the third major Financial System Inquiry (1996), noted:

> Australia is often known as the land of the oligopoly. Arguably the [banking] industry is more concentrated now than it was 30 years ago. The industry is not as competitive as it might be, but of course it's more stable. And, while the rest of the world is seeking to realign, or rebalance stability and efficiency or competitiveness, here in Australia we seem to have lighted upon a mix of reduced competitiveness compared with international benchmarks, but also greater stability. (interview 15 July 2010, Melbourne)

This research also found that senior interviewees considered the competition regulation as one of the key contributors to financial system stability in Australia. All interviewees shared the view that 'the "four pillars" policy is doing what it would always have done; that is, compromising efficiency, competition, growth and internationalization [of the major banks] in the interests of stability,' as pointed out by Harper (15 July 2010). Jeffrey Carmichael, former Chairman of APRA and Chief Executive Officer of Promontory Financial Group Australasia, noted that this policy prevented the major four banks from 'becoming big enough to compete more effectively internationally' and from the 'flurry of takeover activity that was going on internationally in the 2000 s, which again was pushing banks to be more leveraged' (interview 16 July 2010, Sydney). 'So, we don't have globalized banks, therefore we didn't catch the globalized disease,' observed Harper (15 July 2010).

Ian Macfarlane, former governor of RBA and a board member of the fourth largest bank by market capitalization (i.e., ANZ) in Australia, offers a comparative perspective that 'Canada and Australia, the only two of the OECD countries with proper deregulated banking systems, got through the GFC because they had a limit on the competition for corporate control' (interview 12 July 2010, Sydney). This view was widely shared by the interviewees.

Prudential regulation is one of the key components of institutions that have informed the behavior of banks and upheld financial system stability. A remark by Phillips that the 'regulatory framework tends to be more robust in Australia than it has been overseas' (5 July 2010) was among the most commonly expressed opinions. It focused on the quality of bank capital rather than the quantity. Interviewees widely recognized that 'the rules we impose on their [banks'] capital quality are very high, among the very highest in the world,' as highlighted by Littrell (interview 9 July 2010, Sydney). This view was volunteered by all interviewees without any prompting from the researcher.

Carmichael offers a comparison that 'all of the discretions that the Basel committee allows, or used to allow, actually create enormous differences in capital treatment so that Australia was easily the toughest on every discretion. Canada wasn't far behind. At the other end of the scale was the UK' (16 July 2010). These findings in the data and analyses suggest that 'intrusive,' 'consistent,' 'tough,' and 'principles-based' (or risk-based) financial regulation and supervision by APRA was institutional complementarity that reinforced conservative bank behavior, contributing to financial system stability.

Monetary policy in Australia captures the significance of pre-emptive central bank intervention to moderate asset price bubbles that contributed to the financial system stability. The RBA reacted to the boom in housing prices and credit in 2003. Macfarlane highlighted 'interest rate increases' and 'public statements' (12 July 2010) by RBA as key policy mechanisms employed on this course, thereby reinforcing families' incentives to incur less mortgage debt. Philip Lowe, Deputy Governor of RBA, compares this response 'with the situation in the USA where the Fed did not see itself playing that role' (interview 2 July 2010, Sydney). In response to the housing price bubble in 2003, APRA also 'undertook a detailed stress test of banks' housing loan portfolios' (Laker, interview 9 July 2010). All interviewees shared the view that prudential regulation and monetary policy complemented one another.

The data also strongly suggest that a pragmatic, rather than a dogmatic, approach in state–market relations in Australia has affected financial regulation and monetary policy. To illustrate this key finding volunteered by most of the interviewees, I include a representative vignette capturing in the words of Bernie Fraser, former Treasury Secretary and RBA governor, the significance of 'pragmatic approach':

> Pragmatism to me is basically doing what works… [We had] a more pragmatic approach to things: that it had to be more hands on, that it wasn't good enough just to allow the banks themselves to make their own assessments of risk and the amounts of capital that they needed to require. There's been a prevailing view, I think, in both Reserve Bank and APRA for a long time that one has to be flexible and pragmatic and not dogmatic and ideological about these things. … We can make sure that our banks are adequately capitalized, that they are properly assessing risk and that they will be in a good position to cope with the inevitable excesses in global financial markets. That comes back to this pragmatic approach of our regulators and it works. (interview 8 July 2010, Sydney)

Harper compares Australia with the USA and UK in the way this ideational structure complements institutions of prudential regulation and supervision and informs the behavior of public sector agents and politicians:

> We let government get on with its job, but if it crosses the boundary, well, we'll sack the Prime Minister. Let the regulators get on with their job, but if they cross the boundary, there will be a public outcry. Let the business get on with its job, but if it crosses certain boundaries, then there will be an outcry. That, I think, is a culture which is very conducive to strong institutions and one of the blessings in this country. (Interview 15 July 2010)

Australian bankers, regulators, central bankers, and politicians also drew fundamental lessons from the previous banking crises and corporate collapses in Australia. For example, following the deregulation in the mid-1980s, banks engaged in aggressive and lax commercial real estate lending to expand their market share. The subsequent asset price bubble burst in early 1990 and led to the recession of 1990–1991 (Sykes 1994). The largest investment banks, Tricontinental, Partnership Pacific and Elders Finance, were rescued by Westpac and ANZ. Further, two of the four state banks, State Bank of Victoria and State Bank of South Australia, collapsed. In the early 1990s, bank losses equaled 5 % of Australian annual GDP (OECD 2010a, p. 90). The four major banks, the state banks, and foreign banks lost about A$28 billion (Sykes 1994, p. 1). Laker offers a succinct summary of lessons learnt from this episode:

> [Regulatory arrangement] was ambiguous because there wasn't a separate supervisory agency for state banks… but [they] committed to working under and by the same rules as the national banks. But the [then regulator] Reserve Bank had no formal regulatory direct powers over them. …There was a major lesson from that: don't supervise unless you have the powers. There was a major lesson for state governments: don't go into banking. It's not a business for a state government. There were lessons for the regulatory framework which was very much about having a group wide view of your risks and being able to aggregate those within the institution and manage them from the top. There were clearly lessons for risk management and for credit standards in those [banks] because there were substantial losses that were incurred in commercial property. So, the lessons of that period were very salutary in that what we saw after was a much more risk-conscious banking system. What the clear lesson was there was that the board on the State Bank of Victoria didn't really know what was going on in the merchant banking arm of Tricontinental. So, there were clear failures of governance and information systems, etc. Similarly, with Westpac, they had exposures to the commercial property sector through the [investment] bank, but they also had large exposure through their finance company, often to the same entities, but not integrated under a comprehensive integrated risk management system. These are very powerful lessons. (Laker, Interview 9 July 2010, Sydney)

The 15 March 2001, collapse of Australian insurance group, HIH, valued at US$3.75 billion, was the largest corporate collapse in Australian history (see Clarke et al. 2003, pp. 222–245). It was a defining moment in the formation of APRA's conservative attitude to prudential supervision. As noted by Carmichael, 'APRA became a much tougher regulator following HIH than it had been prior to HIH' (interview 16 July 2010). In the words of Laker: 'I think the lessons that we had with HIH were a contributor [to the stability of Australian financial system] so that our regulators were more intrusive and more skeptical of what was going on' (interview 9 July 2010, Sydney).

The final 'wake-up call,' as put by Laker (Interview 9 July 2010), for Australian bankers came in January 2004 when National Australia Bank announced the A$360 million foreign exchange loss. This was due to four traders taking excessive risks in currency options trading, as they 'regularly under and over reported profits, concealing the desk's true performance by false transactions' (PricewaterhouseCoopers 2004, p. 1). The Australian banking community, the major banks in particular, derived a 'salutary lesson to boards about where risks might reside in their [banks]' (Laker, interview 9 July 2010). Unsurprisingly, the senior managers of the major banks were conservative before the GFC: 'We don't understand [Credit Default Swaps]; it's a risk. Let's just keep it simple' as noted by Don Russell, a global investment strategist at BNY Mellon and a former Treasury officer and a senior adviser to Prime Minister (interview 5 July 2010, Sydney).

Most of the interviewees believed that Australian bankers were 'conservative retail bankers' who were not keen to invest heavily in risky assets abroad. The relational analysis of the data also suggested that unlike investment bankers, these bankers had tendency to keep their assets 'on balance sheet.' Carmichael was a keen observer of conservative balance sheet-related activities in a comparative perspective:

> Here home mortgages are mostly held on bank balance sheets. They're not shoveled off the way they are in the US through the Wall Street securitization processes. Corporate lending is mostly on balance sheet. (16 July 2010, Sydney)

These conservative banking practices were commonplace, as retail bankers have always 'had the upper hand because the guy who is running the bank is a balance sheet guy,' as noted by Harper (15 July 2010). Most of the interviewees spoke of robust risk management practices and qualified board oversight as key components of success leading up to the GFC.

Interviewees also acknowledged that the pre-existing strength of the Australian government's finances and monetary and fiscal policy responses during the crisis were factors that complemented financial and economic stability. Harper offers a widely shared view among the interviewees:

> Going into the crisis we were well prepared in the sense that fiscal policy had been run conservatively for more than a decade. So there were substantial fiscal surpluses and savings available to the Commonwealth. There was no debt. Interest rates had been kept reasonably high because of the strength of the Australian economy and the potential for inflation coming out of the mineral boom. So, when we then imported the slowdown from offshore [during the GFC], we had plenty of fiscal reserve and plenty of scope for interest rates to be cut. (interview 15 July 2010)

Some of the interviewees recognized that these Australian fiscal, monetary, and regulatory responses to the GFC were in line with conventional countercyclical policy prescriptions to stimulate economy and maintain financial stability (see also OECD 2010b, chp. 1; Wanna et al. 2015). However, what was different was the Australian political and bureaucratic agents' strong and targeted policy responses (for an insider account of the Rudd Government's policy responses, see Taylor and Uren 2010). In the words of Littrell, they were 'much quicker, targeted and more robust' policy responses that relate to financial system (interview 9 July 2010). This included the Guarantee Scheme for Large Deposits and Wholesale Funding that offered government guarantees for deposits and for wholesale debt securities issued by banks. Consequently, Australian major banks were able to raise funds in confidence-sensitive wholesale markets during the GFC (see also McDonald and Morling 2011, pp. 14, 15). This, in its turn, helped rapidly restore business and consumer confidence that contributed to financial stability.

Discussion

Discussions of these findings would be incomplete without taking a comparative glance at pre-crisis structural, institutional, and agency factors that informed various agents' (im)prudent behavior and financial (in)stability in four LMEs: Australia, Canada, the USA, and UK.

Of the G-20 nations, only two have not had an extended financial crisis; Australia and Canada (Laeven and Levine 2009). There are several striking similarities between these countries, which set them apart from the USA and UK. In regard to structural complementarities, Australia and Canada, unlike the USA and UK, had the strength of production and investments in the resources sector contributing to growth in both countries (Stevens 2009; IMF 2006, 2008). Between 2000 and 2009, Australia and Canada had higher gross investment ratios than in the USA and UK (Battellino 2010, p. 9). Just as in Australia, highly profitable domestic lending opportunities limited incentives for excessive risk taking for major Canadian banks prior to the crisis (Bordo et al. 2011; Knight 2011). Further, both Australia (Kelly 2009, pp. 270, 271) and Canada (Min 2010, p. 1; Knott 2012, p. 81) had a pragmatic approach in state and market relations, rather than a dogmatic approach guided by neoliberal ideology. In the words of Paul Volcker, former Chairman of the US Federal Reserve, Canada's strength is 'partly a cultural thing—they [Canadians] are more conservative' (cited in Freeland 2010). This contrasts with the USA and UK where anti-regulation and pro-market beliefs, based on neoliberal ideology, led to regulatory and supervisory failures (FSA 2009, p. 39; in House of Commons Treasury Committee 2009a, p. 11; Admati and Hellwig 2013).

Moreover, prudential regulators in both Australia and Canada 'are both widely regarded as being conservative' (FitchRatings 2012, p. 8; Freeland 2010). It is striking that Australian and Canadian banks had lower Tier One ratios than the US and UK banks faced, and had the lowest prudential capital ratios, but they survived the crisis (IMF 2009, Tables 22, 23, 24, 25, 26 on pp. 213–230). This was because the predominant form of Tier One capital in Australia and Canada was in common shares and retained earnings, whereas it was mainly in preferred stock, a hybrid of equity and debt in the US and UK. Further, Australia and Canada are the only OECD countries where competition regulation and policy prevent mergers among the largest domestic banks (Bakir 2005). Indeed, 'considered against international peers, these two banking systems are among the most concentrated in the world…In comparison to the largest banks in the world, [their] banks are relatively focused on their home market' (FitchRatings 2012, pp. 5, 9; see also IMF 2006, 2008).According to the IMF, a relatively low degree of exposure to risks in the international banking sector helped protect the domestic banks of Australia and Canada (along with India and Malaysia) from the GFC. The IMF concluded: 'Regulatory policies in Australia and Canada share some features that might have resulted in less globally integrated banking systems. One important policy they have in common is the *de facto* prohibition of mergers among the major domestic banks' (IMF 2012, pp. 106, 107). Unsurprisingly, none of the major banks in these countries 'have been designated as global systematically important financial institutions by the Financial Stability Board' (FitchRatings 2012, p. 9).

Both Australian and Canadian banks, in the words of Stevens, were 'profitable and well capitalized by private investors' and their 'holdings of the complex securities at the center of the crisis were modest by international standards'; additionally, 'banks in Australia and Canada had more conservative lending practices in their home markets than their counterparts in the USA and the UK' (Stevens 2009, p. 7; IMF 2014, p. 18). Furthermore, their banking is rooted in the *commercial* banking model, which is based on 'originate and hold,' rather than the *investment* banking model, which is based on 'originate and sold' (Debelle 2008; Min 2010). Other factors include the fact that independent investment banks were not present, and investment banking was located within commercial banks and subject to prudential regulation and supervision by a single conservative regulator (see Arjani and Paulin 2013). Canadian banks, like Australian banks, also learnt 'lessons from the bank failures and crises in housing market in the 1980s and 1990s which 'were [a] strong contributor to their prudent risk management practices prior to, and performance during, the crisis of 2008-2009' (Arjani and Paulin 2013, p. 22, see also Aaron et al. 2007).

Conclusions

Using a systematic approach that enhanced qualitative rigor in an inductive interpretive research and a deviant case study-based research design, this paper examined why Australia weathered the GFC better than most other LMEs and what lessons could be drawn from this case. Complex interactions among interdependent structural, institutional, and agency-level factors (i.e., the three aggregate dimensions), which had not been thoroughly investigated, were clearly critical during the lead-up to the GFC. This article found that Australia had, like Canada—and unlike the USA and UK—complementarities arising from macroeconomic, market, and ideational (i.e., political and policy pragmatism) structures and those arising from prudential and competition regulations, and monetary and fiscal policies, which were reinforcing the prudent behavior of various public and private sector actors, thereby contributing to financial stability. There were also conducive agency-level enabling conditions such as the business model based on commercial banking that filtered these interactions.

Many examples from past research on causes of the GFC and Australia's exceptionalism provided here raised the question of why *interactions* among structural and institutional complementarities and agents were underappreciated. The absence of an inductive integrative framework is in part to blame, since we lacked a rigorous, refined, and integrated framework in institutional theory for illustrating such interactions. Although this theoretical framework could not, of course, address all of the categories that might affect various dimensions, it begins to explain the specific causal mechanisms that informed the behavior of various agents and socioeconomic outcomes that have not, to date, been explored in detail in the institutional theory and the literature on the GFC. This article suggested that financial stability (instability) was more likely when interactions among structural and institutional complementarities and agents reinforced one another for conservative (opportunistic) banking.

There are several important contributions of this article. One set of contributions relates to institutional theory and past research on the causes of the GFC. In developing an integrative framework, this article highlights the importance of understanding structural and institutional factors, which are mostly combined, or conflated and/or examined in isolation. In doing so, it takes a step forward in bringing together the main parts of the 'elephant.' The central issue that must be examined is how the nature of bank behavior and institutional outcomes are affected by interdependent and dynamic processes among structures, institutions, and agents; not whether financial systems are based on banks or capital markets (Zysman 1983; Allen and Gale 2000); not whether a state has a strong or weak capacity in the financial services industry (Coleman 1996); and nor whether banks operate in LMEs or CMEs (Hall and Soskice 2001). Another set of contributions relates to 'enhanced *research transparency:* the principle that every political scientist should make the essential components of his or her work visible to fellow scholars' (Moravcsik 2014, p. 48). It offered a more transparent and systematic approach to research design—well-recognized in management and organization studies—than has appeared in the policy and political sciences literature up to this point.

There are also policy lessons in order. To date, the policy responses to the question of how to avoid costly banking crises have mainly included a 'macroprudential ideational shift' (Baker 2013) and 'a growing consensus that banks were undercapitalized in the run-up to the crisis, and hence, most counties are now subjecting their banks to higher capital requirements' (Royo 2013, p. 653). However, our experience with financial crises in the past has shown that financial reform has not been a silver bullet to ensure systemic stability which spans years at the national or systemic levels. We need to know 'why a "twin peaks" approach worked well in Australia but not in the Netherlands, an integrated approach worked well in Canada and Japan but not in the UK and Germany' (Bakir 2013, p. 174).

The structure, institution, and agency-based framework proposed here allows academics, and public and private sector actors, to examine the causal mechanisms under which financial regulatory reforms are likely to succeed or fail. There is a key lesson for politicians, policymakers, and bureaucrats who are engaged in 'successful policy design' (Howlett 2009) from the Australian exceptionalism. They should identify and steer a set of structural and institutional complementarities, and agency level enabling conditions that would dynamically guard against excessive risk taking over a period of years.

Questions such as under what conditions interactions among these three key dimensions will generate prudent (imprudent) actor behavior and financial stability (instability), or under what conditions nation states and global public policy networks have the policy capacity to proactively identify and effectively respond to the negative effects of institutional and structural complementarities that generate systemic risk at national and systemic levels; still remain. Further, the logic of this framework can be extended to new empirical settings beyond the financial system. More transparent and rigorous qualitative research is needed to increase understanding of how interactive processes, from structures and institutions to agents, and those from agents to structures and institutions, inform agency behavior and socioeconomic outcomes.

References

Aaron, M., Armstrong, J., & Zelmer, M. (2007). An overview of risk management at Canadian banks. *Financial System Review*, 39–47 June 2007.

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

Alexander, D. (2013). How Australia weathered the global financial crisis while Europe failed. *Guardian*. 28 Aug 2013.

Allen, F., & Gale, D. (2000). *Comparing financial systems*. Cambridge, MA: MIT Press.

Archer, M. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.

Arjani, N., & Paulin, G. (2013). Lessons from the financial crisis: Bank performance and regulatory reform. Bank of Canada, Discussion Paper/2013-4.

Augar, P. (2010). *Reckless: The rise and fall of the city*. London: Vintage Books.

Baker, A. (2013). The new political economy of the macroprudential ideational shift. *New Political Economy, 18*(1), 112–139.

Bakir, C. (2005). The exoteric politics of bank mergers in Australia. *Australian Journal of Politics and History, 51*(2), 235–256.

Bakir, C. (2013). *Bank behavior and resilience: The effect of structures, institutions and agents*. Houndmills: Palgrave MacMillan.

Bakir, C. (2015). Fragile by design: The political origins of banking crises and scarce credit. *Public Administration, 9*(3), 828–829.

Barth, J. R., Caprio, G, Jr., & Levine, R. (2011). *Rethinking bank regulation: Till angels govern*. Cambridge: Cambridge University Press.

Battellino, R. (2010). Some comments on bank funding. *RBA Bulletin*. http://www.rba.gov.au/publications/bulletin/2010/mar/pdf/bu0310-11.pdf

Bebchuk, L. A. (2010). Regulating bankers' pay. *Georgetown Law Journal, 98*(2), 247–287.

Bell, S., & Hindmoor, A. (2015). *Masters of the universe, slaves of the market*. Cambridge, MA: Harvard University Press.

Blundell-Wignall, A., Atkinson, P., & Lee, S. H. (2008). The current financial crisis: Causes and policy issues. *Financial Market Trends.*, *2008*(2), 1–21. doi:10.1787/fmt-v2008-art10-en

Bordo, M., Redish, A., & Rockoff, H. (2011). Why didn't Canada have a banking crisis in 2008 (or in 1930, or 1907, or…)? National Bureau of Economic Research Working Paper No. 17312.

Brummer, A. (2009). *The crunch: How greed and incompetence sparked the credit crisis*. London: Random House Business Books.

Calomiris, C. W., & Haber, S. H. (2014). *Fragile by design: The political origins of banking crises and scarce credit* (p. 2014). Princeton, NJ: Princeton University Press.

Campbell, J. L. (2004). *Institutional change and globalization*. Princeton: Princeton University Press.

Campbell, J. L. (2011). The U.S. financial crisis: Lessons for theories of institutional complementarity. *Socioeconomic Review, 9*, 211–234.

Campbell, J. L. & Pedersen, O. K. (2001). *The rise of neoliberalism and institutional analysis*. Princeton, N.J: Princeton University Press.

Campbell, J. L., & Pedersen, O. K. (2007). The varieties of capitalism and hybrid success: Denmark in the global economy. *Comparative Political Studies, 40*, 307–332.

Clarke, F. G., Dean, G., & Oliver, K. (2003). *Corporate collapse: Accounting, regulatory and ethical failure*. Cambridge: Cambridge University Press.

Coleman, W. D. (1996). *Financial services, globalisation and domestic policy change*. New York: St. Martin's Press.

Corley, K. G., & Gioia, D. A. (2004). Identity ambiguity and change in the wake of a corporate spin-off. *Administrative Science Quarterly, 49*, 173–208.

Corley, K., & Gioia, D. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review, 36*, 12–32.

Crouch, C. (2005). Three meanings of complementarity. *Socioeconomic Review, 3*, 359–363.

Crouch, C. (2010). Complementarity. In G. Morgan, J. L. Campbell, C. Crouch, O. K. Pedersen, & R. Whitley (Eds.), *The oxford handbook of comparative institutional analysis* (pp. 117–137). New York: Oxford University Press.

Davis, G. F. (2009). *Managed by the markets: How finance re-shaped America*. Oxford: Oxford University Press.

Debelle, G. (2008). A comparison of the US and Australian housing markets. *RBA Bulletin*, 35–46 June 2008.

Deeg, R. (2007). Complementarity and institutional change in capitalist systems. *Journal of European Public Policy, 14*(4), 611–630.

Financial Stability Forum. (2008). *Report of the financial stability forum on enhancing market and institutional resilience*. Basel: Financial Stability Forum.

FitchRatings. (2012). Australian and Canadian major banks. Special Report. January 30.

Freeland, C. (2010). What Toronto can teach New York and London. *Financial Times*. http://www.ft.com/cms/s/0/db2b340a-0a1b-11df-8b23-00144feabdc0.html#axzz1tPiEjbZl

Froud, J., Nilsson, A., Moran, M., & Williams, K. (2012). Stories and interests in finance: Agendas of Governance before and after the Financial Crisis. *Governance, 25*(1), 35–59.

FSA (Financial Services Authority). (2009). *The Turner review: A regulatory response to the global banking crisis*. London: Financial Services Authority.

G-30 (Group of Thirty). (2008). *The structure of financial supervision: Approaches and challenges in a global marketplace. A report of the G30 Regulatory Systems Working Group*. Washington, DC: G-30.

G-30 (Group of Thirty). (2009). *Financial reform: A framework for financial stability*. Washington, DC: Group of Thirty.

Gali, J. (2014). Monetary policy and rational asset price bubbles. *American Economic Review, 104*(3), 721–752.

Gamble, A. (2009). *The spectre at the feast: Capitalist crisis and the politics of recession*. Houdmills: Palgrave Macmillan.

Garnaut, R. (2009). *The great crash of 2008*. Melbourne: Melbourne University Press.

George, A. L., & Bennett, A. (2005). Integrating comparative and within-case analysis: Typological theory. In A. George & G. A. Bennett (Eds.), *Case studies and theory development in the social science* (pp. 233–262). Cambridge: MIT Press.

Giddens, A. (1979). *Central croblems in social theory: Action, structure, and contradiction in social analysis*. Los Angeles: University of California Press.

Gieve, J., & Provost, C. (2012). Ideas and coordination in policymaking: The financial crisis of 2007–2009. *Governance, 25*(1), 61–77.

Gioia, D., Corley, K. G., & Hamilton, A. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods, 16*(1), 15–31.

Gioia, D. A., & Thomas, J. B. (1996). Identity, image, and issue interpretation: Sensemaking during strategic change in academia. *Administrative Science Quarterly, 41*, 370–403.

Gioia, D. A., Thomas, J. B., Clark, S. M., & Chittipeddi, K. (1994). Symbolism and strategic change in academia: The dynamics of sensemaking and influence. *Organization Science, 5*(3), 363–383.

Glaser, B. G. (1992). *Emergence vs forcing basics of grounded theory analysis*. Mill Valey: Sociology Press.

Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.

Green, J., & Hay, C. (2015). Towards a new political economy of the crisis: Getting what went wrong right. *New Political Economy, 20*(3), 331–341.

Greenspan, A. (2010). *The crisis. Brookings papers on economic activity*. Washington, DC: Brookings Institution.

Hall, P., & Soskice, D. (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. New York: Oxford University Press.

House of Commons Treasury Committee. (2009a). *Banking crisis: Reforming corporate governance and pay in the city*. London: The Stationery Office Limited.

House of Commons Treasury Committee. (2009b). *Banking crisis: Regulation and supervision*. London: The Stationery Office Limited.

Howlett, M. (2009). Governance modes, policy regimes and operational plans: A multi-level nested model of policy instrument choice and policy design. *Policy Sciences, 42*(1), 73–89.

Howlett, M., & Lejano, R. P. (2012). Tales from the crypt: The rise and fall (and Rebirth?) of policy design. *Administration and Society*, *20*(10), 1–25.

IMF. (2006). Australia: Financial system stability assessment, including reports on the observance of standards and codes on the following topics: Banking supervision, insurance regulation, securities regulation, and payment systems. IMF Country Report No. 06/372. Washington: IMF.

IMF. (2008). *Canada: financial system stability assessment—Update*. Washington: IMF.

IMF. (2009). *Global financial stability report*. Washington: IMF.

IMF. (2012). *Global financial stability report*. Washington: IMF.

IMF. (2014). Canada: Financial sector assessment program: Intensity and effectives of federal bank supervision in Canada-technical note. IMF Country Report No. 14/70. March. Washington: IMF.

Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly, 24*, 602–611.

Kelly, P. (2009). *The march of patriots: The struggle for modern Australia*. Carlton: Melbourne University Press.

Kennedy, S. (2009). Australia's response to the global financial crisis. Speech delivered at Australia Israel Leadership Forum, 24 June.

Ketokivi, M., & Choi, T. (2014). Renaissance of case research as a scientific method. *Journal of Operations Management, 32*(5), 232–240.

Kirkpatrick, G. (2009). *The corporate governance lessons from the financial crisis*. Paris: OECD.

Knight, M. (2011). Canada's banks: Too conservative to fail? In G. Anderson & C. Sands (Eds.), *Forgotten partnership redux: Canada–U.S. relations in the 21st century* (pp.223–268). Amherst, NY: Cambria Press.

Knott, J. (2012). The President, congress, and the financial crisis: Ideology and moral hazard in economic governance. *Presidential Studies Quarterly, 42*(1), 81–100.

Krugman, P. (2009). *The return of depression economics*. New York: Norton.

Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics, 93*(2), 259–275.

Laker, J. (2009). The global financial crisis- lessons for the Australian financial system. Address to the Australian Economic Forum, 19 August. http://www.apra.gov.au/Speeches/upload/03-Aust-Economic-Forum-Opening-Remarks-19-Aug-09.pdf

Lawrence, T., Suddaby, R., & Leca, B. (2009). *Institutional work: A new agenda for institutional studies of organization*. Cambridge: Cambridge University Press.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. London: Sage.

MacFarlane, I. (2009). The crisis: Causes, consequences and lessons for the future. The Australian perspective. The ASIC Summer School 2009 in Sydney, 2–3 March.

Martin, S. (2012). GFC and sovereign risk- Mitigating measures and solutions from down under. In: *Paper presented at the international federation of accountants conference, March 19–20, 2012, Vienna, Austria*.

Mason, P. (2009). *Meltdown: The end of greed*. London: Verso.

McDonald, T., & Morling, S. (2011). The Australian economy and the global downturn part 1: Reasons for resilience. Economic roundup 2, Canberra: Australian Government Printing Services.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Beverly Hills: Sage.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Washington, DC: Sage.

Min, D. (2010). *True north: The facts about Canadian mortgage system*. Washington: Center for American Progress.

Moravcsik, A. (2014). Transparency: The revolution in qualitative research. *PS. Political Science and Politics, 47*(1), 48–53.

OECD. (2010a). *OECD economic surveys: Australia*. Paris: OECD.

OECD. (2010b). *OECD reviews of regulatory reform Australia 2-1: Towards a seamless economy*. Paris: OECD.

Pierson, P. (1993). When effect becomes cause: Policy feedback and political change. *World Politics, 45*(4), 595–628.

Portes, R. (2009). Global Imbalances. In M. Dewatripont, X. Freixas, & R. Portes (Eds.), *Macroeconomic stability and financial regulation: Key issues for the G20* (pp. 19–26). London: Centre for Economic Policy Research.

PricewaterhouseCoopers. (2004). Investigation into foreign exchange losses at the National Australia Bank. http://www2.owen.vanderbilt.edu/nick.bollen/themes/pwcreport.pdf

Royo, S. (2013). How did the Spanish financial system survive the first stage of the global crisis? *Governance, 26*, 631–656.

Scharpf, F. W. (1997). *Games real actors play: Actor-centered institutionalism in policy research*. Boulder, CO: Westview Press.

Stevens, G. (2009). Australia and Canada—Comparing notes on recent experiences address. *RBA Bulletin*, 36–44 June 2009.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Newbury Park: Sage.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks: Sage.

Suddaby, R. (2006). What grounded theory is not. *Academy of Management Journal, 49*(4), 633–642.

Sykes, T. (1994). *The bold riders: Behind Australia's corporate collapses*. St. Leonards, NSW: Allen and Unwin.

Taylor, J. B. (2009). *Getting off track: How government actions and interventions caused, prolonged, and worsened the financial crisis*. Stanford: Hoover Institution Press.

Taylor, L., & Uren, D. (2010). *Shitstorm: Inside Labor's darkest days*. Melbourne: University Publishing, Melbourne.

Van Maanen, J. (1979). The fact of fiction in organizational ethnography. *Administrative Science Quarterly, 24*, 539–550.

Van Maanen, J. (1988). *Tales of the field: On writing ethnography*. Chicago: University of Chicago Press.

Wanna, J., Lindquist, E. A., & De Vries, J. (Eds.). (2015). *The global financial crisis and its budget impacts in OECD nations fiscal responses and future challenges*. Cheltenham: Edward Elgar.

Wanna, J., & Weller, P. (2003). Traditions of Australian governance. *Public Administration, 81*(1), 63–94.

Zysman, J. (1983). *Governments, markets, and growth: Financial systems and the politics of industrial change*. Ithaca: Cornell University Press.