

Rethinking the State's Role in Finance

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Abstract

The global financial crisis has given greater credence to the idea that active state involvement in the financial sector can be helpful for stability and development. There is now evidence that, for example, lending by state-owned banks has helped in mitigating the impact of the crisis on aggregate credit. But evidence also points to negative longer-term effects of direct interventions on resource allocation and quality of intermediation. This suggests a need to rebalance the state's roles from direct to less direct involvement, as the crisis subsides. The state does have very important roles, especially in providing well-defined regulations and enforcing them, ensuring healthy competition, and strengthening financial infrastructure.

One of the crisis lessons is the importance of getting the basics right first: countries with complex but poorly enforced regulations suffered more during the global crisis. Evidence also suggests that instead of restricting competition, the state needs to encourage contestability through healthy entry of well-capitalized institutions and timely exit of insolvent ones. There is also new evidence that supports the state's key role in promoting transparency of information and reducing counterparty risk. The challenge of financial sector policies is to better align private incentives with public interest, without taxing or subsidizing private risk-taking.

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Rethinking the State's Role in Finance

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1. Introduction

The failure of the U.S. investment banking giant Lehman Brothers on September 15, 2008, marked the onset of the largest global economic meltdown since the Great Depression. The aftershocks have severely affected the livelihoods of millions of people around the world. The crisis triggered policy steps and reforms designed to contain the crisis and to prevent repetition of these events. More than four years later, with banking woes ongoing in various parts of the world, most notably in the euro area, it is a good time to evaluate these reforms and their likely contribution to sustainable financial development.

The crisis has prompted many people to reassess official interventions in financial systems, from regulation and supervision of financial institutions and markets, to competition policy, to state guarantees and state ownership of banks, and to enhancements in financial infrastructure.

But the crisis does not necessarily negate the considerable body of evidence accumulated over the past few decades. It is important to use the crisis experience to examine what went wrong and how to fix it. Which lessons about the connections between finance and economic development should shape policies in coming decades?

On the surface, the main contrast between the most recent crisis and those in recent decades is that this time, developed economies were affected much more strongly and more directly than were developing economies. But this is an over-simplification. Some developed financial systems (such as those of Australia, Canada, and Singapore) have shown remarkable resilience so far, while some developing ones have been brought to the brink of collapse. The bigger point is that the quality of a state's policies for the financial sector matters more than the economy's level of development.

In this paper, we reassess the state interventions in finance, based on updated data and research related to the recently released inaugural *Global Financial Development Report* (World Bank 2012), which provides new data and analyses in contributing to the policy discussion.²

² The scope of the *Global Financial Development Report* goes beyond the discussion on the state's role in finance. It also makes publicly available and analyzes a broad dataset with over 70 variables on financial systems in 205 countries from 1960 to 2010 (See <http://www.worldbank.org/financialdevelopment> for the data and the underlying research). In a related study, Čihák, Demirgüç-Kunt, Feyen, and Levine (2012) use the dataset to measure and benchmark financial systems in terms of (a) size of financial institutions and markets (financial depth), (b) degree to which individuals use financial institutions and markets (access), (c) efficiency of financial institutions and markets in providing financial services (efficiency), and (d) stability of financial institutions and markets (stability).

The remainder of this paper starts by a discussion of the basic roles of the state and their pros and cons. The subsequent four sections examine the four key areas of the state's role that were highlighted by the crisis, namely (a) the state's role as regulator and supervisor of the financial sector; (b) the state's role in promoting financial sector competition without planting the seeds of the next crisis; (c) direct government interventions, such as state ownership and guarantees; and (d) the state's role in supporting financial sector infrastructure, such as payments and securities settlements, and credit information sharing systems. The final section provides concluding remarks.

2. Balancing the pros and cons of the state's involvement in finance

Two building blocks underlie our view of the role of the state in finance. First, there are sound economic reasons for the state to play an active role in financial systems. Second, there are practical reasons to be wary of the state playing too active a role in financial systems. The tensions inherent in these two building blocks emphasize the complexity of financial policies. Though economics advertises the social welfare advantages of certain government interventions, practical experience suggests that the state often does not intervene successfully. Furthermore, since economies and the state's capacity differ across countries and over time, the appropriate involvement of the state in the financial system also varies case by case. Nevertheless, with ample reservations and cautions, it is possible to tease out broad lessons for policy makers from a variety of experiences and analyses.

The state is defined here as including not just the government, but also other public sector agencies, such as the central bank, the prudential regulatory agency, and the competition agency. For better or worse, interventions by the state tend to play a major role in the modern financial sector. The state's role is multi-faceted: it is a financial sector promoter, owner, regulator, and overseer. Indeed, economics provides several good motivations for an active role for the state in finance. These motivations reflect the effects of "market imperfections," such as the costs and uncertainties associated with (a) acquiring and processing information, (b) writing and enforcing contracts, and (c) conducting an array of transactions. These market imperfections often create situations in which the actions of a few people or institutions can adversely influence many other people throughout society. It is these "externalities" that provide the economic rationale for the government to intervene to improve the functioning of the financial system.

A few examples demonstrate how market imperfections motivate government action. First, when one bank fails, this can cause depositors and creditors of other banks to become nervous and start a run on these other banks. This “contagion”—whereby the weakness in one bank causes stress for otherwise healthy financial institutions—can reverberate through the economy, causing problems for the individuals and firms that rely on those otherwise healthy institutions. This is the classic bank run.

A second example stresses the externalities associated with risk taking, especially for large financial institutions. For the sake of this illustration, one can imagine a busy road with cars and trucks. If a car or truck goes faster, it can get to its destination sooner, but there is a chance that it will be involved in a crash. The likelihood of a crash is small but it increases with speed. Crashes involving large vehicles are particularly costly to others involved in the crash and very disruptive to traffic in general. Nobody wants to be involved in a crash, of course. But when deciding on how fast to go, a car or truck driver may not take fully into account the costs that a crash might have on others in terms of injuries, damages, time lost in traffic jams, and so on. The state can play a role, for example by imposing and enforcing speed limits, and perhaps imposing stricter regulation of vehicles that pose bigger risks, such as large trucks. Similarly, financial institutions often do not bear the full risks of their portfolios. When a large bank makes risky investments that pay off, bank owners reap the profits. But when such gambles fail, the bank does not always bear the full costs for its clients and other connected banks and firms, in terms of lost value or production, increased unemployment, and so on. A bad gamble by one bank can thus have repercussions for many people with no association to the risk-taking decisions of that original institution. This potential for cascading events can be a reason for the state to intervene by imposing “speed limits” on risk taking by banks.

Third, limitations on the ability of people to process information, and the tendency of some people to follow the crowd, can motivate governments to take an active role in financial markets. For example, when people have difficulty fully understanding complex investments or do not appreciate “tail risk” (that is, the possibility of rare but extreme events), this can lead investors to make systematic mistakes, which can jeopardize the stability of the economy, with potentially adverse ramifications for people who neither make those investments nor have any influence over those that do.

Governments can limit the adverse repercussions of these market failures. For example, regulation and supervision can limit risk taking by financial institutions to avoid the potential

externalities of financial institution fragility. Also, authorities can regulate the nature of information disclosure to facilitate sound decisions and even regulate financial products, similar to how governments regulate the sale of food and drugs. Thus, economics provides many reasons for an active role of the state in finance.

But just because the state can ameliorate market imperfections and improve the operation of financial systems does not mean that it will. Designing and enforcing appropriate policy can be tricky. Returning to the previous analogy with speed limits for cars and trucks, having a single speed limit may not seem very effective, because some vehicles have better safety features, such as braking systems, and therefore are less likely to end up in a crash. If vehicles with better brakes were allowed to go faster, they could spend less time on the road, and traffic could ease up. But things such as brake quality are difficult to monitor in real time. So, differentiated speed limits can be difficult to design and enforce, resulting in more speeding and crashes. The state can intervene instead more directly, for example by providing government-approved drivers for all cars and trucks. That way, the state can have more control over safety and soundness, but it can become quite expensive for taxpayers. Alternatively, the state could build large speed bumps on the road, so that there are almost no crashes; however, traffic would slow down to a crawl.

The analogy underscores that correcting for market imperfections is a complicated task, requiring considerable information and expertise to design, implement, and enforce sound policies. State interventions in finance need to be risk-sensitive, but measuring risk properly and enforcing risk-based regulations is far from straightforward. The state can try to run parts of the financial system directly, but evidence shows that approach to be very costly. And if the state required banks to hold capital as large as their loans, the risk of failures would be minimal, but it would slow down financial intermediation to a crawl.

An important complicating factor is that the same government policies that ameliorate one market imperfection can create other—sometimes even more problematic—distortions. For example, when the government insures the liabilities of banks to reduce the possibility of contagious bank runs, the insured creditors of the bank may not diligently monitor the bank and scrutinize its management. This can facilitate excessive risk taking by banks. As mentioned before, the state can try to limit risk taking by large, interconnected financial institutions. However, such interventions might reduce the incentives of private shareholders to exert strong corporate control over these institutions, because they think the government is already doing it. The state interventions can create even more reliance on the state.

An even deeper issue is whether the state always has sufficient incentives to correct for market imperfections. Governments do not always use their powers to ameliorate market imperfections and promote the public interest. Sometimes, government officials use the power of the state to achieve different objectives, including less altruistic ones, such as helping friends, family, cronies, and political constituents. When this happens, the government can do serious harm in the financial system. These arguments suggest a sober wariness concerning the role of the state in finance that will vary according to confidence in the political system's ability to promote the public good.

Determining the proper role of the state in finance is thus as complex as it is important, suggesting that that one size does not fit all when it comes to policy intervention. In less developed economies, there may seem to be more scope for the government's involvement in spearheading financial development, other things being equal. However, less development is often accompanied by a less effective institutional framework, which in turn increases the risk of inappropriate interventions. And the role of the state naturally changes as the financial system creates new products, some of which obviate the need for particular policies while others motivate new government interventions. Reflecting this complexity, country officials and other financial sector experts often hold opposing views and opinions on the pros and cons of various state interventions—a point illustrated in a recent informal poll of global opinions on financial development (World Bank 2012).

The economic and political underpinnings of state involvement in the financial sector clearly require customization: appropriate policies will differ across countries and over time. But there are common lessons and guidelines. While recognizing the complexity of the issue and the limits of existing knowledge, the following four sections address the following four key policy questions: (a) What is the early post-crisis thinking on transforming regulatory practices around the world? (b) How should governments promote competition in the financial sector without planting the seeds of the next crisis? (c) When do direct government interventions—such as state ownership and guarantees—help in developing the financial sector, and when do they fail? and (d) What should states do to support robust financial infrastructure?³

How should public policy be designed to address these four key questions? How best to balance the various roles of the state as promoter, owner, regulator, and overseer? The right

³ The website <http://www.worldbank.org/financialdevelopment> contains a wealth of underlying research, additional evidence including country examples, and extensive databases on financial development, providing users with interactive access to information on financial systems.

balance depends on a number of factors, including a country's level of development. To preview our findings, the key theme emerging from the analysis relates to the roles of direct and indirect interventions. In the recent crisis, the role of direct state interventions has increased quite dramatically, both in developed economies and in the developing ones. Early evidence reveals that some of these interventions worked, at least in the short run. However, there is also evidence on potential longer-term negative effects. Therefore, as the crisis subsides, there may be a need to rebalance toward less direct state involvement. Related to this theme is the critical role that incentives play in the financial sector. The challenge for the state's involvement is to better align private incentives with public interest, without taxing or subsidizing private risk taking. Design of public policy needs to strike the right balance in order to promote sustainable development. This leads to different challenges and trade-offs in answering each of the four questions below.

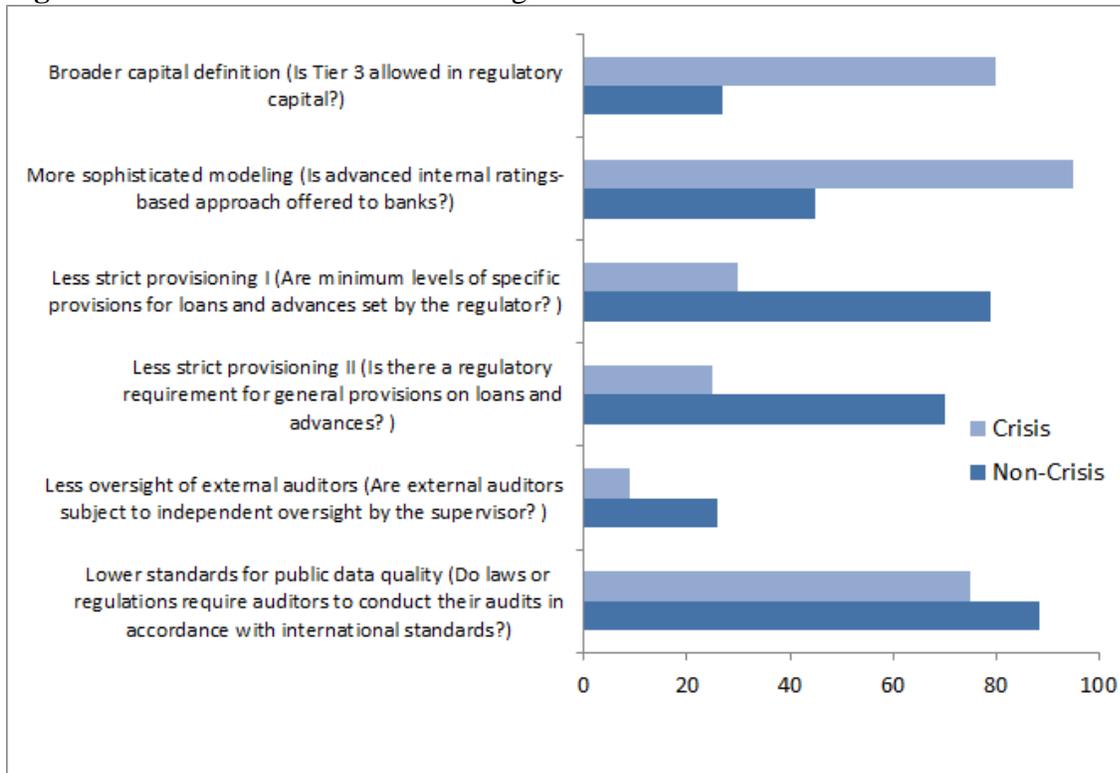
3. What are the best ways to reform regulation and supervision?

The global financial crisis that intensified with the collapse of Lehman Brothers in September 2008 presented a major test of the international architecture developed over many years to safeguard the stability of the global financial system. Although the causes of the crisis are still being debated, there is agreement that the crisis revealed major shortcomings in market discipline as well as regulation and supervision (Demirgüç-Kunt and Servén 2009, Caprio, Demirgüç-Kunt, and Kane 2010.). The financial crisis has reopened important policy debates on financial regulation. After the onset of the meltdown, there was much talk about not wasting the crisis, about using it to push through necessary reforms (Beck 2011). Indeed, many reforms have been enacted or are in process. Much has been done, but the system was tested further by the more recent euro area crisis, leading to the questions: Are the reforms adequate and will they be sufficient to reduce the likelihood and severity of future financial crises?

Regulation and supervision represent one area in which the important role of the state is not in dispute. The crucial role of the state is acknowledged by virtually all involved in global finance and policy and is well established in the economic and financial literature. Hence, the debate is not about whether the state should regulate and supervise the financial sector, but about how best to go about ensuring that regulation and supervision supports sound financial development.

To find out what works in financial regulation and what does not, much can be learned from a recently updated World Bank survey of regulation and supervision around the world (available at <http://www.worldbank.org/financialdevelopment>). This is the fourth round of the survey, and the first one that provides comprehensive information on the state of banking regulation and supervision after the onset of the crisis. Juxtaposing the findings from this survey with a dataset on banking sector performance during the crisis shows that countries that were directly hit by the global financial crisis had weaker regulation and supervisory practices compared to the rest. Specifically, they had less stringent definitions of capital, less stringent provisioning requirements, and greater reliance on banks' own risk assessment (Figure 1). Also, while the quality of publicly available financial information was roughly comparable in crisis and non-crisis countries, the former were characterized by much less scope for incentives to actually use that information and monitor financial institutions (for example, they had more generous deposit insurance coverage). These findings are confirmed also by more in-depth statistical analysis (Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni-Cherghlou 2012).

Tracking changes during the crisis (and comparing the latest bank regulation survey with the pre-crisis surveys) confirms that countries have stepped up efforts in the area of macroprudential policy, as well as on issues such as resolution regimes and consumer protection. However, it is not clear whether incentives for market discipline have improved. Some elements of disclosure and quality of information have improved, but deposit insurance coverage has increased during the crisis. This increased coverage, together with other aspects—such as generous support for weak banks—did not improve incentives for monitoring. The survey suggests that there is further scope for improving disclosures and monitoring incentives (Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni-Cherghlou 2012).

Figure 1. Selected Features That Distinguish Crisis-Hit Countries

Notes: Percentage of countries that responded “yes” to the question in parentheses. Based on the World Bank’s 2011 Bank Regulation and Supervision Survey. “Crisis” countries are defined as those that had a banking crisis between 2007 and 2011, as identified in Laeven and Valencia (2012).

Sources: Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni-Cheraghloo (2012)

Despite the progress made on regulatory reform, there are still important areas of disagreement and discussion. Hence, there are numerous reform proposals that call for greater emphasis on (a) simplicity and transparency, as well as (b) focus on incentive-compatible regulations. Importantly, these proposals warn against the trend toward growing complexity of regulation, which may reduce transparency and accountability, increase regulatory arbitrage opportunities, and significantly strain regulatory resources and capacity. The proposals suggest a regulatory approach that is more focused on proactively identifying and addressing incentive problems and making regulations incentive-compatible to end the continuous need to eliminate deficiencies and close loopholes that are inevitably present in ever more complex sets of regulations. To this end, Čihák, Demirgüç-Kunt, and Johnston (2013) propose “incentive audits” as a tool that could help in pinpointing incentive misalignments in the financial sector and identifying reforms that are incentive-robust (as discussed also by Calomiris 2011). Other proposals address the incentives that the regulators face and propose adjustments in the

institutional structures for regulation and supervision (Barth, Caprio, and Levine 2001, Masciandaro, Pansini and Quintyn 2011).

In implementing supervisory best practices, emerging markets and developing economies should focus on establishing a basic robust supervisory framework that reflects local financial systems' characteristics, and refrain from incorporating unnecessary (and in several cases inapplicable) complex elements. Referring back to the earlier analogy with speed limits for cars and trucks, it may be appealing to have a more sophisticated rule in which each car has its own speed limit, depending on the quality of its brakes and other risk-mitigating features. A case could be made that such a system is not only more efficient (allowing safer cars to go faster), but also that it is less prone to failures (because cars get to safety faster, there may be less crashes) However, if the state does not have the capacity to monitor and police such complex rules, the likely result is more speeding and more crashes. Similarly, for example, complex approaches to calculating capital requirements are not appropriate if there is limited capacity to verify the calculations, do robustness checks, and police implementation.

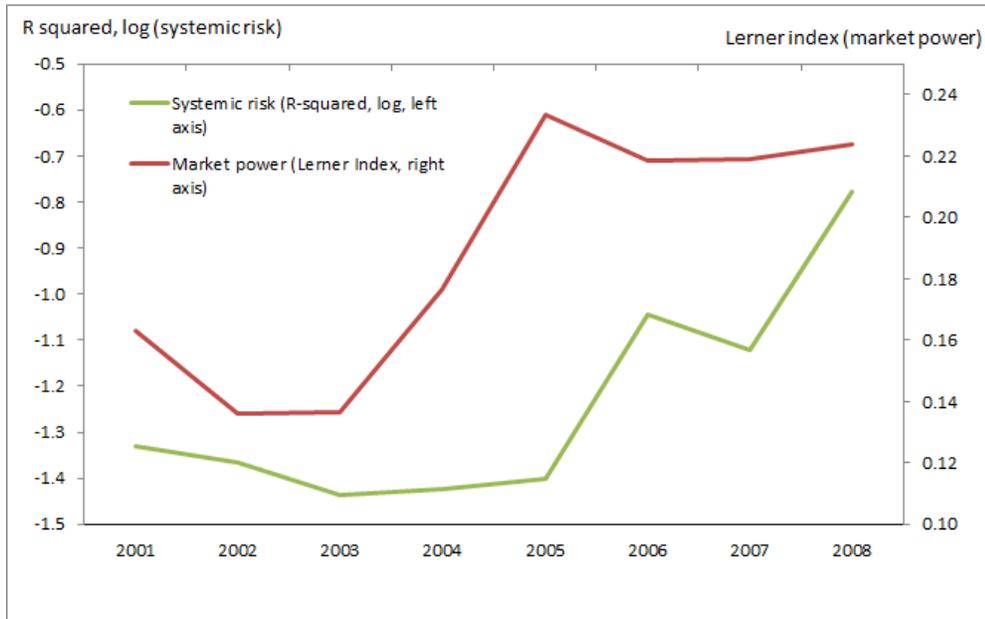
Overall, there is broad agreement that it is important to address the "basics" first (Squam Lake Group 2010, Beck 2011, Claessens, Dell'Ariccia, Igan, and Laeven 2010, London School of Economics 2010, Rajan 2010, World Bank 2012). That means having in place a coherent institutional and legal framework that establishes market discipline complemented by strong, timely, and anticipatory supervisory action. In many developing economies, this also means that building up supervisory capacity needs to be a top priority. Among the important lessons of the global financial crisis are renewed focus on systemic risk and the need to pay greater attention to incentives in the design of regulation and supervision.

One of the positive developments triggered by the crisis is much greater debate and communication among regulators, policy makers, and academics. The diverse views and multiple reform proposals in this debate, examined in detail in World Bank (2012), are likely to inform the regulatory reform process and improve future outcomes in terms the occurrence and cost of future crises.

4. How should the state promote competition in the financial sector?

The global financial crisis also reignited the interest of policy makers and academics in assessing the impact of bank competition and rethinking the role of the state in shaping competition policies. While the benefits of bank competition for efficiency and for access to finance are relatively well established, the relationship between competition and stability has been subject to active debate (Claessens and Klingebiel 2001, Allen and Gale 2004, Claessens 2009, Schaeck, Čihák, and Wolfe 2009, Casu and Girardone 2009, Vives 2011, Gropp, Hakenes, and Schnabel 2011, Hakenes and Schnabel 2010, and Delis 2012). The debate has intensified with the crisis. While some believe that increasing financial innovation and competition in certain markets, such as subprime mortgage lending, contributed to the global financial turmoil, and are calling for policies to restrict competition. Others worry that, as a result of the crisis and the actions of governments in support of the largest banks, concentration in banking increased, reducing the competitiveness of the sector and access to finance, and potentially also contributing to future instability as a result of moral hazard problems associated with “too big to fail” institutions. The design of competition policy is challenging because it involves a possible trade-off between efficiency and growth on one hand and stability concerns on the other hand. Another reason why it is important to rethink competition policies is the changing mandate of central banks and bank regulatory agencies: survey data reveal that the majority now have explicit responsibilities in the areas of competition policy (Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni-Cheraghloo 2012).

The *Global Financial Development Report* (World Bank 2012) provides guidance on this important issue. Research suggests that bank competition brings about improvements in efficiency across banks and enhances access to financial services, without necessarily undermining systemic stability. A review of trends in average systemic risk and bank market power (Figure 2) indicates that greater market power (that is, less competition) is associated with more systemic risk. This observation is confirmed also by more in-depth panel data analysis (Anginer, Demirgüç-Kunt, and Zhu 2012). The evidence of a real trade-off is thus weak at best.

Figure 2. Market Power and Systemic Risk

Notes: The systemic risk measure follows Anginer and Demirgüç-Kunt (2001) and builds on Merton's (1974) contingent claim pricing. Systemic risk is defined as the correlation in the risk taking behavior of banks and is captured by the R-squared from a regression of a bank's weekly change in distance to default on country average weekly change in distance to default (excluding the bank itself). Higher R-squared means higher systemic risk. Lerner index is a proxy for profits that accrue to a bank as a result of its pricing power, so higher values mean less competition. The calculations cover 1,872 publicly traded banks in 63 economies (developed and developing).

Sources: Calculations based on Anginer, Demirgüç-Kunt, and Zhu (2012).

This analysis suggests that policies to address the causes of the recent crisis should not unduly restrict competition. The appropriate public policy is (a) to establish a regulatory framework that does not subsidize risk taking through poorly designed exit policies and too-big-to-fail subsidies and (b) to remove barriers to entry of “fit and proper” bankers with well-capitalized financial institutions.

For competition to improve access to finance, the state has an important role to play in enabling a market-friendly informational and institutional environment. Policies that guarantee market contestability, timely flow of adequate credit information, and contract enforceability will enhance competition among banks and improve access. For instance, evidence across business line data in Brazil (Urdapilleta and Stephanou 2009) shows that competition in the corporate segment is higher than that in the retail segment. This reflects the existence of a larger pool of credit providers and easier access to information for large corporations. Competition in the retail sector can be fostered by promoting portability of bank accounts, expanding credit information sharing, and increasing payment system interconnection.

In this context, consumer protection laws have been at the forefront of competition policies in many countries. One example is South Africa, where new legislation provided a framework to bolster competition by providing a sound information environment to customers and protecting consumers from unfair credit and credit marketing practices. It established a National Credit Regulator to act as a knowledge platform for credit practices and to ensure the compliance of the law.

Competition agencies also play a crucial advocacy role in promoting competition. One example in this regard is Romania's Competition Council, which has extended the European Union Consumer Credit Directive of 2008. The directive establishes common rules on consumer credit over mortgage or real estate guaranteed loans and eliminates (or sets a low threshold for) early repayment fees.

Finally, state interventions during crises may constitute a barrier to exit that permits insolvent and inefficient banks to survive and generate unhealthy competition. Governments should also be aware that their interventions during crises may have potentially negative consequences on bank competition and distort risk-taking incentives.

5. When do direct government interventions help?

During the global financial crisis, countries pursued a variety of strategies to restart their financial and real sectors. As the balance sheets of private banks deteriorated and they curtailed their lending activities, many countries used state-owned banks to step up their financing to the private sector. Most countries relied heavily on the use of credit guarantee programs. Others adopted a number of unconventional monetary and fiscal measures to prop up credit markets.

Historically, many state-owned banks were created to fulfill long-term development roles by filling market gaps in long-term credit, infrastructure, and agriculture finance, and to promote access to finance to underserved segments of the economy—notably, small and medium enterprises. In practice, however, there is widespread evidence that state banks have generally been very inefficient in allocating credit, more often than not serving political interests. Nevertheless, the global financial crisis underscored the potential countercyclical role of state-owned banks in offsetting the contraction of credit from private banks, leading to arguments that this is an important function that can perhaps better justify their existence.

Hence, the crisis and the actions adopted by different countries reignited the age-old debate on whether there is a need for direct government intervention in the financial sector (for

example, Altunbas, Evans, and Molyneux 2001, La Porta, López-de-Silanes, and Shleifer 2002, Sapienza 2004, Micco and Panizza 2006, Micco, Panizza, and Yañez 2007, Beck 2008, Andrianova, Demetriades, and Shortland 2008). Supporters of state-owned banks now argue that these financial institutions provide the state with an additional tool for crisis management and, relative to central banks, may be more capable of providing a safe haven for retail and interbank deposits, creating a fire break in contagion, and stabilizing aggregate credit. On the other hand, those opposing government bank ownership point out that agency problems and politically motivated lending render state-owned banks inefficient and prone to cronyism. Furthermore, past experiences of numerous countries suggest that cronyism in lending may build up large fiscal liabilities and threaten public sector solvency and financial stability, as well as misallocate resources and retard development in the long run.

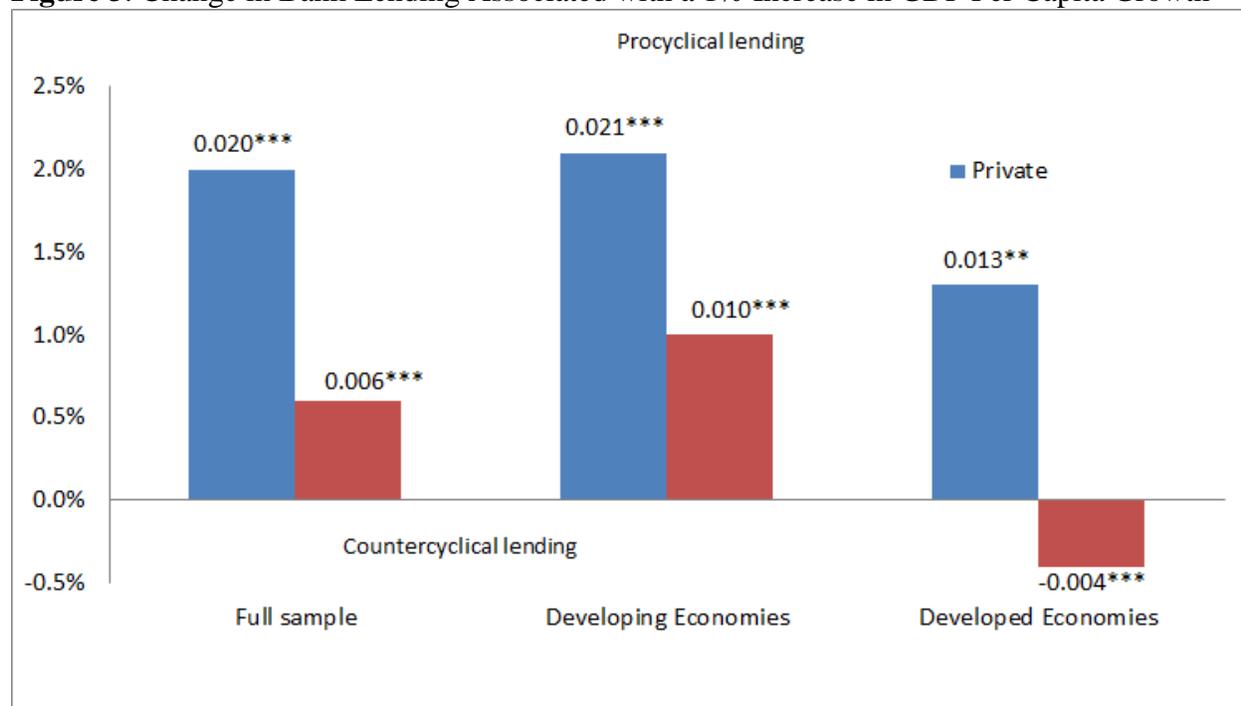
During the recent crisis, several countries used their public bank infrastructure to prop up financial conditions. For instance, the Brazilian government injected capital into its state-owned development bank and authorized state-owned banks to acquire equity stakes from private banks and loan portfolios from financial institutions with liquidity problems. In China, state-owned banks were instructed to boost credit to specific sectors in order to promote growth. In Russia, Vnesheconombank, the country's state-owned development bank, received new capital to assist troubled smaller financial institutions and to invest in Russian financial instruments. It also injected money into large state-controlled banks to increase their loans to Russian companies. In Mexico, state-owned development banks extended credit to large companies, participated in loan programs for fragile sectors, and extended guarantees on commercial paper and credit instruments issued by specialized nonbank financial institutions. Similar actions were also taken by some developed economies. For example, Germany's state-owned development bank, Kreditanstalt für Wiederaufbau, increased lending to larger companies with short-term liquidity problems, provided additional financing for infrastructure, and helped recapitalize regional state banks. And in Finland, the government raised the limits on domestic and export financing for the country's state-owned bank to boost lending to small and medium enterprises (World Bank 2012).

Not all state-owned banks are alike. They can be classified as state commercial banks, state development banks, and development financial institutions, depending on whether they aim to maximize profits, are deposit takers, or have a clear developmental mandate. State-owned development banks and financial institutions, in turn, can lend to the public either directly or

indirectly through private banks. Most of the evidence discussed on the short-term and long-term effects of state-owned banks focuses on commercial banks or does not distinguish between commercial and development banks. That is partly because, despite the importance of development banks during crisis and non-crisis periods, relatively little is known about them. Accompanying the recent *Global Financial Development Report* (World Bank 2012) is a new survey of 90 national development banks in 61 countries examines how development banks operate, what their policy mandates are, what financial services they offer, which type of clients they target, how they are regulated and supervised, what business models they have adopted, what governance framework they have (De Luna-Martínez and Vicente 2012). The survey suggests that some of the development banks played a role in mitigating the effects of the recent financial crisis. The survey also indicates that, despite recent improvements in some jurisdictions, there is still enormous room to improve the performance and effectiveness of the development banks.

A review of the historical and new research evidence suggests that lending by state-owned banks tends to be less pro-cyclical than that of their private counterparts (Bertay, Demirgüç-Kunt, and Huizinga 2012, Cull and Martínez Pería 2012). During the global financial crisis, some state-owned banks have indeed played a countercyclical role by expanding their lending portfolio and restoring conditions in key markets. World Bank (2012) documents that the expansion of the lending portfolio of state-owned commercial banks (such as PKO Bank Polski in Poland) and state-owned development banks (such as BNDES in Brazil) did mitigate the effects from the global credit crunch and fill the gap of lower credit from the private sector. Also, Mexican development banks supported the credit channel through the extension of credit guarantees and lending to private financial intermediaries.

The mitigating short-term effect of state-owned banks is illustrated in Figure 3. The figure shows the relationship between lending patterns of banks with private and state ownership and economic growth, measured by real GDP per capita growth. Globally, bank lending is pro-cyclical, growing during booms and falling during downturns. Yet the lending pattern of private banks is more pro-cyclical compared with their state-owned counterparts. In high-income countries, state-owned banks even behave in a clearly countercyclical fashion, increasing in downturns.

Figure 3. Change in Bank Lending Associated with a 1% Increase in GDP Per Capita Growth

Notes: The figure shows marginal effects from a regression of bank lending on GDP per capita growth and a number of control variables, estimated using a sample of 1,633 banks from 111 countries for the period 1999–2010. Significance level: ** 5 percent, *** 1 percent.

Source: Bertay, Demirgüç-Kunt, and Huizinga (2012).

However, because in many cases lending growth continued even after economic recovery was under way, and loans were not directed to the most constrained borrowers, it is not clear that the recent crisis illustrates that state-owned banks can effectively play a countercyclical role. Furthermore, the evidence from previous crises on this issue is also mixed. Importantly, efforts to stabilize aggregate credit by state-owned banks may come at a cost: particularly through the deterioration of the quality of intermediation and resource misallocation. In other words, a temporary boom in state bank lending has long-term adverse effects by creating a portfolio of bad loans in crises that take a long time to sort out.

Ideally, focusing on the governance of these institutions may help policy makers address the inefficiencies associated with state-owned banks. They need to design a clear mandate, work to complement (rather than substitute for) the private banks, and adopt risk management practices that allow them to guarantee a financially sustainable business (Scott 2007, Gutiérrez Rudolph, Homa, and Beneit 2011). However, these governance reforms are particularly challenging in weak institutional environments, further emphasizing that the trade-off is a serious one for policy makers.

Credit guarantee schemes have also been a popular intervention tool during the recent crisis. However, given their limited scale, they are used not to stabilize aggregate credit but to alleviate the impact of the credit crunch on segments that are most severely affected, such as small and medium enterprises. Unfortunately, rigorous evaluations of these schemes are very few, and existing studies suggest that the benefits of these programs tend to be rather modest, particularly in institutionally underdeveloped settings, and they tend to incur fiscal and economic costs. Nevertheless, best practices can be identified. These include leaving credit assessments and decision making to the private sector; capping coverage ratios and delaying the payout of the guarantee until recovery actions are taken by the lender so as to minimize moral hazard problems; having pricing guarantees that take into account the need for financial sustainability and risk minimization; and encouraging the use of risk management tools. Success again hinges on overcoming the challenges of getting the design right, particularly in underdeveloped institutional and legal settings.

6. What is the role for the state in promoting financial infrastructure?

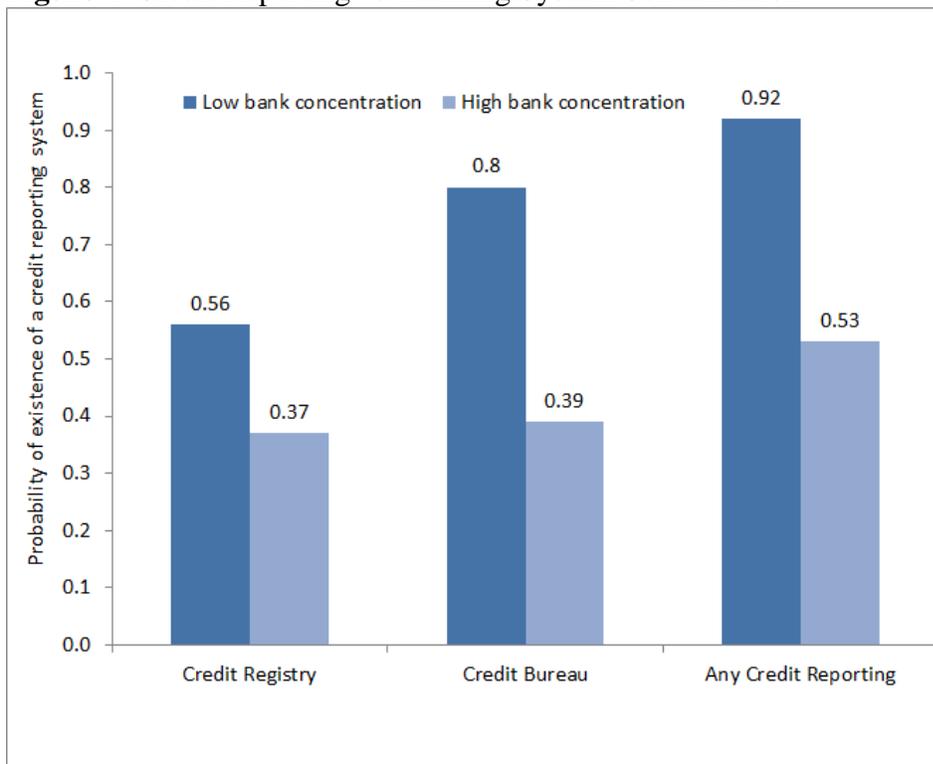
The global financial crisis has highlighted the importance of a resilient financial infrastructure for financial stability. It also has led to a discussion about the role of the state, particularly in promoting the provision of high-quality credit information and in ensuring stable systems for large-value financial transactions.

Transparent exchange of credit information reduces information asymmetries between borrowers and lenders and is an essential requisite of a well-functioning credit market. However, the financial crisis has shown that there is much room for improvement in this area, especially in the use of existing credit reporting systems for prudential oversight and regulation.

Information sharing in credit markets acts as a public good that improves credit market efficiency, access to finance, and financial stability. Nonetheless, for an individual commercial bank, proprietary credit information is valuable, so it has incentives to collect the information and keep it away from others. Information sharing among private lenders thus may not arise naturally, especially where banking systems are concentrated (Figure 4). This creates an important rationale for state involvement. In addition, information sharing in credit markets has increasing returns to scale: the benefits of credit reporting for financial access and stability are greatest when participation is as wide as possible and includes banks as well as nonbank financial institutions. Therefore, another important role for the state is to create a level playing

field for the provision and exchange of credit information, and to facilitate the inclusion of nonregulated lenders into existing credit reporting systems. In many emerging markets, such as China and South Africa, major initiatives are under way to integrate the rapidly growing microfinance and consumer loan markets into the existing credit reporting infrastructure.

Figure 4. Credit Reporting vs. Banking System Concentration



Notes: The figure reports the percentage of countries with private (credit bureau), public (credit registry), or any credit reporting institutions for countries with high and low degrees of bank concentration (above and below the sample mean), respectively. It shows that bank concentration (the asset share of a country's three largest banks) is negatively associated with the development of credit reporting. This relationship is also conditional on the level of economic development.

Sources: Bruhn, Farazi, and Kanz (2012).

As regards stability of payment systems, liquidity provision by central banks during the crisis helped prevent major payment system disruptions. However, stress emerged in interbank and over-the-counter derivatives markets. The state can play an important role in mitigating counterparty risks in interbank money markets by providing robust and secure infrastructures and, potentially, by promoting the development of collateralized interbank markets. The state can

also contribute in the development of a robust infrastructure for security settlement systems and the oversight of securities transactions, particularly for over-the-counter transactions. Increased standardization and transparency of transactions is needed and can be achieved by (a) trading on exchanges or electronic trading platforms; (b) clearing transactions through central counterparties, that is, entities that interpose themselves as counterpart to each trade (examples include the Chicago Mercantile Exchange’s CME Clearing in the United States, Eurex Clearing in Germany, and London Clearing House’s LCH.Clearnet in the United Kingdom); and (c) reporting transactions to trade repositories, which are entities that store centralized record of transaction data. These policy prescriptions are especially important in many emerging markets, where the development of a modern settlement infrastructure has lagged behind the rapid growth of emerging equity and securities markets.

7. Concluding remarks

Our overall message is cautionary. The global financial crisis has given greater credence to the idea that active state involvement in the financial sector can help maintain economic stability, drive growth, and create jobs. There is evidence that some interventions may have had an impact, at least in the short run. But there is also evidence on potential longer-term negative effects. The evidence also suggests that, as the crisis subsides, there may be a need to adjust the role of the state from direct interventions to less direct involvement. This does not mean that the state should withdraw from overseeing finance. To the contrary, the state has a very important role, especially in providing supervision, ensuring healthy competition, and strengthening financial infrastructure.

Incentives are crucial in the financial sector. The main challenge of financial sector policies is to better align private incentives with public interest without taxing or subsidizing private risk-taking. Design of public policy needs to strike the right balance—promoting development, yet in a sustainable way. This approach leads to challenges and trade-offs.

In regulation and supervision, one of the crisis lessons is the importance of getting the “basics” right first. That means solid and transparent institutional frameworks to promote financial stability. Specifically, it means strong, timely, and anticipatory supervisory action, complemented with market discipline. In many developing economies, that combination of basic ingredients implies a priority on building up supervisory capacity. Here, less can mean more: less

complex regulations, for instance, can mean more effective enforcement by supervisors and better monitoring by stakeholders.

The evidence also suggests that the state needs to encourage contestability through healthy entry of well-capitalized institutions and timely exit of insolvent ones. The crisis fueled criticisms of “too much competition” in the financial sector, leading to instability. However, research presented in this report suggests that, for the most part, factors such as poor regulatory environment and distorted risk-taking incentives are what promote instability, rather than competition itself. With good regulation and supervision, bank competition can help improve efficiency and enhance access to financial services, without necessarily undermining systemic stability. Hence, what is needed is to address the distorted incentives and improve the flow of information as well as the contractual environment, rather than to restrict competition.

Lending by state-owned banks can play a positive role in stabilizing aggregate credit in a downturn, but it also can lead to resource misallocation and deterioration of the quality of intermediation. The report presents some evidence that lending by state-owned banks tends to be less pro-cyclical and that some state-owned banks even played a countercyclical role during the global financial crisis. However, the track record of state banks in credit allocation remains generally unimpressive, undermining the benefits of using state banks as a countercyclical tool. Policy makers can limit the inefficiencies associated with state bank credit by paying special attention to the governance of these institutions and schemes and ensuring that adequate risk management processes are in place. However, this oversight is challenging, particularly in weak institutional environments.

Experience points to a useful role for the state in promoting transparency of information and reducing counterparty risk. For example, the state can facilitate the inclusion of a broader set of lenders in credit reporting systems and promote the provision of high-quality credit information, particularly when there are significant monopoly rents that discourage information sharing. Also, to reduce the risk of freeze-ups in interbank markets, the state can create the conditions for the evolution of markets in collateralized liabilities.

References

- Allen, Franklin, and Douglas Gale. 2004. "Competition and Financial Stability." *Journal of Money, Credit and Banking* 36 (3, pt. 2): 453–80.
- Altunbas, Yener, Lynne Evans, and Philip Molyneux. 2001. "Bank Ownership and Efficiency." *Journal of Money, Credit and Banking* 33 (4): 926–54.
- Andrianova, Svetlana, Panicos Demetriades, and Anja Shortland. 2008. "Government Ownership of Banks, Institutions, and Financial Development." *Journal of Development Economics* 85: 218–52.
- Anginer, Deniz, and Asli Demirgüç-Kunt. 2011. "Has the Global Banking System Become More Fragile over Time?" Policy Research Working Paper 5849, World Bank, Washington, DC.
- Anginer, Deniz, Asli Demirgüç-Kunt, and Min Zhu. 2012. "How Does Bank Competition Affect Systemic Stability?" Policy Research Working Paper 5981, World Bank, Washington, DC.
- Barth, James R., Gerard Caprio Jr., and Ross Levine. 2012. *Guardians of Finance: Making Regulators Work for Us*. Cambridge, MA: MIT Press.
- Beck, Thorsten. 2008. "Bank Competition and Financial Stability: Friends or Foes?" Policy Research Working Paper 4656, World Bank, Washington, DC.
- , ed. 2011. *The Future of Banking*. London: Center for Economic and Policy Research (CEPR).
- Bertay, Ata Can, Asli Demirgüç-Kunt, and Harry Huizinga. 2012. "Bank Ownership and Credit over the Business Cycle: Is Lending by State Banks Less Procyclical?" Policy Research Working Paper 6110, World Bank, Washington, DC.
- Bruhn, Miriam, Subika Farazi, and Martin Kanz. 2013. "Bank Concentration and Credit Reporting." Policy Research Working Paper, World Bank, Washington, DC.
- Calomiris, Charles. 2011. "An Incentive-Robust Programme for Financial Reform." *Manchester School* 79: 39–72.
- Caprio, Gerard, Asli Demirgüç-Kunt, and Edward J. Kane. 2010. "The 2007 Meltdown in Structured Securitization: Searching for Lessons, not Scapegoats." *World Bank Research Observer* 25 (1): 125–55.
- Casu, Barbara, and Claudia Girardone. 2009. "Testing the Relationship between Competition and Efficiency in Banking: A Panel Data Analysis." *Economic Letters* 105: 134–37.

- Čihák, Martin, Aslı Demirgüç-Kunt, Erik Feyen, and Ross Levine. 2012. "Benchmarking Financial Development around the World." Policy Research Working Paper 6175, World Bank, Washington, DC.
- Čihák, Martin, Aslı Demirgüç-Kunt, and Robert Barry Johnston. 2013. "Incentive Audits: A New Approach to Financial Regulation." Policy Research Working Paper 6308, World Bank, Washington, DC.
- Čihák, Martin, Aslı Demirgüç-Kunt, Maria Soledad Martínez Pería, and Amin Mohseni-Cheraghloo. 2012. "Bank Regulation and Supervision around the World: A Crisis Update." Policy Research Working Paper 6286, World Bank, Washington, DC.
- Claessens, Stijn. 2006. "Access to Financial Services: A Review of the Issues and Public Policy Objectives." *World Bank Research Observer* 21 (2): 207–40.
- Claessens, Stijn. 2009. "Competition in the Financial Sector: Overview of Competition Policies." *World Bank Research Observer* 24 (1): 83–118.
- Claessens, Stijn, Giovanni Dell’Ariccia, Deniz Igan, and Luc Laeven. 2010. "Lessons and Policy Implications from the Global Financial Crisis." Working Paper 10/44, International Monetary Fund, Washington, DC.
- Claessens, Stijn, and Daniela Klingebiel. 2001. "Competition and Scope for Financial Services." *World Bank Research Observer* 16 (1): 18–40.
- Cole, Shawn A. 2009. "Financial Development, Bank Ownership, and Growth: or, Does Quantity Imply Quality?" *Review of Economics and Statistics* 91 (1): 33–51.
- Cull, Robert, and Maria Soledad Martínez Pería. 2012. "Bank Ownership and Lending Patterns during the 2008–2009 Financial Crisis: Evidence from Eastern Europe and Latin America." Policy Research Paper 6195, World Bank, Washington, DC.
- Delis, Manthos D. 2012. "Bank Competition, Financial Reform, and Institutions: The Importance of Being Developed." *Journal of Development Economics* 97 (2): 450–65.
- De Luna-Martínez, José, and Carlos L. Vicente. 2012. "Global Survey of Development Banks." Policy Research Working Paper 5969, World Bank, Washington, DC.
- Demirgüç-Kunt, Aslı, and Enrica Detragiache. 1997. "The Determinants of Banking Crises in Developing and Developed Countries." *IMF Staff Papers* 45: 81–109.
- Demirgüç-Kunt, Aslı, Enrica Detragiache, and Ouarda Merrouche. 2010. "Bank Capital: Lessons from the Financial Crisis." Policy Research Working Paper 5473, World Bank, Washington, DC.

- Demirgüç-Kunt, Asli, and Luis Servén. 2009. "Are All the Sacred Cows Dead? Implications of the Financial Crisis for Macro and Financial Policies." Policy Research Working Paper 4807, World Bank, Washington, DC.
- Demsetz, Harold. 1973. "Industry Structure, Market Rivalry, and Public Policy." *Journal of Law and Economics* 16: 1–9.
- DeYoung, Robert, Iftekhar Hasan, and Bruce Kirchoff. 1998. "The Impact of Out-of-state Entry on the Cost Efficiency of Local Banks." *Journal of Economics and Business* 50: 191–203.
- Dick, Astrid. 2006. "Nationwide Branching and Its Impact on Market Structure, Quality and Bank Performance." *Journal of Business* 79: 567–92.
- Dinç, I. Serdar. 2005. "Politicians and Banks: Political Influences on Government-Owned Banks in Emerging Markets." *Journal of Financial Economics* 77: 453–79.
- Duchin, Ran, and Denis Sosyura. 2011. "Safer Ratios, Riskier Portfolios: Banks' Response to Government Aid." Ross School of Business Paper No. 1165, University of Michigan, Ann Arbor.
- Ellul, Andrew, and Vijay Yerramilli. 2011. "Stronger Risk Controls, Lower Risk: Evidence from U.S. Bank Holding Companies." AFA 2011 Denver Meetings Paper, American Finance Association, Berkeley, CA.
- Enriquez, Luca, and Gerard Hertig. 2010. "The Governance of Financial Supervisors: Improving Responsiveness to Market Developments." Paper presented at the 5th International Conference on Financial Regulation and Supervision, Università Bocconi, Milan, June 24–25.
- Farhi, Emmanuel, and Jean Tirole. 2012. "Collective Moral Hazard, Maturity Mismatch and Systemic Bailouts." *American Economic Review* 102 (1): 63–90.
- Galindo, Arturo José, and Alejandro Micco. 2004. "Do State Owned Banks Promote Growth? Cross-Country Evidence for Manufacturing Industries." *Economics Letters* 84: 371–76.
- Gropp, Reint, Hendrik Hakenes, and Isabel Schnabel. 2011. "Competition, Risk-Shifting, and Public Bail-Out Policies." *Review of Financial Studies* 24 (6): 2084–2120.
- Gutiérrez, Eva, Heinz Rudolph, Theodore Homa, and Enrique Blanco Beneit. 2011. "Development Banks: Role and Mechanisms to Increase Their Efficiency." Policy Research Working Paper 5729, World Bank, Washington, DC.
- Hakenes, Hendrik, and Isabel Schnabel. 2010. "Banks Without Parachutes: Competitive Effects of Government Bail-Out Policies." *Journal of Financial Stability* 6: 156–68.

- Laeven, Luc, and Fabian Valencia. 2012. "Systemic Banking Crisis Database: An Update." Working Paper 08/224, International Monetary Fund, Washington, DC.
- La Porta, Rafael, Florencio López-de-Silanes, and Andrei Shleifer. 2002. "Government Ownership of Banks." *Journal of Finance* 57: 265–301.
- London School of Economics. 2010. *The Future of Finance: The LSE Report*. London: LSE.
- Masciandaro, Donato, Rosaria Vega Pansini, and Marc Quintyn. 2011. "The Economic Crisis: Did Financial Supervision Matter?" Working Paper 11/261, International Monetary Fund, Washington, DC.
- Merton, Robert. 1974. "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates," *Journal of Finance* 29: 449–70.
- Micco, Alejandro, and Ugo Panizza. 2006. "Bank Ownership and Lending Behavior." *Economics Letters* 93: 248–54.
- Micco, Alejandro, Ugo Panizza, and Mónica Yañez. 2007. "Bank Ownership and Performance. Does Politics Matter?" *Journal of Banking and Finance* 31: 219–41.
- Rajan, Raghuram. 2010. *Fault Lines: How Hidden Fractures Still Threaten the World Economy*. Princeton, NJ: Princeton University Press.
- Sapienza, Paola. 2004. "The Effects of Government Ownership on Bank Lending." *Journal of Financial Economics* 72: 357–84.
- Schaeck, Klaus, Martin Čihák, Andrea Maechler, and Stephanie Stolz. 2011. "Who Disciplines Bank Managers?" *Review of Finance* 16: 197–243.
- Schaeck, Klaus, Martin Čihák, and Simon Wolfe. 2009. "Are Competitive Banking Systems More Stable?" *Journal of Money, Credit, and Banking* 41 (4): 711–34.
- Scott, David H. 2007. "Strengthening the Governance and Performance of State-Owned Financial Institutions." Policy Research Working Paper 4321, World Bank, Washington, DC.
- Semenova, Maria. 2008. "Information Sharing in Credit Markets: Incentives for Incorrect Information Reporting." *Comparative Economic Studies* 50 (3): 381–415.
- Special Investigation Commission. 2010. "Report on the Collapse of the Three Main Banks in Iceland." Icelandic Parliament, April 12.
- Squam Lake Group. 2010. "The Squam Lake Report: Fixing the Financial System." Princeton University Press, Princeton, NJ.

- Urdapilleta, Eduardo, and Constantinos Stephanou. 2009. "Banking in Brazil: Structure, Performance, Drivers, and Policy Implications." Policy Research Working Paper 4809, World Bank, Washington, DC.
- Vives, Xavier. 2011. "Competition Policy in Banking." *Oxford Review of Economic Policy* 27 (3): 479–97.
- World Bank. 2012. *Global Financial Development Report 2013: Rethinking the Role of the State in Finance*, World Bank, Washington, DC.