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## Overview



On September 15, 2008, the failure of the U.S. investment banking giant Lehman Brothers 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.

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 long-run financial development. The crisis experience is thus an important part of the motivation for this inaugural *Global Financial Development Report*. The crisis has prompted many people to reassess various 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 on these topics 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 this global crisis and those in recent decades is that developed economies were affected much more strongly and more directly than were developing economies. But 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 policy for the financial sector matters more than the economy's level of development. This report reassesses the role of the state in finance, based on updated data, ongoing research, and World Bank Group experiences from around the world.

Two building blocks underlie the report's 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 identifies 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 to regulate 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, this report teases out broad lessons for policy makers from a variety of experiences and analyses (see box O.1 for a summary of the main messages).

The state tends to play a major role in the modern financial sector, as promoter,

### BOX 0.1 Main Messages of This Report

**The report's 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 insta-

bility. However, research presented in this report suggests that, for the most part, factors such as poor regulatory environment and distorted risk-taking incentives 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. Rather than restricting competition, it is necessary to address distorted competition, improve the flow of information, and strengthen the contractual environment.

**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 procyclical 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.

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 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. These externalities 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 can cause 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, 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 fully consider 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 may not bear the full cost. For example, bailouts of troubled banks spread the cost of failed bets broadly among others in society who had no connection to the original risky investment decision. 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 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 associated with financial fragility. Also, authorities can regulate 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 brake quality is 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 could also intervene directly 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 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 financial intermediation would grind to a halt since banks would not be able to lend.

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 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. 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. Thus, 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 address 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: 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. 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 by a recent informal global opinion poll carried out by the *Global Financial Development Report* team (box O.2).

The *Global Financial Development Report* provides new insights on financial development and the role of the state in financial systems, building on the experience from the global financial crisis. Varying economic and political circumstances across countries imply that financial sector policies 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, this report contributes new data and analysis to the policy discussion.

## BENCHMARKING FINANCIAL SYSTEMS

A growing body of evidence shows that financial institutions and financial markets

## BOX 0.2 Views from Some of the World Bank Clients

As part of its effort to find out more about client country views, the *Global Financial Development Report* team carried out an informal global poll—the 2011/12 Financial Development Barometer. This poll, which covered country officials and financial sector experts from 78 countries (23 developed and 55 developing), provides interesting insights into views about financial development and the role of the state in finance.

Despite the crisis experience, 90 percent of the country officials and experts surveyed in the poll perceive that positive effects of finance (in particular those on economic growth and poverty reduction) outweigh its potential negative effects. A majority of the respondents therefore see that their country's financial sector needs to grow, especially in terms of financial markets and nonbank financial institutions, to better serve its clients and expand to new ones.

As regards the role of the state in the financial sector, the Financial Development Barometer con-

firmed various areas of agreement. For example, there is a widespread notion that state-owned financial institutions and government-backed credit guarantees can in principle play a useful role. The poll also shows many respondents seeing potential benefits in more stringent supervision of new financial instruments in light of the crisis. A majority also see a scope for a more active role of the state in promoting technological innovations in financial infrastructure.

Perhaps more interestingly, the poll also indicated many key policy areas where the views for and against are almost evenly split. This split includes, for example, opinions on the need for stringency and greater scope of regulation and supervision, the pros and cons of greater competition in countries' financial systems, the possible countercyclical role of state-owned financial institutions, and the role of the state in promoting information sharing—all topics that are examined in the current *Global Financial Development Report*.

### Selected Responses from the 2011/12 Financial Development Barometer

Views were split on important aspects of the state's role . . .	Agree? (%)
"In view of the global financial crisis, more <b>stringent</b> financial sector regulation and supervision is needed."	49
"In view of the global financial crisis, there is a need for broadening the <b>scope</b> of financial sector regulation and supervision."	54
"More financial sector <b>competition</b> would help financial stability in my home country."	58
"State-owned financial institutions played an <b>effective countercyclical</b> role during the recent global financial crisis."	48
"Government-backed <b>credit guarantee</b> schemes do play an important role in promoting financial stability."	64
"The development of <b>collateral registries</b> can be left, fully or mostly, to the private sector."	42

*Note:* The Financial Development Barometer is an informal global poll covering country officials and financial sector experts from 78 economies (23 developed and 55 developing). The response rate was 65 percent. Results are percentages of total responses received.

exert a powerful influence on economic development, poverty alleviation, and the stability of economies around the world. Yet measuring the functioning of the financial system has important shortcomings. Indeed, empirical work has largely—though not exclusively—relied on measures of the size of

the banking industry as a proxy for financial development. However, size is not a measure of quality, efficiency, or stability. Moreover, the banking sector is only one component of financial systems. This report, along with the accompanying public database, assembles and improves cross-country data that can be

used to benchmark financial systems. Chapter 1 addresses questions such as: How can one empirically describe different characteristics of financial systems? How can one compare financial systems across countries and regions and through time? How have financial systems been affected by the global financial crisis, and what are the key recent trends?

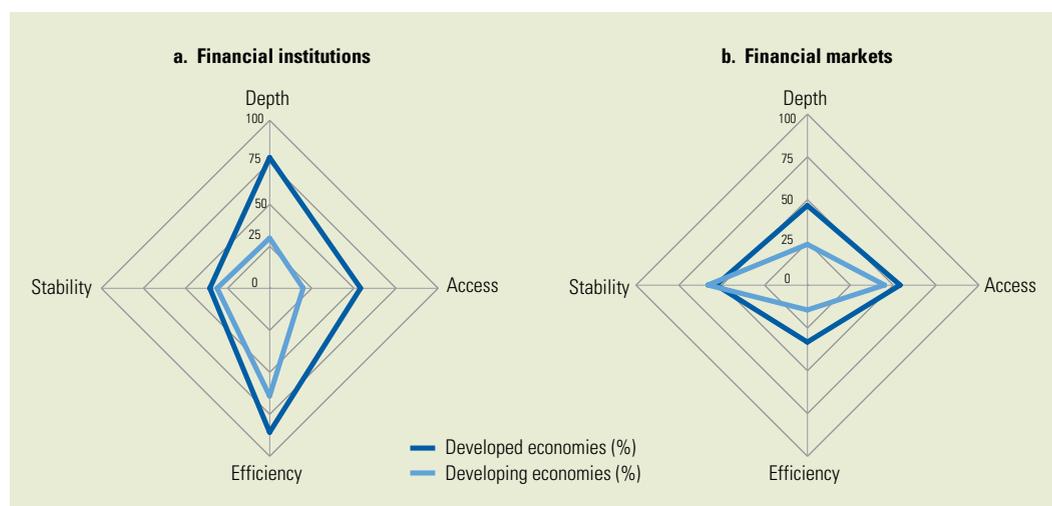
To measure and benchmark financial systems, the report develops several measures of four characteristics of financial institutions (banks, insurance companies, and so on) and financial markets (stock markets and bond markets): (a) the size of financial institutions and markets (financial depth), (b) the degree to which individuals can and do use financial institutions and markets (access), (c) the efficiency of financial institutions and markets in providing financial services (efficiency), and (d) the stability of financial institutions and markets (stability). These four characteristics are measured both for financial institutions and financial markets, leading to a 4x2 matrix of the characteristics of financial systems. A basic comparison (figure O.1) confirms that although developing-economy financial systems tend to be much

less deep and also somewhat less efficient and to provide less access, their stability has been comparable to developed-country financial systems. These measures are then used to characterize and compare financial systems across countries and over time, highlighting the multidimensional nature of financial development. Country-by-country information on the key financial system characteristics is presented in the Statistical Appendix, with more data available through the report's website.

## RETHINKING THE ROLE OF THE STATE IN THE FINANCIAL SECTOR

The report addresses the following key policy questions: (a) What is the early postcrisis 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

**FIGURE O.1** Benchmarking Financial Development, 2008–10



Source: Calculations based on Čihák, Demirgüç-Kunt, Feyen, and Levine 2012.

Note: Average values are shown for 2008–10 with simple (unweighted) averages across country groups. The 0 corresponds to a historical low of the proxy variable, and 100 corresponds to a historical high calculated for all countries over the period 1960–2010. For the explanation of individual proxy variables for financial depth, access, stability, and efficiency, see chapter 1.

### BOX 0.3 Navigating This Report

In addition to this Overview, the report has two main parts. The first part (chapter 1) introduces measures of different characteristics of financial systems that are useful in benchmarking financial systems around the world. The second part (chapters 2 through 5) examines various aspects of the state's role in finance.

**Chapter 1** describes financial depth, access, efficiency, and stability across countries and regions, especially in developing economies. Chapter 1 introduces a major new database, the Global Financial Development Database, and discusses how subsequent editions of the report will revisit the analysis and benchmarking of financial systems with updated and expanded data.

**Chapter 2** examines the role of the state as regulator and supervisor. It presents results from a recently updated and substantially expanded World Bank survey of regulation and supervision around the world, explores how crisis countries were different from noncrisis countries, and tracks changes that governments made after the crisis. The chapter also reviews international regulatory and supervisory reforms and discusses proposals for further reforms.

**Chapter 3** focuses on the role of the state in competition policy. After discussing various measures of competition, and presenting trends across countries and over time based on a new worldwide data set, it reviews the evidence on the implications of banking competition for bank efficiency, access to finance, and financial stability. The chapter then analyzes the policy drivers of competition and highlights the role of the state in (a) promoting a contestable banking system and (b) enabling a market-friendly informational and institutional environment. It also analyzes the impact of government actions during crises on bank competition.

**Chapter 4** examines direct state interventions, particularly the experience with state-owned banks during the financial crisis. It reviews existing and new research and reexamines the performance of state-owned banks during crises. A large part of the discussion focuses on state-owned commercial banks as opposed to state-owned development banks; nonetheless, the chapter also presents a new data set based on a recent survey of development banks. It also examines the role of credit guarantees.

**Chapter 5** relates to the role of the state in financial infrastructure, with a focus on two topics highlighted by the crisis: (a) information sharing in credit markets, and (b) the role of the state in reducing counterparty risk in payments and securities settlement systems.

The accompanying website (<http://www.worldbank.org/financialdevelopment>) contains a wealth of underlying research, additional evidence including country examples, and an extensive database on financial development, providing users with interactive access to information on financial systems. The website is also a place where users participate in an online version of the Financial Development Barometer, provide feedback on this *Global Financial Development Report*, and submit their suggestions for future issues of the report.

The report concentrates on banks. There are some references to and data on financial markets and nonbank financial institutions (for example, in a discussion on the regulatory perimeter and on access by nonbank institutions to financial infrastructure). But to keep the report focused, much of the discussion is devoted to banks. Future issues of the report will cover financial markets and nonbank financial institutions in more depth.

infrastructure? Box O.3 provides an overview of the report's chapters.

How should public policy be designed to address these four key questions? The issue of concern in this report is how best to balance the various roles of the state as promoter, owner, regulator, and overseer. The right balance depends on a number of

factors, including a country's level of development and the government's capacity. Two themes emerge throughout this report.

The first relates to direct and indirect interventions. During the recent crisis, direct state interventions have increased, and 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.

The second important 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. The 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.

### **What are the best ways to reform regulation and supervision?**

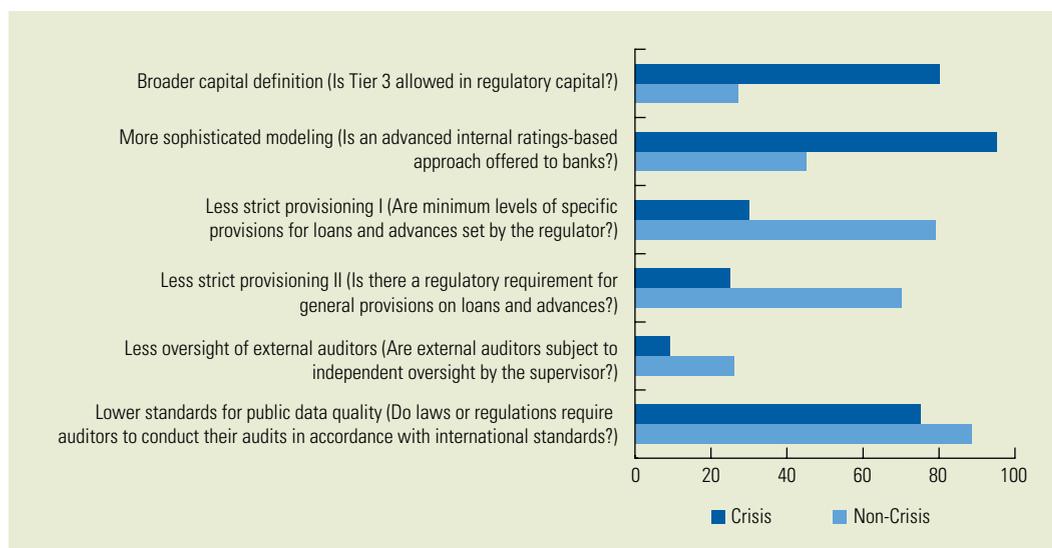
The global financial crisis that intensified with the collapse of Lehman Brothers in September 2008 presented a major test of the international architecture developed over many years to safeguard the stability of the global financial system. Although the causes of the crisis are still being debated, there is agreement that the crisis revealed major shortcomings in market discipline, regulation, and supervision. The financial crisis therefore has reopened important policy debates on financial regulation. After the onset of the meltdown, there was much talk about not wasting the crisis, and using it to push through necessary reforms. 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 role of the state is not in dispute. The crucial role of the state is widely acknowledged 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 support sound financial development.

Overall, there is broad agreement to address the “basics” first. This 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.

Using a new survey of regulation and supervision around the world (figure O.2), chapter 2 confirms that countries where the global financial crisis originated had weaker regulation and supervisory practices (for example, less stringent definitions of capital, less stringent provisioning requirements, and greater reliance on banks' own risk assessment), as well as less scope for market incentives (for example, lower quality of financial information made publicly available, more generous deposit insurance coverage). Tracking changes during the crisis reveals 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 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.

Despite the progress made on regulatory reform, there are still important areas of disagreement. Hence, chapter 2 also presents a number of reform proposals that call for greater emphasis on simplicity and transparency, as well as a focus on incentive-compatible regulations. Importantly, these proposals warn against growing complexity of regulation, which may reduce transparency and accountability, increase regulatory arbitrage

**FIGURE 0.2 Selected Features That Distinguish Crisis-Hit Countries**

Source: Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni 2012.

Note: 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).

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. This can help to end the continuous need to eliminate deficiencies and close loopholes that are inevitably present in ever more complex sets of regulations. Other proposals address the incentives that the regulators face and either propose alternative institutional structures or suggest tools to identify incentive issues on an ongoing basis.

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 refraining 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 complex rule in which each car has its own speed limit, depending on the quality of its brakes and

other risk-mitigating features. 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, complex approaches to calculating capital requirements are not appropriate if there is limited capacity to verify the calculations, do robustness checks, and police implementation.

One of the positive developments triggered by the crisis is much greater debate and communication among regulators, policy makers, and academics, who are striving to reach the common goal of designing regulations to minimize the occurrence and cost of future crises. The diverse views and multiple reform proposals in this debate (presented in chapter 2) are likely to inform the regulatory reform process and improve future outcomes.

### How should the state promote competition in the financial sector?

The global financial crisis also reignited the interest of policy makers and academics in the impact of bank competition and the role

of the state in shaping competition policies. Some believe that increasing financial innovation and competition in certain markets, such as subprime mortgage lending, contributed to the global financial turmoil, and they 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. Hence, the design of competition policy is challenging because it again involves a possible trade-off between efficiency and growth on one hand and stability concerns on the other hand. Another reason why rethinking competition policies is important relates to 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.

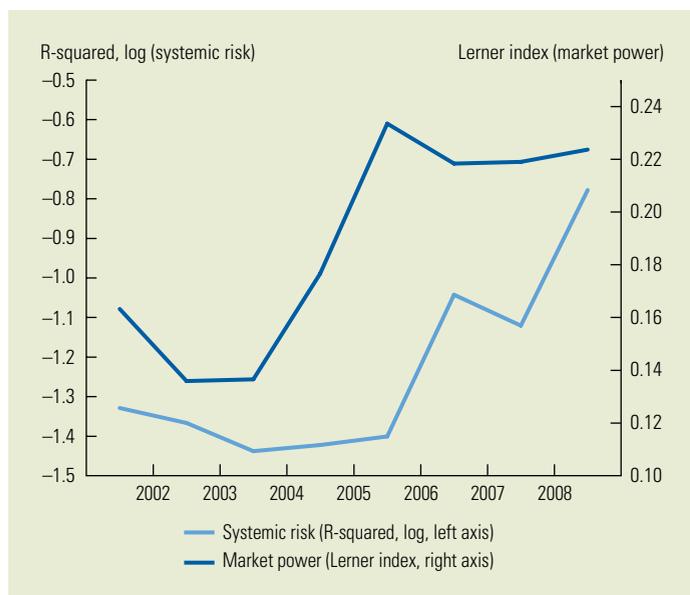
The *Global Financial Development Report's* analysis (chapter 3) provides guidance on this important issue. Research suggests that bank competition brings about improvements in efficiency across banks and enhances access to financial services, without necessarily undermining systemic stability. A cursory look at trends in average systemic risk and bank market power (figure O.3) indicates that greater market power (that is, less competition) is associated with more systemic risk (chapter 3 examines this in more detail). Hence, the evidence of a real trade-off is weak at best.

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 shows that competition in the corporate segment is higher than 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

**FIGURE O.3 Market Power and Systemic Risk**



Source: Calculations based on Anginer, Demirgüç-Kunt, and Zhu 2012.

Note: 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).

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 compliance with 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 be aware that their interventions during crises may have potentially negative long-term consequences on bank competition and may distort risk-taking incentives.

### **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 instead. 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.

The crisis and the actions adopted by different countries reignited the debate on the need for direct government intervention in the financial sector. Supporters of state-owned banks argue that they provide the state 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.

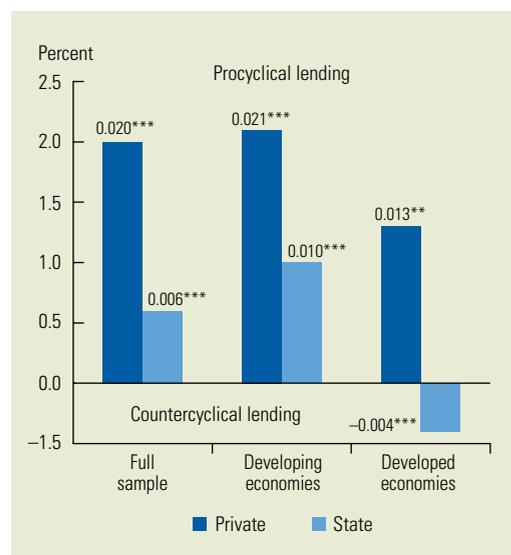
During the recent crisis, several countries used their public bank infrastructure to prop up the financial sector. For instance, the Brazilian government injected capital into its state-owned development bank and authorized state-owned banks to acquire equity stakes from private banks and loan portfolios 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 the Russian Federation, 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.

Chapter 4 highlights that 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.

Chapter 4 reviews the historical and new research evidence and concludes that lending by state-owned banks tends to be less procyclical than that of their private counterparts. During the global financial crisis, some state-owned banks have indeed played a countercyclical role by expanding their lending portfolio and restoring favorable conditions in key markets. For instance, the chapter highlights the expansion of the lending portfolio of state-owned commercial banks (for example, PKO Bank Polski in Poland) and state-owned development banks (for example, BNDES in Brazil) in mitigating the effects from the global credit crunch and filling 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.

**FIGURE 0.4** Change in Bank Lending Associated with a 1% Increase in GDP Per Capita Growth



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

Note: 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.

The mitigating short-term effect of state-owned banks is illustrated in figure O.4. 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 procyclical, growing during booms and falling during downturns. Yet the lending pattern of private banks is more procyclical compared with their state-owned counterparts. In high-income countries, state-owned banks even behave in a clearly countercyclical fashion, increasing in downturns.

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, the countercyclical benefits of state-owned banks came at the cost of resource misallocation and worsened intermediation. This mixed view is supported by evidence from previous crises as well. 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. State banks need a clear mandate to complement (rather than substitute for) private banks, and adopt risk management practices that allow them to guarantee a financially sustainable business. 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.

### **What is the role for the state in promoting financial infrastructure?**

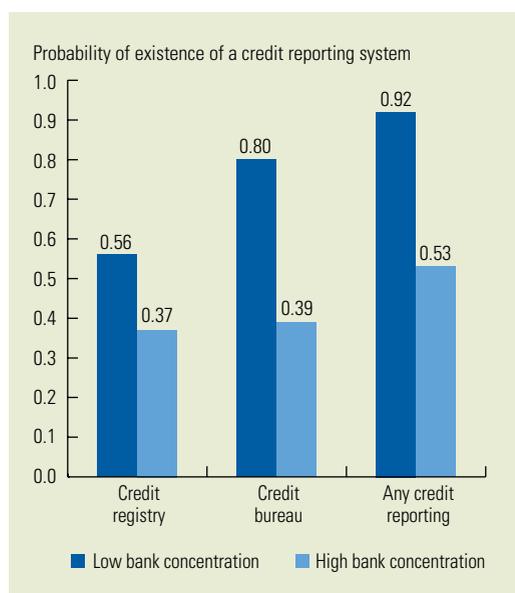
The global financial crisis has highlighted the importance of a resilient financial infrastructure for financial stability. It also has led to a discussion about the role of the state, particularly in promoting the provision of high-quality credit information and in ensuring

stable systems for large-value financial transactions. Reflecting the focus on the aftermath of the financial crisis, the report does not examine other components of financial infrastructure, such as retail payment systems and collateral regimes; it leaves these important issues to be covered in future editions.

Chapter 5 emphasizes that the 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 O.5). This creates an important rationale for state involvement. In addition, the report highlights that 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.

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

**FIGURE 0.5 Credit Reporting vs. Banking System Concentration**

Source: Bruhn, Farazi, and Kanz 2012.

Note: 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.

money markets by providing robust and secure infrastructure 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 records 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.