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Financial Sector Policy in Practice

Benchmarking Financial Sector Strategies around the World

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Abstract

Policy makers use financial sector strategies to formulate a holistic policy for their national financial sectors. This paper examines and rates financial sector strategies around the world based on how well they formulate development targets, arrangements for systemic risk management, and implementation plans. The strategies are also rated on whether they consider policy trade-offs between financial development and systemic risk management. The rated strategies are then benchmarked against a wide range of country characteristics. The analysis finds that the scope and quality of national strategies for the financial sector are influenced by the country's type of legal system, its level of income and macroeconomic stability, the existing financial depth and inclusion, the share of foreign ownership in the national financial sector, and the experience of past financial crises. Giving due consideration to policy trade-offs, particularly between financial development and systemic risk management, remains the weakest part of these strategies. Countries with civil- and religious-based law and those with a higher share of foreign ownership in their financial system address the policy trade-offs more often.

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Financial Sector Policy in Practice:

Benchmarking Financial Sector Strategies around the World[*]

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1. Introduction

The world needs more financial inclusion and overall financial development (G-20 Financial Inclusion Action Plan).[1] People, enterprises, and even states can pursue better development opportunities with greater resilience to a variety of risks when they use efficient and reliable financial tools (World Bank 2013). Nevertheless, credit, for instance, is used by only about 8 percent of people in developing countries and about 14 percent in developed countries. The observed gaps in financial inclusion thus suggest that greater access to credit, as well as to other financial tools (savings, insurance, and payment services), is warranted.

Finance, however, can be a double-edged sword. Rapid financial development and deepening can cause accumulation of systemic risk and lead to costly financial crises (Reinhart and Rogoff 2009; Demirguc and Detragiache 2005). Banking crises in Thailand (1997), Colombia (1982), and Ukraine (2008), for example, were preceded by excessive credit growth of 25 percent, 40 percent, and 70 percent per year, respectively. When banking crises struck, they caused losses of 26–33 percent of gross domestic product (GDP) and fiscal costs (net of recoveries) of more than 13 percent of GDP, on average (Laeven and Valencia 2012).[2] Providing the right amount of credit—not too much and not too little—is a major concern for countries (Buncic and Melecky 2013).

The double relevance of financial systems—their developmental impact when they perform well and the major social costs when they do not—thus puts a high premium on carefully calibrated and implemented financial sector policies. Therefore, financial sector policy must account for the trade-off between the speed of financial development and the systemic risk accumulation (Beck and De Jonghe 2013; Arcand, Berkes, and Panizza 2012; Pagano 2012; Loayza and Ranciere 2006). This trade-off is analogous to the risk-return trade-off in finance. At the national level, the financial sector strategy formulates policy for the financial sector and chooses how much speed and how much restraint to apply, and where. Overall, a comprehensive strategy sets development targets that account for the associated risk and communicates the systemic risk appetite (tolerance) of the country in the financial area.

The academic literature has pointed out important complementarities and trade-offs between boosting financial development (inclusion) and fostering financial stability. In general, there appears to be a limit to how much, to whom, and what range of services the financial system can provide at a given stage of its development. This limit (a financial possibility frontier) is affected by many development factors driving the provision of financial services on the supply side (financial system), constraining participation on the demand side (individuals and firms), and affecting public policy (the government) in correcting market imperfections (Beck and Feyen 2013).

At the micro level and from the perspective of the demand side of the financial market, greater financial inclusion can improve the efficiency and stability of financial intermediation by, for example, making greater and more diversified domestic savings available to banks. As a result, the banking system can rely less on reversible foreign capital and enhance the resilience of its funding (Han and Melecky 2013). Further, by enabling broader access to credit, bank loan portfolios could become more diversified

[1] http://www.gpfi.org/our-work/work-plans/g20-financial-inclusion-action-plan.

[2] The negative effects of crises reach people more strongly through the labor market channel than through the financial system, product markets, or social services channels (Brown 2013).

and resilient to correlated losses (Adasme, Majnoni, and Uribe 2006). Greater financial inclusion can also enhance financial stability indirectly by providing households (and firms) with access to savings, credit, and insurance tools that strengthen the resilience and stability of the real economy and thus of the financial system that serves it (Cull, Demirguc-Kunt, and Lyman 2012). However, inclusion of everybody in each and every financial service cannot be the social objective. The U.S. subprime crisis showed that subsidized, excessive access to credit, combined with tolerated predatory lending, is bad policy. Similarly, in Russia, where consumer loans grew from about US$10 billion in 2003 to over US$170 billion in 2008, people with low financial literacy underestimated the increased burden of debt-servicing costs in bad times, which significantly impaired their spending capacity even for basic necessities (Klapper, Lusardi, and Panos 2012).

For the financial sector and from the perspective of the supply side, it is becoming evident that the development of the financial system and its depth can face a threshold, depending on the level of a country's development, beyond which further financial deepening can be counterproductive and could plant the seeds of future crises. The academic literature has only recently focused on the trade-off between financial development and stability. On the one hand, Ranciere, Tornell, and Westermann (2006, 2008) praise financial liberalization for advances in economic development even when accounting for the cost of occasional financial crises. In their opinion, systemic risk taking has a positive effect on economic growth in many countries. On the other hand, the work of Beck and Feyen (2013), Arcand et al. (2012), and Pagano (2012) underscores that finance can become too large relative to the real economy it serves, at which point it can stop contributing to economic growth and turn from the "lifeblood" to "toxin" for real economic activity. However, if the financial sector is too small relative to the real economy, this can also pose a risk to financial stability. The ability of a small financial sector to efficiently and prudently intermediate funds can be compromised if the economy experiences capital inflows so large that existing capacities of the financial system become overstretched and overheated (Committee on International Economic Policy and Reform 2012; Allen et al. 2011).

The bull's eye that policy makers are aiming at is thus balanced financial development that contributes the most to sustainable and shared economic growth. To get to such a balanced stage, the financial sector can develop only at a speed that involves acceptable systemic risk. Policy makers must ensure that this is indeed the case and, if not, intervene with appropriate policy tools. Along the development path, a number of trade-offs and synergies may exist, and policy formulation must consider them to be successful (World Bank 2013).

Equally important are the implementation arrangements for the holistic policy formulated in the national financial sector strategy. The implementation of targeted financial development and systemic risk supervision should be clearly assigned to individual government agencies in accord with their mandate. For instance, the ministry of economy (or finance) could be responsible for financial development and the central bank for systemic risk supervision, as in Moldova; or both areas could be entrusted to one institution such as the central bank in Malaysia. It is important, however, that the agencies be equipped with adequate tools for their job, including the powers to intervene both directly through government investment in financial infrastructure, for example, and indirectly through appropriate regulation, for example, implementation of macroprudential buffers (World Bank 2013).

This paper, to our knowledge, is the first attempt at summarizing and investigating the properties of national strategies for the financial sector. We use a sample of 78 countries at different levels of development from around the world to carry out our study. The sample has been "stratified" to cover all geographic regions, various levels of development, and different structures of national financial systems and experience of financial crises, among other factors. We examine and rate the national financial sector strategies based on how well they define development targets, arrangements for systemic risk management, and implementation plans for the strategy.[3] Moreover, we rate the strategies on whether they consider policy trade-offs between financial development and systemic risk accumulation.[4] The rated strategies are then benchmarked against a wide range of country characteristics.[5] We find that the scope and quality of national strategies for the financial sector are influenced by the type of legal system in a given country, its level of income and macroeconomic stability, its existing financial depth and inclusion, the share of foreign ownership in the national financial sector, and the experience of past financial crises. More specifically:

(i) If a country's legal system is based on mixed law, and on civil, common, or mixed law, the country is, respectively, more attentive to financial development objectives, and to planning for implementation in its financial sector strategy. Interestingly, countries with legal systems based on civil law and religious law are more likely to address trade-offs between financial development and stability.

(ii) As their per capita income increases, countries pay less attention to development objectives, and, surprisingly, they also pay less attention to systemic risk. At the same time, greater governance effectiveness helps countries address policy trade-offs in their financial sector strategies.

(iii) As financial inclusion increases and country financial systems deepen, the national financial sector strategies progressively neglect development objectives and systemic risk, respectively. Concurrently, the increasing depth of credit markets sharpens countries' focus on broader financial development objectives—presumably concerning other financial services, not just credit.

(iv) Greater foreign ownership in the domestic banking system intensifies the attention countries pay to the trade-off between financial development and systemic risk management.

(v) Experience of past banking crises raises countries' awareness of challenges in the financial sector and stimulates greater planning for implementation of financial sector strategies. However, as the

[3] We would like to emphasize here that the rating takes into account *implementation plans,* not the actual implementation or its outcomes.

[4] Although other policy trade-offs may also exist, such as that between financial inclusion and market integrity, we focus on the trade-off between financial development (inclusion) and financial stability. We focus on this trade-off as the most important one, based on the lessons from the global financial crisis that has been in many respects caused by irresponsible financial inclusion in credit.

[5] We have considered, in addition to the various benchmarking variables presented in the paper, the possible effect of the Financial Sector Assessment Program (FSAP)—conducted by the International Monetary Fund and the World Bank—on the scope and quality of national financial sector strategies. However, because of the possible long time lag and lead effects, as countries either react to (receive technical assistance) after an FSAP or prepare and revamp their strategies before an FSAP, we left this possible benchmarking variable for future research. Note that section 5 explains how we have addressed possible endogeneity issues in our regression.

memory of past banking crises fades, that experience can become counterproductive and weaken financial sector strategies and planning for implementation.

(vi) Finally, we do not find any significant positive effect of development assistance by the World Bank under the FIRST initiative on the scope and quality of financial sector strategies in addition to the considered country characteristics.

Notably, we find that national financial strategies rarely discuss policy trade-offs between financial development and systemic risk. Only 26 percent of countries have financial sector strategies that consider trade-offs between their financial development goals and their management of systemic risk in the financial sector, despite the fact that many countries (54 percent) commit to both financial development and systemic risk management within the same strategy document. Overall, 42 percent of countries commit to both advancing financial development and managing systemic risk without considering any trade-offs between the two goals.

The paper proceeds as follows. Section 2 discusses general properties of national strategies for the financial sector, explains the lenses through which this paper assesses the comprehensiveness of the strategies, and outlines which aspects a comprehensive financial sector strategy would include for the purpose of this paper. Section 3 presents general stylized facts following from our review of financial sector strategies, focusing on 10 selected aspects. Section 4 discusses some summary statistics conditional on selected country characteristics. Section 5 describes our benchmarking model for financial sector strategies that takes into account a number of country characteristics. Section 6 discusses the estimation results after we have taken the benchmarking model to the data. Using the estimated regression model, section 8 benchmarks individual countries to their peers. Section 8 concludes.

2. Properties of Financial Sector Strategies

The global financial crisis has heightened attention to the interactions between financial development (inclusion) and financial stability and to the links between the financial systems and the real economy. Policy makers, especially in developing countries, have expressed a greater degree of interest in developing and implementing national financial sector strategies. In developing countries, such strategies were typically prepared only as a summary chapter of the national economic development plan or, occasionally, after participation in the Financial Sector Assessment Program (FSAP).[6]

Taking a holistic view of the current state, future development, and intrinsic risks of the financial sector and formulating policies to address various financial market imperfections are important. Policies on financial inclusion to help alleviate poverty and boost shared prosperity, such as government subsidies or guarantees, can distort incentives of financial firms and their clients to manage risk responsibly and have serious implications for financial stability (Dowd 2009; Honohan 2010). In contrast, policies that do too little to mitigate the risks to financial stability, such as deployment of insufficient macroprudential

[6] The program, established in 1999, provides countries with a comprehensive and in-depth analysis of their financial sector. Since the FSAP was launched, some 140 countries have completed the program (many more than once). In the future, it is expected that more countries will pursue the drafting of a national financial sector strategy more systematically after participating in an FSAP.

buffers (BCBS 2011), can undermine access to credit, economic development, and shared prosperity. Overall, in many instances financial policies focused on one part (or aspect) of the financial system produce spillovers or have unintended consequences for other parts of the system. These spillovers, unintended consequences, and policy trade-offs and synergies need to be properly deliberated and addressed for any financial sector strategy, policy, and individual public intervention to produce its desired outcomes.

Moreover, in some areas policy makers will have to make conscious decisions on how much risk they want to take to achieve their development goals. Policy makers could be good at setting ambitious development goals. But they can fail to set reasonable development goals taking into account the systemic risk associated with achieving these goals. For instance, increasing the credit to GDP ratio from 40 percent to 60 percent could seem a reasonable development goal. But if it requires an annual credit growth of 20 percent in a financial system that does not have the underwriting capacity to manage an annual credit growth above 10 percent, then this development goal might not be reasonable. With their limited information and knowledge and faced with deep uncertainty about many areas of financial system functioning, government officials should take only informed risks. In this respect, many of their information and knowledge gaps can be narrowed by bringing the private sector to the table when deliberating and preparing a national financial sector strategy. Private sector participants could include financial industry associations to represent the supply side of the financial system and industry associations (such as chambers of commerce) and civil society organizations to represent views of the real sector and individuals. The governance of the process of preparing financial sector strategies will need to be tailored to country specifics and the institutional context to mitigate undesired lobbying and political economy factors. In spite of these challenges, a more inclusive and informed process of formulating financial sector strategies can result in more balanced implementation of financial policies that are sustainable in the medium to long term (World Bank 2013).

A holistic financial sector strategy might imply that such a strategy could or should be formulated in one document. We, however, do not impose this assumption and consider multiple documents when assessing national financial sector strategies. The documents that we consider range from genuine national financial sector strategies formulated in a single document to financial sector chapters of national development plans to financial inclusion strategies to annual reports of financial supervisors to financial stability reports. Overall, we assess the substance against our set of criteria rather than on whether the strategy is formulated in a single document or in multiple documents.

For instance, 56 countries published explicit financial inclusion strategies by end-2013 and thus committed to formal targets for financial inclusion. These are the countries that have made formal commitments under the Alliance for Financial Inclusion's Maya Declaration or have been identified by the Financial Inclusion Strategy Peer Learning Group as having significant national strategies. The common features of financial inclusion strategies cover several policy areas (in percentages of incidence): improving financial literacy (63 percent); modifying the regulatory framework to expand financial access (61 percent); data collection and measurement (59 percent); increasing consumer protection (50 percent); and expansion of mobile financial services (39 percent) (Cihak and Singh, 2013).

Concurrently, policy makers have increased their investment in reporting on financial sector stability and are making greater efforts to link financial sector performance and risks to the real economy.

From 1996 to 2005, publishing of financial stability reports (FSRs) became a rapidly growing "industry," with the number of central banks issuing such reports increasing worldwide from 1 to about 50. Since 2005, this number has grown somewhat less rapidly, although it has kept increasing and has now reached about 80. For instance, India's central bank, the Reserve Bank of India, started publishing FSRs in 2010, and the United States, which stayed out of the FSR publishing trend for many years, started publishing an FSR in 2011 (Cihak et al. 2012).

When preparing this paper, international financial institutions, particularly the World Bank (which has facilitated the preparation of a number of strategies in developing countries in partnership with the FIRST Trust Fund), became our primary source of data. Thereafter, the websites and official documents of ministries of finance, central banks, or financial sector supervisors were used as sources for data collection, because these institutions are typically the custodians of national financial sector policy. Only 29 out of the 78 countries in our sample have their financial sector strategies formulated in a single document that aims to address both financial development and financial stability objectives, in contrast to financial inclusion strategies (see section 3 for more details). To accurately assess some of the questions on systemic risk, we used financial sector stability reports. These documents provided more detailed information on the country's views and approaches to systemic risk management in the financial sector. Yet using these reports was not without challenge. For one thing, not all countries that had a financial sector strategy produced a financial stability report and vice versa. Therefore, comparison across the entire pool of countries for certain topics was not always easy; nonetheless, it was always informative.

Overall, we have strived to "stratify" the countries included in our sample across all geographic regions, levels of development, and different structures of the national financial system and experience of financial crises, among other criteria. For the geographic regions and income level, we have followed the World Bank classification and complemented the developing countries with a proportional sample of countries in the Organisation for Economic Co-operation and Development (OECD) outside World Bank regions, generally high-income OECD countries. Taking all limitations of our sampling strategy into account, we find the sample in general representative for the purpose of our preliminary study, especially because this is the first such study to have been conducted.

2.1. Establishing financial sector development objectives

In reviewing the objectives set forth in financial sector strategies (see table 1), we focus on their *specificity* and *measurability,* not on their achievability or realism. We ask whether a given financial sector strategy has clear (specificity) and well-quantified objectives (measurability). This paper does not discuss the *achievability* or *realism* of the strategic objectives set forth in the strategies. Such a determination requires a more comprehensive assessment of resources, knowledge, and degree of consensus around the objectives held by key stakeholders in the system for each country. Instead, we are content to assess whether, at a minimum, the strategy includes an adequate specification of tools to achieve the objectives.

Table 1: Objectives of Selected Financial Sector Strategies

Country	Relevant Extract from the Financial Sector Strategy
Malaysia (2011)	It is envisioned that in the next ten years, the Malaysian financial sector will increasingly be intermediating domestic, regional and international financial resources and contributing to the efficient allocation of resources not only in the domestic economy but also across borders....the financial system is expected to grow at an annual rate of 8–11%, increasing the depth of the financial system to six times of gross domestic product (GDP) in 2020....The reorientation and expansion of the financial system will alter the landscape of the financial system significantly....the new landscape will be redefined by the increased importance of existing institutions and the emergence of new financial institutions including those with a greater regional and international focus....Correspondingly, the scope of both the conventional and Islamic financial activity will expand at a faster pace....Among the key additions to the landscape to support international Islamic finance [is] the emergence of a single reference body for Shariah matters, as well as Shariah advisories and consultancies.
Mexico (2013)	One of the main issues on the agenda of democratization of productivity is greater access to credit and that it is the cheapest, therefore, in the Pact for Mexico in Commitments 62 and 63 are set as goals, respectively: the strengthening of the Development Bank to extend credit, with special emphasis on priority areas for national development, and the modification of the legal framework for commercial banks and credit institutions to provide more and cheaper credit.
Rwanda (2008)	Rwanda's long-term development plan, as articulated in Vision 2020, seeks to transform Rwanda into a middle-income country and an economic trade and communications hub by the year 2020. An effectively functioning financial sector is a fundamentally important and essential element for achieving this objective. Rwanda seeks to develop a financial sector that is effective, in particular, by: (1) Expanding access to credit and financial services; (2) Enhancing savings mobilization, especially long-term savings; and (3) Mobilizing long-term capital for investment.

Source: Authors' review of selected national financial sector strategies.

We start with evaluating whether the objective is *clear* and *well defined*. We assess whether the objective is clearly identified somewhere in the draft of the strategy document(s). The judgmental criterion that we apply is: Would the objective be clear to someone with a basic knowledge of finance and economics? In most of the cases that we reviewed, finding a statement of objective(s) was relatively easy (Mexico). The objectives were broadly drafted in the form of aspirations for the type of financial sector perceived to be necessary for supporting the country's national development, for example, maintaining financial sector stability, increasing access to finance, or promoting competition in the sector.

Few strategies, however, included *quantifiable development objectives* (Malaysia). There was a reference to national levels of development, such as becoming a middle-income country by a specific date. To this end, the financial development objective could be described as a derived quantifiable objective. When the review of financial sector strategies expanded to include financial sector stability reports, it became possible to identify quantified indicators as the reference points for financial development objectives. In the absence of numerical targets, the preferred performance indicators were

general statements of intent, such as achieving financial sector stability, increasing access to finance, improving financial inclusion, and mobilizing long-term finance.[7]

Statements of objectives accompanied by an explicit statement or discussion of specific *policy tools* that would be deployed to achieve the targets set out in the objectives were more difficult to find. Instead, the objectives were peppered with statements of intent to develop a financial sector that is effective, for instance, by expanding access to credit and financial services; enhancing savings mobilization, especially long-term savings; and mobilizing long-term capital for investment (Rwanda). The strategies did not include, for example, intermediate goals such as the level of outreach for expanding the access to finance as an objective, regulation to facilitate development of transparent savings products and the targeted level of savings as a percentage of GDP, or development of capital markets' infrastructure and institutions and the targeted proportion of long-term finance in financial intermediation.

2.2. Identifying systemic risk in achieving targeted development objectives

In judging whether a financial sector strategy includes both the identification and quantification of systemic risk associated with achieving the set development objectives and the adequate specification of tools to manage systemic risk, we were careful to look for an explicit reference to risk expectations over the medium- to long-term horizon, as well as the specific tools to be deployed for systemic risk management. The most informed strategies are those that acknowledge that financial development is not a deterministic linear process of growth. Rather, it is a process full of risks that need to be identified, quantified, and managed appropriately. The levels and types of risks vary. This paper focuses on *systemic risks*, that is, those that affect the financial system as a whole. In reviewing the strategies, we looked for those that identified potential risks such as a significant increase in private sector indebtedness, unsound financial markets, and imprudent behavior of financial institutions that could lay the foundations for instability or a financial crisis. Equally, we looked for measures or tools to be deployed for mitigating and managing such risks (see table 2).

Table 2: Identification of Risk in Selected Financial Sector Strategies

Country	Relevant Extract from the Financial Sector Strategy
Cambodia (2011)	A crisis management framework will need to be established and will require periodic testing to ensure it is suitable to the local economic and financial situation as well as designed to address increasing interconnections and new risks within the financial sector.
Morocco (2000)	The banks' foreign exchange risk exposure is currently limited and well below prudential limits, and foreign exchange transactions in the domestic market seem to be adequately supervised. However, prudential regulation with regard to foreign currency exposure is not applied on a consolidated basis, which would include the currency exposure of Moroccan banks' foreign subsidiaries. The management of credit risk should be improved. In 1998, more than 12 percent of outstanding loans were overdue, and a large proportion (about 67 percent) was classified as non-recoverable. However, the classification rules governing overdue loans seem to be properly enforced, and the tax treatment of loan provisions seems to favor the timely recognition of non-performing loans.

[7] See, for example, Cihak et al. (2012) on suitable indicators to quantify development objectives in the financial sector.

Mozambique (2010)	Going forward, the Government will address the risks posed by the unique characteristics of a banking system with assets that are highly concentrated in the four largest banks, all of which are majority foreign owned. These characteristics drive a need for the BDM [Banco de Mozambique] to have strong cross-border collaboration with home-country supervisors; and, in collaboration with home-country supervisors, the BDM needs to review systems developed at the parent company and determine their applicability and adequacy for the Mozambican branch or subsidiary.

Source: Authors' review of selected national financial sector strategies.

The majority of strategies are quick to refer to *specific individual* risks—credit risks, interest rate risks, foreign exchange risks and the like (Morocco)—that pose a risk to the country in achieving its development objectives. These risks are discussed in detail, as are the mitigation measures the government plans to adopt. Systemic risks are described and acknowledged in general terms, often in reference to the banking sector and its concentration in certain large institutions (Mozambique). Overall, though, such references are cursory in nature and fell short of quantifying systemic risks, using only some simple customary indicators of systemic risk.[8]

Systemic risks were often referred to in the context of the move from *compliance-based* to *risk-based* supervision and further to consolidated supervision under Basel II or crisis preparedness frameworks (Cambodia). Strategies thus included plans for strengthening early-warning systems, regimes of prompt corrective actions, and lender-of-last-resort facilities. The discussion of the specific systemic risks (of time-series or cross-section type) that were to be addressed by these arrangements and their embedded policy tools (loan-to-value-ratio limits or regulation on lending in foreign currency to unhedged borrowers, for example) was often missing.

2.3. Implementing the strategy

For the success of any strategy, planning for implementation is just as important as the content of the strategy. We look for three key elements in this regard: signs of a *collaborative* process among the key stakeholders within a financial system that should underlie the preparation and design of a strategy; clear *responsibility* for the implementation of a strategy in its entirety and its subcomponents; and an agreed institutional *monitoring and evaluation* process that includes periodic external assessment. Specifically, we look to see if the strategy communicates the implementation plan, assigns responsibility for implementation of development goals, and assigns responsibility for systemic risk management (see table 3).

[8] See, for example, Dijkman (2012) for simple indicators of systemic risk.

Table 3: The Implementation Plan of Selected Financial Sector Strategies

Country	Relevant Extract from the Financial Sector Strategy
Georgia (2006)	In order to effectively implement the strategy worked out and presented by NBG [National Bank of Georgia], the policy of transparent functioning of the banking system and optimal management of information flow should be carried out. NBG considers close cooperation with international financial institutions as [a] priority for successful implementation of the presented strategy. In this respect, active cooperation shall be continued with the International Monetary Fund, World Bank, European Bank for Reconstruction and Development, Organisation for Economic Co-operation and Development, as well as representatives of other international organizations and experts.
Pakistan (2009)	The Banking Sector Strategy (BSS) is centered on reforms involving the State Bank of Pakistan (SBP) and the banking sector, which constitutes not only the core of the financial system in Pakistan but is also central to the monetary and financial stability responsibilities of the SBP. The BSS focuses on reforms that the SBP has the power and resources to implement or substantially influence....But the Banking Sector Strategy (BSS) will also involve departments and agencies of the Government of Pakistan (GOP), the Securities and Exchange Commission of Pakistan (SECP) and ultimately all other stakeholders in the financial sector.
Thailand (2009)	After the principles stipulated in the FSMII have been approved, to ensure that implementation would meet its objectives, the FSMP Phase II Implementation Committee, chaired by the Minister of Finance, would be formed. The Committee would be responsible for the overall implementation of the FSMP Phase II. Moreover, the Committee would form 4 sub-committee[s] to oversee implementation of the Action Plan in various areas including tax, legal, data and human resource development. Meanwhile, the Financial Institutions Policy Committee would oversee implementation of policies on competition and financial access.…All related agencies and Committees would coordinate and work together to determine an implementation time-table. In this regard, the BOT [Bank of Thailand] would be in charge of policies to reduce regulatory cost, NPL and NPA [nonperforming loans and assets] resolution, and enhancement of financial infrastructure to facilitate strengthened risk management and information technology capacity and utilization.

Source: Authors' review of selected national financial sector strategies.

Strategies are relatively clear about the *process* for implementing the strategy—outlining which institutions are responsible for coordinating the strategy (Pakistan) and the coordinating mechanism that will be used for its implementation (Georgia). Also, the subsequent allocation of specific responsibilities under the umbrella coordination mechanism tends to be embedded in the implementation process, including the management of risk (Thailand). In almost all cases, the central bank was assigned the responsibility for managing systemic risk in the financial sector.

2.4. Communicating the trade-off between financial development and systemic risk

Determining if a given financial sector strategy has adequately considered and communicated trade-offs between the speed of financial development and the degree of systemic risk associated with it—or, for that matter, gauging whether the strategy involves plans to address the trade-off—is challenging, but not impossible. To that end, we examined the strategies to see whether risk and return in development had been explicitly weighed. We noted whether strategies referred to the expectation that the

financial system would work well—that is, would it allocate resources to the most productive uses and help the real economy, including individuals and firms, manage risks by enhancing productivity, boosting the poverty-reduction effects of growth, and promoting equal opportunity? We then looked to see whether the strategies also referred to concerns that overambitious development, excessive risk taking, and malfunctioning risk management on the side of the financial system and its clients could create a breeding ground for costly financial crises. At the other extreme from policy trade-offs are win-win policies that can produce synergic effects and improve financial development and stability in sync. We look for discussions of these as well in our assessment.

Positive country examples that consider the trade-off between financial development and financial stability at different levels of development and under different country circumstances include China, South Africa, and Switzerland (see table 4). In contrast, countries such as Colombia, Indonesia, and Turkey commit to advancing financial development and managing systemic risk without considering related policy trade-offs in achieving the two goals. In general, the strategies include a lot of numerical analysis on recent trends and changes in the financial sector; however, they lack a comprehensive discussion of trade-offs in general and of the trade-off between financial development and systemic risk in particular. At best, they acknowledge that economic growth is negatively affected by a financial sector that is weak or unable to provide long-term capital. This is a general reference to the performance of the sector in aggregate and not explicit reference to specific systemic risks. More specific discussions of advancing financial inclusion—and its positive effect on poverty alleviation and enhancing shared prosperity—and the possible risks to financial stability, such as those from overindebted households or enterprises, are rarely tackled in the strategies.

Table 4: Communication of Trade-offs between Risk and Development in Selected Financial Sector Strategies

Country	Relevant Extract from the Financial Sector Strategy
China (2012)	The mix of monetary policy objectives shall be optimized. Stronger emphasis shall be put on price stability, coupled with a broader sense of overall price level stability. A balance shall be struck among economic growth, price stability and financial risk prevention. The total volume of monetary credit shall be properly controlled to maintain the overall funding provided to the real economy at a reasonable level. While focusing on traditional intermediate objectives such as monetary supply and volume of new loans, more reference shall be made to the overall funding provided to the real economy to coin the monetary policy. [..] Coordination between financial regulation and supervision and monetary policy shall be strengthened. Relevant policies and regulations shall be improved and various mid- and long-term plannings in connection with the development of the financial system shall be prepared in synergy. The respective functions of regulatory policy and monetary policy shall be specified and the information exchange and sharing between regulators and the central bank shall be further enhanced, guiding the financial industry to strike a balance between sustaining economic development and preventing financial risks.

South Africa (2011)	Sustainable and inclusive economic growth and development will be aided by improving access to financial services for the poor, vulnerable and those in rural communities. […] These priorities, however, interact with one another, often generating difficult decisions for the policymaker. In particular, there are multiple trade-offs and competing objectives which must be balanced. [...] While unrestrained credit growth might appear desirable (for example, to allow broader access to housing), the financial crisis demonstrated that excessive household lending creates financial stability risks, with disastrous economic consequences. A careful balance needs to be struck between these competing objectives. [...] Arguably, a highly profitable and concentrated financial services sector is a stable one but, often, profits might be considered excessive and due to unreasonably high fees. Again, a balance is required.
Switzerland (2009)	These four objectives of financial market policy are, to a certain extent, both interdependent and conflicting. Thus, measures taken to attain one objective may affect the attainment of another either positively (harmony of objectives) or negatively (conflict of objectives) or may have no impact whatsoever on it (neutrality of objectives). For example, extremely competitive business conditions allow for not only a broad range of high-quality services for companies and consumers but also create employment in the financial sector. On the other hand, overly restrictive regulation in an effort to prevent systemic or reputational risks may jeopardize jobs and value creation in the financial sector and result in an inadequate offering of high-quality, reasonably priced financial services for the business sector. […]Effective and efficient financial market regulation, together with effective supervision, creates competitive advantages for the financial centre. Formulating a legislative framework that allows for competitiveness is, however, something of a balancing act, resulting from various trade-offs and the search for equilibrium between different interests. Adverse economic repercussions of market failures should be minimized through appropriate financial market regulation. This should safeguard the profitable functioning of the financial sector and the allocative efficiency of the economy as a whole. [...] As a basic principle in the creation of regulation, the overall economic benefit of a regulatory measure should be greater than the associated overall economic costs. The need for regulation must be clarified in detail in advance and the impact of individual courses of action determined. Such research should determine whether regulation is necessary at all and, if so, which legal form [...] is best suited.

Source: Authors' review of selected national financial sector strategies.

Overall, the findings of Laftey et al. (2012) that conventional strategic planning is not actually strategic will resonate with our assessment in relation to the drafting of strategies. They find that, although the process of preparing a strategy involves a lot of scientific analysis of data, it lacks the creation of novel hypotheses and careful generation of custom-tailored tests of those hypotheses. They stress that conventional strategies are focused on isolated *issues* rather than on making *choices*, an approach that would naturally lead to a discussion of trade-offs. Generally, the approach to formulating a financial sector strategy does not naturally lend itself to the formulation of choices but rather to the aggregation of issues into an all-inclusive reform program. Typically, the process starts with sequencing reforms that incorporate a country's specific national priorities, such as existing national development plans, subsector development strategies, or other donor assistance strategies, as well as setting out new priorities for financial sector development. Once the recommendations are prioritized and discussed with the authorities, expert consultants conduct additional analytical work as necessary and then work directly with national steering committees, subcommittees, and other stakeholders to prepare a cohesive, comprehensive sector development strategy. For the strategy to be concrete and implementable, it must

include a detailed, time-bound, and budgeted action plan. Adopting a possibilities-based approach that balances ambition with obstacles and risks would require governments to recognize that they must make choices and that each choice has consequences.

3. Stylized Facts

For countries, the national financial sector strategy formulates the policy for the financial sector. However, in our sample, only 29 countries out of the 78 countries (37 percent) have a financial sector strategy. Most of the national strategies appear in Sub-Saharan Africa and East Asia, while only one country in Latin America and the Caribbean in our sample has one. In the 29 countries, the financial sector strategy was used as the only data source. In six countries, the national development strategy was used as the data source if it contained sections on financial sector development. The financial inclusion strategy was used for two countries as the data source while the annual reports or strategies of central banks and financial sector supervisors were used for 13 countries—provided they contained sections on financial sector development (not only on the development of the institution). If the financial sector strategy was not available, we used the financial stability report as a complementary source to the national development strategy—together with central banks' or superintendence annual reports or strategies—and the financial inclusion strategy as available. The financial stability report was used as the only data source, if none of the other documents were available.[9] In total, the financial stability report was used in 36 countries. The summary statistics on the data sources for our assessment of strategies are presented in table 5**.**

Table 5: Summary Statistics on the Data Sources for Our Review of National Financial Sector Strategies

Countries That Have a Financial Sector Development Strategy

World Bank Region	Counties with FSDS	No. of Countries
Africa	9	10
East Asia	6	10
ECA	4	19
LAC	1	11
MENA	4	10
South Asia	4	8
Other OECD[a]	1	10
Total	**29**	**78**

Countries That Have the Type of Report Defined

Type of Report	No. of Docs. Found	No. of Docs. Used
Financial sector development strategy	29	29
National development plan[b]	38	6
Financial stability report	56	36
Central bank, superintendence strategy, or annual report	13	13
Financial inclusion strategy	2	2

Source: Authors' review of selected national financial sector strategies.

Note: FSDS = financial sector development strategy; OECD = Organisation for Economic Co-operation and Development; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa.

[9] Note that we do not rate strategies only 0/1; that is, a country does not or does have a strategy. We consider available relevant policy documents that could form a country's financial sector strategy and based on those, we rate the country on a scale from 0 to 10 along the 10 criteria presented.

a. Other OECD countries include only OECD countries outside the World Bank regions.
b. Only 12 of these countries have an objective or plan for the financial sector development in the NDP.

In our postulation, a well-formulated strategy sets development targets that take into account the associated risks and communicates the country's systemic financial risk appetite (tolerance). In our assessment of strategies—that is, the document or set of documents that represents a national strategy for the financial sector—we asked the yes/no questions listed in the first column of table 6. We have assessed the national strategies for those questions using 0/1 values for no/yes, respectively.

[Table 6 about here]

The evidence from our review of strategies indicates that only 65 percent of countries have financial sector strategies with clearly identified goals and that only 27 percent of our sample countries have a quantifiable indicator included in their statement of objectives. In addition, only 56 percent of strategies identify policy tools to support achievement of their goals, while the remaining 44 percent lack any credible policy support. Although most strategies refer to systemic risk in general terms (88 percent), fewer (38 percent) refer to specific indicators of systemic risk, and only about half the strategies (51 percent) identify policy tools for maintaining systemic risk in the financial systems at an acceptable level.

We further investigate whether the national financial sector strategy clearly assigns the implementation of the targeted financial development at the (identified) acceptable level of systemic risk to individual government agencies in accord with their mandate. For instance, the ministry of finance (or economy) could be responsible for financial development and the central bank for systemic risk supervision (as in Kazakhstan or Moldova). In their financial sector strategies (table 6), the majority of countries (85 percent) broadly identify the implementing government agencies based on their overall mandates. However, less often countries clearly assign responsibility to specific government agencies for implementation of measures to achieve development goals (53 percent) and to maintain systemic risk at an acceptable level (54 percent) in their financial sector strategy.

Only 26 percent of countries have financial sector strategies that discussed specific trade-offs between their financial development goals and management of systemic risk in the financial sector, despite the commitment of many countries to both financial development and systemic risk management (54 percent) within the same strategy document. Overall, 42 percent of countries committed to both advancing financial development and managing systemic risk but did not consider any trade-offs between the two goals. While the strategies involved rich numerical analysis of recent developments in the sector, in general, there was a weak use of quantifiable data in their forward-looking objectives.

4. Stylized Facts Based on Country Characteristics

Table 7 shows summary statistics of our survey data based on country characteristics: the level of development (average gross national income per capita over 2007–11), public governance (regulatory quality of public governance in 2011), financial depth (average credit-to-GDP ratio over 2007–11), financial structure (average share of bank assets in total financial sector assets), financial inclusion (index of access to financial services in 2005 by Honohan 2008), and crisis experience (based on Laeven and

Valencia 2012). See table A1 in the appendix for a detailed description of the variables, including their sources. We divide our sample into two groups of countries—one below and the other above the median for the selected country characteristic—and compare differences in their financial sector strategies using a *t*-test. In addition, we compare the average characteristics of financial strategies of countries in the top and bottom 25th percentiles for a given country characteristic. The results of this simple analysis are reported in table 7.

[Table 7 about here]

Table 7 (column 1, row 1) suggests that financial development (obj1) is present much more strongly on the policy agenda of developing countries than on that of more developed countries (at the 1 percent significance level). Perhaps for the same reason, developing countries are more likely to quantify their development goals (obj2) and support them with identified policy tools (obj3). In contrast, more developed countries seem to pay greater attention to systemic risk management and more often identify the policy tools to support systemic risk management than developing countries (sys3). Similarly, developed countries are more specific about the agencies responsible for implementing the strategic goals for systemic risk management (imp3). While there is some indication that developed countries could be paying more attention to the trade-off between the speed of financial development and systemic risk in the financial sector (trff1), this difference is significant only at the 5 percent level.

Table 7 (column 1, row 2) suggests that countries with better public sector governance differ from countries with worse public sector governance in the same way that developed countries differ from less developed countries. This observation is due to the high correlation between economic development and public sector governance, and we will estimate the marginal effects of each characteristic conditional on the other later in the paper using regression analysis. However, we find one difference: countries with better public governance are more likely to pay greater attention to the trade-off between the speed of financial development and systemic risk in the financial sector (trff1).

Table 7 (column 1, row 3) implies that countries with a deeper financial sector explicitly assign the responsibility for implementation of systemic risk management to individual government agencies in significantly more cases (imp3). Moreover, countries with deeper financial sectors are also more cognizant of the trade-offs between financial development and systemic risk and are much more likely to make this explicit for all stakeholders in their strategies (trff1).

Table 7 (column 2, row 1) shows that countries with financial systems more concentrated in banking do not formulate their financial sector strategy much differently from countries with more balanced financial structures. There is some indication that countries with the least concentrated banking systems (bottom 25 percent) could identify more frequently the systemic risk associated with achieving the development objectives in their strategy (sys1). This indication, however, is significant only at the 10 percent level.

Table 7 (column 2, row 2) suggests that countries with greater financial inclusion pay more attention to systemic risk management in their strategies by identifying policy tools for systemic risk management in more cases (sys3). Countries that have achieved greater financial inclusion are also more specific about assigning responsibility for systemic risk management (imp3) and are more attentive to the trade-off between keeping systemic risk at an acceptable level and furthering financial development and

inclusion, for example, in credit (trff1). The differences between the top 25 percent and the bottom 25 percent of countries in financial inclusion suggest that countries with less financial inclusion could be more focused on defining their financial development goals (obj1), including through quantitative indicators (obj2).

Table 7 (column 2, row 3) implies that there is no significant difference across countries with different experience of banking crises in regard to formulating a financial sector strategy. Only when considering zero versus one crisis do the data suggest that countries with experience of one crisis are more likely (at the 5 percent significance level) to clearly assign responsibilities for implementing the formulated strategy to individual government agencies (imp1). Furthermore, the differences between one versus two crises indicate that countries that experienced one crisis could focus more frequently on systemic risk in their strategies (sys1) than countries that experienced repeated crises (at the 10 percent significance level).

We will proceed next with estimating the marginal effects of the discussed country characteristics on the formulation of strategies. For this, we will use regression analysis and condition on a broader set of selected country characteristics.

5. Benchmarking the Properties of Financial Sector Strategies

Based on our review of financial sector strategies in 78 countries, we assess the basic properties of the strategies (see table 6). Then, we construct five summary variables that we model using the regression analysis. Specifically, we construct a "strategy" variable as the count of ones in the yes/no (0/1) rating of attributes presented in table 6. Similarly, we construct variables "objective," "risk," "implementation," and "tradeoff" as the count of ones in rating the attributes in table 6 marked with "obj," "sys," "imp," and "trff," respectively. We used this count variable as our dependent variable in a regression that tries to link selected country characteristics and experience to how countries formulate their financial sector strategies in general, particularly in regard to stated objectives, systemic risk considerations, implementation planning, and the trade-off between the speed of financial development and systemic risk management.

We model this count variable using a simple ordinary least squares regression with bootstrapped standard errors to properly account for the small-sample properties of our study. In addition, we employ regressors that we make weakly exogenous by using data from periods preceding the dating of financial sector strategies, by taking long-term averages, and by relying on the principle of aggregation:[10]

$$st_i^C = X_i{}'\beta + \varepsilon_i \tag{1}$$

where $st_i^C = \{objective, risk, implementation, tradeoff\}$, X_i is a vector of selected country characteristics and experience that could be relevant for the process of formulating the content of national financial sector strategies, and ε_i is a likely heteroscedastic disturbance.

[10] For example, we assume that overall governance effectiveness in the public sector cannot be significantly influenced by the formulation of financial sector strategies because it relates to all sectors of public policy, only one of which is the financial sector.

We consider four groups of country characteristics: (1) the legal and macroeconomic environment; (2) the public governance and institutional structure of financial sector supervision; (3) the structural characteristics of the domestic financial sector; and (4) the experience of banking crises. We describe the variables in each of the four categories in more detail together with the data sources in the next section.

To broadly characterize (1) the legal and macroeconomic environment, we regress the properties of the financial sector strategies on the level of income (*inc0711*), income group (high-, middle-, and low-income countries—HIC, MIC, LIC; *inc3group*), level of inflation (*inflation0711*), and the type of law used in the country (civil, common, custom, religious, and their mixes), capital account openness (*kaopen0610*), and trade openness (*trade0711*). See table A1 in the appendix for a detailed description of the variables, including their sources.

To characterize (2) public governance and institutional structures of financial sector supervision, we regress the properties of strategies on governance effectiveness (*GE_PRANK*), regulatory quality (*RQ_PRANK*), voice and accountability (*VA_PRANK*), the type of supervisory structure for the financial sector (*ps0610*: the proximity of micro- and macroprudential supervision, *integ0610*: integration of microprudential supervision), and supervisory quality (*sq*). Table A1 contains a detailed description of the variables, including their sources.

For (3) the structural characteristics of the domestic financial sector, we consider financial depth (average credit to GDP, *cred0711*), the share of bank assets in total assets of the financial systems (*bank*), concentration of the financial system (Herfindahl-Hirschman Index, considering banks, insurance companies, and capital markets; *hhi*), an index of financial inclusion in savings and credit (*findex1*), a composite index of financial inclusion (*honohan*), the ratio of the number of foreign banks to the total number of banks in the domestic banking sector (*foreignbank0509*), the share of foreign bank assets in total bank assets (*foreignasset0509*), the fraction of banks that are at least 50 percent foreign owned (*forowned05*), the fraction of banks that are at least 50 percent government owned (*govowned05*), and entry barriers for banks (*entrybr*). Table A1 contains a detailed description of the variables, including their sources.

Financially, for (4) the experience of banking crises, we consider, in the regression model, the total number of banking crises a country experienced between 1970 and 2011 (*crisis*), the number of banking crises weighted by year of occurrence (more recent crises receive more weight; *w_crisis*), a 0/1 dummy if a country experienced a banking crisis at all (*bcrisis*), and a 0/1 dummy if a country experienced repeated banking crises—that is, more than one crisis (*repcrisis*). Table A1 contains a detailed description of the variables, including their sources.

6. Discussion of Estimation Results

We first run regression models by the category of country characteristics 1–4 and then search for an overall parsimonious model for each attribute of national financial strategies (*strategy, objective, risk, implementation, trade-off*) considering all country characteristics of interest at once. We first run and present the results of the regression by a category of country characteristics because some of these categories can drop out from the parsimonious regression due to an insufficient number of observations.

Or they can be constrained on the number of included countries because of missing observations for other blocks of variables. We therefore find the estimation by category of variables useful in providing complementary insights into the data analysis.

Tables A2 to A5 report the estimation results for individual attributes of financial strategies (*strategy, objective, risk, implementation, trade-off*) by category of country characteristics. Each table contains the full and parsimonious (based on adjusted R2 maximization) model for *strategy, objective, risk, implementation, and trade-off*.

6.1. By group of country characteristics

Legal and macroeconomic environment. The estimation result in table A2 suggests that countries in higher-income groups (HICs, MICs, LICs) have less comprehensive strategies (the negative coefficient on *inc3group* in the *strategy* column). This finding is consistent with our bivariate analysis (table 7), which indicates that more developed countries pay less attention to objectives for financial development in their strategies. The focus of richer countries lags on *objective*s (negative coefficient of *inc0711*) and, further, on *systemic risk* (negative coefficient on *inc3group*) and policy *implementation* (negative coefficient on *inc3group*). Moreover, countries with persistently higher inflation pay significantly less attention to the *trade-off* between financial development and stability (negative coefficient on *inflation0711*).

Overall, the legal environment (type of law) in the country can have a positive effect on strategy formulation when the legal system incorporates aspects of *civil law*, *common law,* and *custom law* (positive coefficients on *civil*, *common,* and *anycustom* in the strategy column). Countries with any aspects of *civil law* in their legal system are more likely to pay greater attention to policy *implementation* and *trade-offs* (positive coefficients on *anycivil* and *civil*, respectively). Furthermore, countries with *mixed law* focus more on identifying *objectives* and *trade-offs* between financial development and stability in their strategies (positive coefficients on *mixed* in *objective* and *trade-off* columns). In contrast, countries with *custom-based* legal systems are more likely to include *implementation* plans for the set objectives in their strategies (positive coefficient on *anycustom*). Overall, the legal and macroeconomic environments are irrelevant for explaining the overall completeness of a national financial sector *strategy* (a negative adjusted R squared**.** They are more relevant for explaining the strategies' focus on *objectives*, systemic *risk*, and to some extent also *trade-off* (adjusted R-squares of 0.28, 0.25, and 0.17, respectively)

Public governance and institutional structures of financial sector supervision. Table A3 shows that government effectiveness could positively affect the strategy formulation and whether the country accounts for the *trade-off* between financial development and stability (positive coefficient on *GE_PRANK* in the *trade-off* column). Also, the overall regulatory quality in the country (*RQ_PRANK*) can have a positive effect on the comprehensiveness of the national *strategy* and on the definition of development *objectives*. In contrast, countries with a higher rank on voice and accountability (VA_PRANK) pay significantly more attention to the role of policy *implementation* when shaping their financial sector strategies. The quality of microprudential supervision (*sq*) is positively associated with a greater focus of the *strategy* on *implementation* plans and policy *trade-offs*. Moreover, integrated microprudential supervision (*integ0610*)—either in the central bank or in a financial supervisory authority—is positively associated with a more frequent account of systemic *risk* management in the strategy.

Overall, public governance and institutional structures of financial sector supervision could be relevant for explaining how well the strategic *objectives* for financial development are defined and, to some extent, the account of *trade-off*s and comprehensiveness of the entire *strategy* (respective adjusted R-squares of 0.16, 0.14, and 0.13). However, for explaining other attributes (*systemic risk*, *implementation*), public governance and the institutional structure of financial sector supervision, they are less relevant.

Structural characteristics of the domestic financial sector. Table A4 suggests that countries with deepening financial markets tend to have more comprehensive strategies that focus in particular on financial development objectives and policy trade-offs (positive coefficients on *credit0711* in the *strategy*, *objective,* and *trade-off* regressions). Further, greater concentration of the financial system seems to be associated with strategies more focused on systemic risk management (the positive coefficient on *hhi* in the *risk* column). Countries that have achieved greater financial inclusion seem to have less comprehensive financial sector strategies, as they focus significantly less on further financial development (and associated implementation plans) and more on management of systemic risk (negative coefficients on *honohan* in the *objective* regression and on *findex1* in the implementation regression versus the positive coefficient on *honohan* in the *risk* regression).

Greater presence of foreign ownership in the national banking system seems to be associated with more comprehensive national strategies, focusing especially on systemic risks and trade-offs (positive coefficients on *forowned05* in the *strategy*, *risk,* and *trade-off* regressions). In contrast, a larger share of foreign banks' assets in the banking system is associated with significantly less focus on implementation (the negative coefficient of *foreignasset0509* in the *implementation* regression). In addition, countries seem to pay less attention to development objectives when the number of foreign banks among all banks is greater (the negative coefficient of *foreignbank0509* in the *objective* regression). Greater government ownership of domestic banks is associated with more comprehensive financial sector strategies, particularly with their greater attention to the objectives of financial development (the positive coefficient on *govowned05* in the *strategy* and *objective* regressions). Finally, greater barriers to bank entry are associated with more comprehensive strategies, especially in the area of development objectives (the positive coefficients on *entrybr* in the *strategy and objective* regressions).

Overall, the structural characteristics of the domestic financial sector can explain a significant share of variation in the overall properties of strategies (adjusted R squared of 0.20 in the *strategy* column) and, in particular, their individual attributes concerning development *objectives*, systemic *risk,* and strategy *implementation* (the respective R squares are 0.51, 0.23, and 0.14). We acknowledge that the structural characteristics of the domestic financial sector could entail some endogenous relation to the strategies and thus interpret our results carefully as associations. Recall that we are interested in benchmarking countries rather than in recommending policy intervention to improve formulation of financial sector strategies.

Experience of past banking crises. The results in table A5 indicate that countries that have experienced past banking crises could have more comprehensive financial sector *strategies* (positive coefficient on *w_crisis* in the *strategy* column). This comprehensiveness relates in particular to implementation plans and accounting for trade-offs between financial development and stability (positive coefficients on *w_crisis* in the *implementation* and *trade-off* columns). However, this positive association

holds only if the crises are more recent: if the banking crises occurred in the distant past, the fading memory of such possible hazards and the ensuing complacency could be associated with much less comprehensive strategies, especially in regard to *implementation* and policy *trade-offs* (negative coefficients on *crisis* in *strategy*, *implementation* and *trade-offs* columns).

Overall, experience of banking crises may explain to some extent the attention that strategies pay to policy *implementation* and policy *trade-offs* (respective adjusted R-squares of 0.096 and 0.095), but its effect can go both ways depending on how recent the crisis experience is.

6.2. Overall parsimonious models

We proceed by discussing the parsimonious regressions for the five attributes of strategies (*strategy, objective, risk, implementation, trade-off*) taking into consideration all country characteristics (categories 1–4). Because of the limited degrees of freedom available, the overall parsimonious models are chosen by (a) taking the most significant variables from groups 1–4 for each attribute of strategies; (b) checking whether any other variable from any other group can add significantly to the explanatory power of the regression by improving its adjusted R-squared; and (c) excluding further variables from the regression based on (a) and (b) to arrive at a final parsimonious model that maximizes the adjusted R-squared for each attribute of strategies.[11]

Legal system. Table 8 shows that characteristics of the national legal system can have an important influence on how countries formulate their national strategies for the financial sector. Countries with legal systems containing any features of civil law tend to have more comprehensive strategies overall (positive coefficient on *civil* in the strategy regression). Moreover, countries with civil-code legal systems focus significantly more on policy implementation and trade-offs between financial development and stability (positive coefficients on *civil* in the *implementation* and *trade-off* regressions). Countries with legal systems based on *common law* plan much better than other countries for *implementation* and to some extent account more often for policy *trade-offs* (positive coefficients on *common* in the *implementation* column and on *anycommon* in the *implementation* and *trade-off* regressions). In addition, countries with legal systems involving any features of a religion-based law tend to address more systemic risk and *trade-offs* in their strategies (positive coefficients on *anyrelig* in the *systemic risk* and *trade-off* regressions). Finally, countries with laws involving a mixed influence from civil, common, custom, and religious legal systems are significantly more likely to focus on financial development objectives and implementation of the strategy (positive coefficients on *mixed* in the *objective* and *implementation* regressions).

[Table 8 about here]

Macroeconomic environment. In general, at higher income per capita, countries tend to focus less on financial development objectives (negative coefficient on *inc0711* in the *objective* regression in table 8). Moreover, as countries cross standard income thresholds and migrate to higher income groups, their strategies become less comprehensive (negative coefficient on *inc3group* in *strategy* regression), paying less attention to systemic risk and implementation. This observation could be worrying especially for

[11] Because of various constraints on data availability, we have also aimed at preserving at least 60 observations for the estimation when maximizing the adjusted R squared. If we allowed for estimation of parsimonious models with fewer than 60 observations, the adjusted R squared would be even higher, however, at the cost of representing a smaller sample of countries. The estimation results are available from the authors upon request.

countries that migrate from the LIC group to the MIC group or from the lower- to the upper-MIC group, because at those stages, financial development needs are still high but exposures to financial risk grow dramatically (trade and capital openness and the size and complexity of the domestic financial sector, for example). Moreover, as countries advance in their macroeconomic management and bring inflation down, they may improve their focus on implementation and on the attention they pay to policy trade-offs (negative but not significant coefficients on *inflation0711* in the *implementation* and *trade-off* regressions).

Greater capital openness is negatively associated with the overall comprehensiveness of strategies that could result from declining focus on financial development objectives once countries become more open to financial flows (negative coefficients on *kaopen0610* in the *strategy* and *objectives* regressions). Greater trade openness is associated with less comprehensive strategies, particularly regarding implementation (negative coefficients on *trade0711* in the *strategy* and *implementation* regressions). At the same time, increasing their trade openness makes countries focus more on policy trade-offs (positive coefficient on *trade0711* in the *trade-off* regression). However, the respective coefficients on capital and trade openness are not significant at common levels.

Public governance and supervisory structures for the financial sector. There is some consistent indication that overall government effectiveness can contribute to more comprehensive financial sector strategies, especially concerning objectives and policy trade-offs. Although these effects contribute to the overall explanatory power of the regressions, they are statistically significant only in the trade-off regression. In contrast, the overall regulatory quality appears negatively associated, at the 10 percent significance level, with the capacity of the country to address policy trade-offs (negative coefficient on *RQ_PRANK* in the *trade-off* regression). We conjecture that nonfinancial sectors of public governance might experience less pressure to consider regulatory trade-offs than the financial area. Supervisory structures for the financial sector dropped out of the parsimonious model altogether, perhaps because they are more a consequence of financial sector strategies and more *predicted by* than *predictive of* the attributes of financial sector strategies.

Financial depth and inclusion. Countries with deeper credit markets tend to focus more on financial development objectives, perhaps concentrating on access to a broader range of financial services beyond credit and savings, such as insurance, capital market instruments, and electronic payments (positive coefficient on *credit0711* in the *objective* regression). At the same time, as financial sectors deepen and more people are included in financial services, countries give less attention to financial development objectives, systemic risk management, and implementation (negative coefficients on *honohan2008* in the *objective* and *implementation* regressions and on *credit0711* in the *systemic risk* regression).

Ownership in the financial sector. Contrary to common belief, countries with a greater share of foreign ownership in the financial sector (in terms of the number of banks) focus their strategies less on objectives and, to some extent, on policy trade-offs and implementation plans as well (significantly negative coefficient on *foreignbank0509* in the *objective* regression). With greater foreign bank entry, the domestic policy makers might become more complacent about development objectives and rely on the imported foreign practices and technology to do the job. In contrast, countries with a greater foreign ownership (in terms of assets and number of banks) tend to be more attentive to systemic risk and to

address policy trade-offs in their strategies more often (significantly positive coefficient on *foreignbank0509* in the *systemic risk* regression and on *foreignasset0509* in the *trade-off* regression). Interestingly, the share of state ownership dropped out of the factors that in any way significantly affect the attributes of strategies.

Experience of banking crises. The experience of past banking crises is significantly associated with more comprehensive financial sector *strategies* (positive coefficient on *w_crisis* in the *strategy* column), in particular as related to implementation plans and potentially to the overall comprehensiveness of the strategy (significantly positive coefficient on *w_crisis* in the *implementation* regression). However, the positive association holds only if the crises are more recent. Because if the banking crises occurred in the more distant past, the fading memory of those events and the ensuing complacency could be associated with much less comprehensive strategies, especially in regard to *implementation* and to a lesser extent to policy *trade-offs* (significantly negative coefficients on *crisis* in *strategy* and *implementation* regressions).

Development assistance in formulation of financial sector strategies. In some cases, countries request and receive development assistance on formulating their financial sector strategies. However, it is very difficult to collect consistent data on such development assistance across all agencies that could have provided it. That said, we have strived to include at least some of the data, namely, that on the development assistance provided by the World Bank under the FIRST initiative. Most of the development assistance has been concentrated in Africa and South Asia.[12] When including the 0/1 dummy (not received/received relevant development assistance) in our regressions, we fail to find any significant positive effect of this assistance on the scope and quality of financial sector strategies in addition to the considered country characteristics. This is surprising because such development efforts address, at the minimum, strategic objectives on financial development, and the regression should pick up those efforts. More comprehensive data and further research are needed to derive more affirmative conclusions in this regard.

In sum, the scope and characteristics of national strategies for the financial sector are significantly influenced by the type of legal system in a given country, its level of income and macroeconomic stability, existing financial depth and inclusion, the share of foreign ownership in the national financial sector, and the experience of past financial crises. Let us reiterate the most significant results at the 5 percent level. Specifically, if a country's legal system is based on mixed law or on civil, common, or mixed law, it pays more attention to financial development objectives and implementation, respectively, in its strategies. Moreover, countries with legal systems based on civil law and religious law do a better job in addressing trade-offs between financial development and stability. As their per capita income increases, countries pay less attention to development objectives but, surprisingly, to systemic risk as well. Also, overall effectiveness of public governance can help countries address policy trade-offs in the financial sector.

[12] A total of 20 countries have inquired funds from the FIRST initiative to develop their financial sector strategies. 17 of the countries are from Africa of which 7 are in our sample. Hence, those 7 African countries have the value of 1 as the entry in the dummy variable. The remaining 3 countries are from South Asia (Maldives, Nepal, and Bhutan). They are in the sample, however, they have not finished the update of their strategies yet or they are in the process of acquiring the assistance. Hence, they have 0 as the entry in the dummy variable.

Furthermore, as financial inclusion increases and national financial systems deepen, country strategies for the financial sector gradually neglect development objectives and systemic risk in formulation of their strategies. However, increasing depth of credit markets also sharpens countries' focus on broader financial development objectives—presumably concerning financial services other than credit alone. Greater foreign ownership in the domestic banking system intensifies the attention countries pay to the trade-off between financial development and systemic risk management. Experience of past banking crises raises countries' awareness of the challenges in the financial sector and, in particular, stimulates greater planning for implementation of financial sector strategies. However, as the memory of past banking crises fades, crisis experience can become counterproductive and weaken financial sector strategies and planning for implementation. Finally, we do not find any significant positive effect of development assistance on the scope and quality of financial sector strategies, in addition to the considered country characteristics.

Giving due consideration to policy trade-offs, particularly between financial development and management of systemic risk in the financial sector, remains the weakest part of strategies and is more difficult to link to country characteristics.

7. Benchmarking Individual Countries against Their Peers

In this section, we compare financial sector strategies of individual countries to the benchmark estimated by our regression model based on a sample of 78 countries. In this exercise, we compare the actual ratings of country strategies to the rating predicted by the model for a particular country, given its characteristics. We do the same for the total rating that sums all 10 attributes on which we rate the 78 countries in our sample and present the results in a scatter plot in figure 1. We repeat the process for the four components of the total rating—that is, development objectives, systemic risk, implementation planning, and policy trade-offs—and report the results in figure A1 in the appendix.

[Figure 1 about here]

Figure 1 shows, on the horizontal axis, the actual ratings of national financial sector strategies summed across the 10 criteria that we consider. The model-predicted values based on the experience of 78 countries in our sample are shown on the vertical axis. The model-predicted values constitute a benchmark that can be usefully depicted by the diagonal line in figure 1. The "outperformers" vis-à-vis the estimated benchmark will be located below the diagonal line and to the far right. The "underperformers" will then be located above the diagonal line to the far left. We can see that the group of outperformers includes the Arab Republic of Egypt (EGY), Malaysia (MYS), Pakistan (PAK), South Africa (ZAF), and Switzerland (CHE). Somewhat surprisingly, Egypt and Pakistan seem to appear in this group, perhaps due to unaccounted for development assistance that they received.[13] The group of underperformers includes Belarus (BLR), Canada (CAN), Costa Rica (CRI), Germany (DEU), Morocco

[13] Further investigation of these unexpected outperformers revealed that Egypt received development assistance to develop its financial sector strategy from the African Development Bank, USAID, and the World Bank, at different stages. Pakistan developed its strategy with technical assistance from the Asian Development Bank, International Monetary Fund, and the Department for International Development (DFID) of the UK. Collecting comprehensive data on development assistance can help assess the impact of different development assistance on the quality and scope of national financial sector strategies in the future.

(MAR), and Turkey (TUR). Recall that we rate the countries on the comprehensiveness of their financial sector strategies, not on actual implementation or achieved outcomes in the financial sector. Note that some countries could be just lucky in navigating their ship without a map (strategy) in the sea of financial development and stability. Recall also that as countries develop they neglect financial development and inclusion. In addition, dating of the strategy, if possible to establish, could have played a role. Because more recent strategies may have built on lessons learned from the global financial crisis, they could be more comprehensive and balanced across financial development and stability and focus more on planning for implementation.

The results of similar benchmarking exercises for objectives, systemic risk, implementation, and policy trade-offs are plotted in quadrants (1,1), (1,2), (2,1) and (2,2) of figure A1 in the appendix. Concerning *objectives*, examples of outperformers are Egypt (EGY) and Uruguay (URY), while the sample underperformer is Jordan (JOR). Concerning *systemic risk*, examples of outperformers are South Africa (ZAF), Switzerland (CHE), and, more recently, Latvia (LVA), while the underperformers are Costa Rica (CRI) and Lebanon (LBN). Concerning *implementation*, outperformers are Egypt (EGY) and Georgia (GEO), while the underperformer is Germany (DEU). Here, a more in-depth account of institutional context and organization of public administration would explain some of the observed gaps. Finally, concerning *trade-offs*, the sample outperformers are Peru (PER) and South Africa (ZAF), while the sample underperformers are the Netherlands (NLD) and Slovenia (SVN). Note that the countries that do not pay much attention to financial development objectives will almost inevitably fail to properly account for the trade-off between financial development and stability.

8. Conclusion

In this paper, we assessed a sample of 78 countries on the comprehensiveness of their financial sector strategies. We did so against 10 predefined attributes that a comprehensive financial strategy should have, in our view. Broadly, these attributes concern definition of financial development objectives, identification of the systemic risk involved in achieving the set objectives, consideration of trade-offs between achieving development objectives and managing systemic risk in the financial sector at an acceptable level, and an outline of implementation plans for the financial sector strategy.

We found that only 65 percent of the 78 countries had financial sector strategies with clearly identified goals and that only 27 percent had a quantifiable indicator included in their statement of objectives. Given that only 56 percent of strategies identify policy tools to support the achievement of the set goals, 44 percent of strategies rely on wishful thinking rather than on credible policy support. Although most strategies refer to systemic risk in general terms (88 percent), many fewer documents (38 percent) refer to specific indicators of systemic risk, and only about a half (51 percent) of the strategies identify policy tools to manage that risk. The majority of countries (85 percent) broadly identify the government agencies responsible for implementation of their strategies based on their overall mandates. However less often, countries clearly assign responsibility to specific government agencies for implementation of measures to achieve development goals (53 percent) and to manage systemic risk at an acceptable level (54 percent). Many countries commit to both development and systemic risk management (54 percent) in their strategy; however, only 26 percent address trade-offs between their financial development goals and management of systemic risk in their strategies. Overall, 42 percent of

countries commit to both advancing financial development and managing systemic risk but do not consider any tradeoffs between the two goals.

In addition to assessing and rating the financial sector strategies of 78 countries and creating a new data set, we benchmarked the rated strategies using regression analysis and conditioning on a number of country characteristics of interest. We found that countries have more comprehensive strategies if their legal system is based on civil law rather than on other types of law and when they have the experience of financial crises in the recent past. Furthermore, countries better define their objectives on financial development if their legal systems are based on mixed law and if they have lower income per capita, deeper credit markets, lower financial inclusion, and a lower proportion of foreign banks in their banking systems. Countries pay more attention to management of systemic risk in the financial sector if their legal system includes features of religious law, if their per capita income is lower, if their credit markets are less developed, and if foreign banks account for a greater share of their banking system. Moreover, countries plan more for implementation in their strategies, particularly if their legal systems are based on common law or mixed law, if their per capita income is low and if they experienced banking crises in the very recent past. Finally, countries are more likely to address policy trade-offs between financial development and stability if their legal system is based on civil law or religious law, if their public governance system exhibits greater effectiveness, and if foreign banks account for a greater share of their banking system assets.

Using the estimated regression models, we benchmarked financial sector strategies of individual countries to their peers. Specifically, we compared the actual ratings of country strategies to the rating predicted by the model for a particular country, conditioning on its various characteristics. Through this benchmarking exercise, we could identify some outperformers such as Egypt, Malaysia, Pakistan, South Africa, and Switzerland in formulating comprehensive financial sector strategies. We also conducted a similar benchmarking exercise for different subcomponents of national financial sector strategies. In addressing the trade-off between financial development and stability, we could identify Peru and South Africa as likely outperformers.

References

Adasme, Osvaldo, Giovanni Majnoni, and Myriam Uribe. 2006. "Access and Risk: Friends or Foes? Lessons from Chile." Policy Research Working Paper 4003, World Bank, Washington, DC.

Allen, Franklin, Thorsten Beck, Wolf Wagner, Philip Lane, Dirk Schoenmaker, and Elena Carletti. 2011. *Cross-Border Banking in Europe: Implications for Financial Stability and Macroeconomic Policies*. London: Centre for Economic Policy Research (CEPR).

Anginer, Deniz, Asli Demirguc-Kunt, and Min Zhu. 2012. "How Does Bank Competition Affect Systemic Stability?" Policy Research Working Paper 5981, World Bank, Washington, DC.

Arcand, Jean-Louis, Enrico Berkes, and Ugo Panizza. 2012. "Too Much Finance?" IMF Working Paper WP/12/161, International Monetary Fund, Washington, DC.

BCBS (Basel Committee on Banking Supervison). 2011. "Basel III: A Global Regulatory Framework for More Resilient banks and Banking Systems (rev.)." Bank for International Settlements, Basel. http://www.bis.org/publ/bcbs189.pdf.

Beck, Thorsten, and Olivier De Jonghe. 2013. "Lending Concentration, Bank Performance and Systemic Risk Exploring Cross-Country Variation." Policy Research Working Paper 6604, World Bank, Washington, DC.

Beck, Thorsten, and Erik Feyen. 2013. "Benchmarking Financial Systems: Introducing the Financial Possibility Frontier." Policy Research Working Paper 6615, World Bank, Washington, DC.

Buncic, Daniel, and Martin Melecky. 2013. "Equilibrium credit: the reference point for macroprudential supervisors." Policy Research Working Paper Series 6358, World Bank. Washington, DC.

Brown, Martin. 2013. "The transmission of banking crises to households: lessons from the 2008-2011 crises in the ECA region." Policy Research Working Paper Series 6528, World Bank. Washington, DC.

BRSS III 2008. Banking Regulation and Supervision Survey. Database of the World Bank available at: http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20345037~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html.

Central Intelligence Agency. 2012. *The World Factbook.* Washington, DC: CIA. https://www.cia.gov/library/publications/the-world-factbook/.

Chinn, Menzie D., and Hiro Ito. 2006. "What Matters for Financial Development? Capital Controls, Institutions, and Interactions." *Journal of Development Economics* 81 (1): 163–92.

Cihak, Martin, Asli Demirguc-Kunt, Erik Feyen, and Ross Levine. 2012. "Benchmarking Financial Systems around the World." Policy Research Working Paper 6175, World Bank, Washington, DC.

Cihak, Martin, and Parabal Singh. 2013. "An Analysis of National Financial Inclusion Strategies." Blog post at All about Finance, http://blogs.worldbank.org/allaboutfinance/analysis-national-financial-inclusion-strategies.

Committee on International Economic Policy and Reform. 2012. "Banks and Cross-Border Capital Flows: Policy Challenges and Regulatory Responses." Brookings Institution, Washington, DC.

Cull, Robert, Asli Demirguc-Kunt, and Timothy Lyman. 2012. "Financial Inclusion and Stability: What Does Research Show?" CGAP Brief 71305, Consultative Group to Assist the Poor, Washington, DC.

Demirguc-Kunt, Asli, and Enrica Detragiache. 2005. "Cross-Country Empirical Studies of Systemic Bank Distress: A Survey." Policy Research Working Paper 3719, World Bank, Washington, DC.

Dijkman, Miquel. 2010. "A Framework for Assessing Systemic Risk." Policy Research Working Paper 5282, World Bank, Washington, DC.

Dowd, Kevin. 2009. "Moral Hazard and the Financial Crisis." *Cato Journal* 29 (1): 141–66.

FinStats 2013. Database of Financial Sector Development Indicators. World Bank. Washington, D.C.

Global Financial Development Database, World Bank, Washington, DC, http://data.worldbank.org/data-catalog/global-financial-development.

Han, Rui, and Martin Melecky. 2013. "Financial Inclusion for Financial Stability: Access to Bank Deposits and the Growth of Deposits in the Global Financial Crisis." Policy Research Working Paper 6577, World Bank, Washington, DC.

Honohan, Patrick. 2008. "Cross-Country Variation in Household Access to Financial Services." *Journal of Banking & Finance* 32 (11): 2493–2500.

———. 2010. "Partial Credit Guarantees: Principles and Practice." *Journal of Financial Stability* 6 (1): 1–9.

Klapper, Leora F., Annamaria Lusardi, and Georgios A. Panos. 2012. "Financial Literacy and the Financial Crisis." World Bank Policy Research Working Paper 5980, World Bank, Washington, DC.

Laeven, Luc, and Fabian Valencia. 2012. "Systemic Banking Crises Database: An Update." IMF Working Paper WP/12/163, International Monetary Fund, Washington, DC.

Laftey, A. G., Roger L. Martin, Jan W. Rivkin, and Nicolaj Siggelkow. 2012. "Bringing Science to the Art of Strategy." *Harvard Business Review*, September 22, http://hbr.org/product/bringing-science-to-the-art-of-strategy/an/R1209C-PDF-ENG.

Loayza, Norman V., and Romain Ranciere. 2006. "Financial Development, Financial Fragility, and Growth." *Journal of Money, Credit and Banking* 38 (4): 1051–76.

Melecky, Martin, and Anca Maria Podpiera. 2012. “Institutional Structures of Financial Sector Supervision, Their Drivers and Emerging Benchmark Models.” MPRA Paper 37059, Munich Personal RePEc Archive, http://mpra.ub.uni-muenchen.de/37059/1/MPRA paper 37059.pdf.

Pagano, Marco. 2012. "Finance: Economic Lifeblood or Toxin?" CSEF Working Paper 326, Centre for Studies in Economics and Finance, University of Naples, Italy.

Ranciere, Romain, Aaron Tornell, and Frank Westermann. 2006. “Decomposing the Effects of Financial Liberalization: Crises vs. Growth.” NBER Working Paper 12806, National Bureau of Economic Research, Cambridge, MA.

———. 2008. “Systemic Crises and Growth.” *Quarterly Journal of Economics* 123 (1): 359–406.

Reinhart, Carmen M., and Kenneth S. Rogoff. 2009. “The Aftermath of Financial Crises.” NBER Working Paper 14656, National Bureau of Economic Research, Cambridge, MA.

World Bank. 2013. “The Role of the Financial System in Managing Risk: More Financial Tools, Fewer Financial Crises.” In *World Development Report 2014: Risk and Opportunity: Managing Risk for Development,* chap. 6. Washington, DC: World Bank.

World Development Indicators (database). World Bank, Washington, DC, http: //d at a .wo r l d b a n k . o r g /d a t a - c at a l o g /world-development-indicators.

Worldwide Governance Indicators (database). World Bank, Washington, DC, http://data.worldbank.org/data-catalog/worldwide-governance-indicators.

Figures and Tables in the Main Text

Table 6: Summary Statistics of Selected Characteristics of Financial Sector Strategies

Property of Financial Sector Strategy	Benchmark for 0/1 Classification (0/1 Dummy Variable)	Mean	Std. Error	90% CI	
Clear development goals set (obj1)	Is the objective clearly identified somewhere in the strategy document?	65%	5%	56%	74%
Development goals quantified (obj2)	Is the strategic objective quantified? Or are the development targets for the financial sector quantified?	27%	5%	19%	35%
Policy tools to achieve goals identified (obj3)	Does the document identify the policy tools to support targeted development goals or greater development of financial (banking) sector in general?	56%	6%	47%	66%
Systemic risk associated with achieving development goals identified (sys1)	Does the document refer to systemic risk and macroprudential regulation associated with the strategy?	88%	4%	82%	95%
Systemic risk quantified (sys2)	Is the systemic risk somehow quantified, e.g., with reference to solvency risk, liquidity risk, exchange rate risk, or other types of systemic risks?	38%	6%	29%	48%
Policy tools to manage systemic risk identified (sys3)	Does the document make reference to policy tools to manage bank capital adequacy, liquidity position, lending allocation, and banking sector risk taking?	51%	6%	42%	61%
Agenci**es** to implement the strategy identified (imp1)	Does the document make reference to which agency shall implement this strategy? Or how the strategy will be implemented? Even if the implementation is intrinsic, based on existing mandates (e.g., central bank is the systemic risk regulator).	85%	4%	78%	91%
Agencies responsible for achieving development goals assigned (imp2)	Does the document explain how banking sector development goals of the strategy will be implemented?	53%	6%	43%	62%
Agencies to manage systemic risk assigned (imp3)	Is a macroprudential policy committee established, or a similar body to implement macroprudential regulation? Or does the government at least refer to using macroprudential tools to control systemic risk beyond individual bank risk? And if so, can it be implied that the bank supervisor will be involved in this?	54%	6%	44%	63%
Trade-off between development and systemic risk is communicated (trff1)	Does the strategy acknowledge that stricter management of systemic risk, e.g., through additional capital charges, could reduce banking sector development and financial inclusion? Or does the strategy state that the government intends to be less conservative in managing systemic risk compared to its peers to achieve its relatively more ambitious development goals?	26%	5%	17%	34%

Source: Authors' review of financial sector strategies in 78 countries.

Table 7: Differences in Financial Sector Policy Strategies by Income Level, Public Governance, Financial Depth and Structure, and Crisis Experience

Income Level	Upper50	Lower50	diff	Pr(|T|>|t|)	Top25	Bottom25	diff	Pr(|T|>|t|)
Obs	39	39			19	19		
obj1	0.44	0.87	-0.44	0.00	0.37	0.95	-0.58	0.00
obj2	0.10	0.44	-0.33	0.00	0.11	0.47	-0.37	0.01
obj3	0.33	0.79	-0.46	0.00	0.37	0.84	-0.47	0.00
sys1	0.92	0.85	0.08	0.29	1.00	0.79	0.21	0.04
sys2	0.51	0.26	0.26	0.02	0.47	0.16	0.32	0.04
sys3	0.67	0.36	0.31	0.01	0.74	0.26	0.47	0.00
imp1	0.79	0.90	-0.10	0.21	0.79	1.00	-0.21	0.04
imp2	0.41	0.64	-0.23	0.04	0.42	0.74	-0.32	0.05
imp3	0.72	0.36	0.36	0.00	0.89	0.32	0.58	0.00
trff1	0.36	0.15	0.21	0.04	0.37	0.16	0.21	0.15

Financial Structure	Upper50	Lower50	diff	Pr(|T|>|t|)	Top25	Bottom25	diff	Pr(|T|>|t|)
Obs	27	28			13	14		
obj1	0.63	0.57	0.06	0.67	0.69	0.50	0.19	0.33
obj2	0.26	0.21	0.04	0.70	0.38	0.14	0.24	0.16
obj3	0.52	0.57	-0.05	0.70	0.54	0.50	0.04	0.85
sys1	0.85	0.96	-0.11	0.15	0.77	1.00	-0.23	0.06
sys2	0.41	0.39	0.01	0.91	0.46	0.43	0.03	0.87
sys3	0.48	0.68	-0.20	0.14	0.54	0.79	-0.25	0.19
imp1	0.93	0.89	0.03	0.68	0.92	0.93	-0.01	0.96
imp2	0.48	0.61	-0.13	0.36	0.38	0.64	-0.26	0.19
imp3	0.63	0.64	-0.01	0.92	0.54	0.79	-0.25	0.19
trff1	0.33	0.32	0.01	0.93	0.38	0.43	-0.04	0.83

Public Governance	Upper50	Lower50	diff	Pr(|T|>|t|)	Top25	Bottom25	diff	Pr(|T|>|t|)
Obs	39	39			19	20		
obj1	0.46	0.85	-0.38	0.00	0.32	0.85	-0.53	0.00
obj2	0.13	0.41	-0.28	0.00	0.05	0.35	-0.30	0.02
obj3	0.41	0.72	-0.31	0.01	0.32	0.65	-0.33	0.04
sys1	0.95	0.82	0.13	0.08	1.00	0.80	0.20	0.04
sys2	0.51	0.26	0.26	0.02	0.63	0.15	0.48	0.00
sys3	0.69	0.33	0.36	0.00	0.84	0.30	0.54	0.00
imp1	0.85	0.85	0.00	1.00	0.74	0.80	-0.06	0.65
imp2	0.46	0.59	-0.13	0.26	0.32	0.65	-0.33	0.04
imp3	0.79	0.28	0.51	0.00	0.89	0.30	0.59	0.00
trff1	0.38	0.13	0.26	0.01	0.47	0.10	0.37	0.01

Financial Inclusion	Upper50	Lower50	diff	Pr(|T|>|t|)	Top25	Bottom25	diff	Pr(|T|>|t|)
Obs	34	34			17	17		
obj1	0.53	0.79	-0.26	0.04	0.29	0.88	-0.59	0.00
obj2	0.21	0.41	-0.21	0.07	0.12	0.53	-0.41	0.01
obj3	0.50	0.65	-0.15	0.33	0.29	0.71	-0.41	0.04
sys1	0.97	0.82	0.15	0.05	1.00	0.76	0.24	0.03
sys2	0.41	0.26	0.15	0.13	0.53	0.18	0.35	0.03
sys3	0.71	0.29	0.41	0.00	0.82	0.29	0.53	0.00
imp1	0.85	0.85	0.00	1.00	0.76	0.82	-0.06	0.68
imp2	0.53	0.56	-0.03	0.81	0.35	0.53	-0.18	0.32
imp3	0.82	0.29	0.53	0.00	1.00	0.35	0.65	0.00
trff1	0.47	0.06	0.41	0.00	0.59	0.00	0.59	0.00

Financial Depth	Upper50	Lower50	diff	Pr(|T|>|t|)	Top25	Bottom25	diff	Pr(|T|>|t|)
Obs	41	37			23	18		
obj1	0.54	0.78	-0.25	0.02	0.65	0.89	-0.24	0.08
obj2	0.20	0.35	-0.16	0.12	0.26	0.28	-0.02	0.91
obj3	0.49	0.65	-0.16	0.16	0.61	0.78	-0.17	0.26
sys1	0.93	0.84	0.09	0.23	0.91	0.83	0.08	0.45
sys2	0.49	0.27	0.22	0.05	0.39	0.22	0.17	0.26
sys3	0.63	0.38	0.26	0.02	0.65	0.28	0.37	0.02
imp1	0.80	0.89	-0.09	0.29	0.74	0.89	-0.15	0.24
imp2	0.49	0.57	-0.08	0.49	0.57	0.61	-0.05	0.77
imp3	0.66	0.41	0.25	0.03	0.70	0.28	0.42	0.01
trff1	0.39	0.11	0.28	0.00	0.43	0.06	0.38	0.01

Crisis Experience	no crisis	1 crisis	diff	Pr(|T|>|t|)	1 crisis	2crises	diff	Pr(|T|>|t|)
Obs	19	40			40	14		
obj1	0.74	0.63	0.11	0.41	0.63	0.64	-0.02	0.96
obj2	0.32	0.28	0.04	0.75	0.28	0.21	0.06	0.66
obj3	0.58	0.60	-0.02	0.88	0.60	0.50	0.10	0.52
sys1	0.84	0.95	-0.11	0.17	0.95	0.79	0.16	0.07
sys2	0.26	0.38	-0.11	0.41	0.38	0.57	-0.20	0.21
sys3	0.37	0.60	-0.23	0.10	0.60	0.43	0.17	0.28
imp1	0.68	0.88	-0.19	0.08	0.88	1.00	-0.13	0.17
imp2	0.47	0.53	-0.05	0.72	0.53	0.57	-0.05	0.77
imp3	0.42	0.65	-0.23	0.10	0.65	0.50	0.15	0.33
trff1	0.16	0.30	-0.14	0.25	0.30	0.29	0.01	0.92

Source: Authors' calculations.

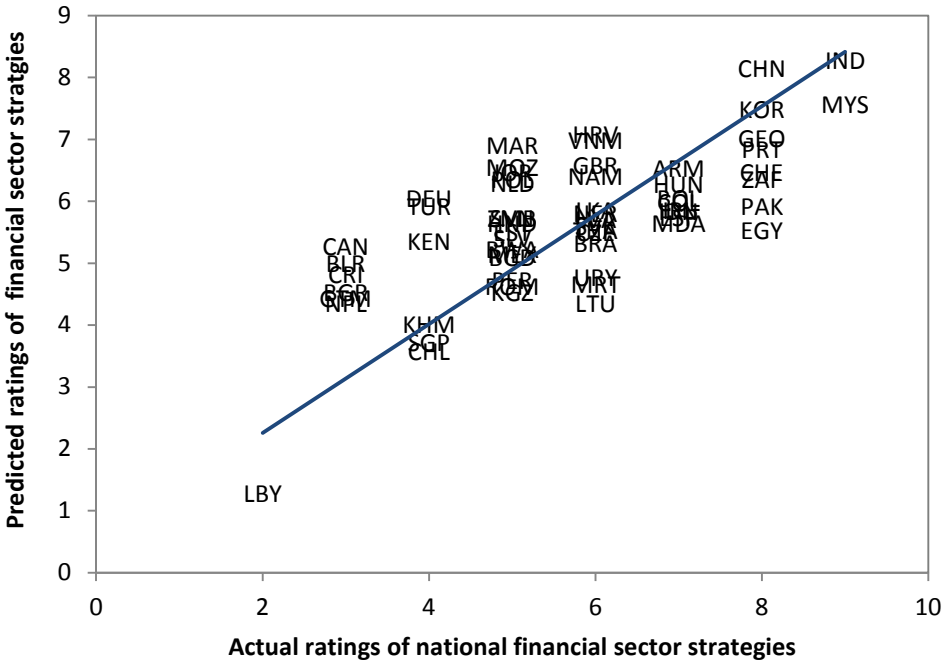
Note: The countries are split based on average gross national income per capita over 2007–11, regulatory quality of public governance in 2011, average credit-to-GDP over 2007–11, average share of bank assets in total financial system assets (banks, insurance companies, stock market capitalization), measure of access to financial services by Honohan (2008), and the experience of banking crises based on Laeven and Valencia (2012).

Table 8: Parsimonious Benchmark Models for National Financial Sector Strategies

Category of Country Characteristics	Independent Variables	Dependent Variable				
		Strategy	Objective	Systemic Risk	Implementation	Trade-off
Legal system	civil	2.403*			0.860**	0.465***
		(0.0939)			(0.0322)	(0.00237)
	anycivil				0.843*	
					(0.0863)	
	common	1.825			1.651***	
		(0.289)			(0.00126)	
	anycommon				0.522*	0.258*
					(0.0627)	(0.0678)
	anyrelig	0.841	-0.701	0.523*	0.471	0.374***
		(0.329)	(0.162)	(0.0843)	(0.259)	(0.00620)
	mixed	2.621	0.849**	-0.368	1.418***	
		(0.121)	(0.0395)	(0.224)	(0.00619)	
Macroeconomic environment	inc0711	-0.515	-0.495**			
		(0.245)	(0.0160)			
	inc3group	-1.373*		-1.080***	-0.524*	
		(0.0557)		(4.81e-08)	(0.0860)	
	inflation0711				-0.0623	-0.0246
					(0.157)	(0.216)
	kaopen0610	-0.270	-0.145			
		(0.300)	(0.259)			
	trade0711	-0.00836			-0.00304	0.00205
		(0.152)			(0.174)	(0.106)
Public governance and supervisory structures in the financial sector	GE_PRANK	0.0508	0.0171			0.0150**
		(0.100)	(0.200)			(0.0286)
	RQ_PRANK					-0.0132*
						(0.0655)
	VA_PRANK	-0.0225				
		(0.279)				
Financial depth and inclusion	cred0711	0.00571	0.0127***	-0.00684**		
		(0.378)	(0.00106)	(0.0131)		
	honohan2008	-0.0209	-0.0228**		-0.0125*	
		(0.161)	(0.0293)		(0.0945)	
Ownership in the financial sector	foreignbank0509	0.00595	-0.00826*	0.00683*		-0.00430
		(0.623)	(0.0932)	(0.0954)		(0.191)
	foreignasset0509				-0.000449	0.00549***
					(0.862)	(0.00951)
Experience of banking crisis	w_crisis	120.2*			74.01***	21.34
		(0.0918)			(0.00245)	(0.178)
	crisis	-119.1*			-73.01***	-21.23
		(0.0922)			(0.00254)	(0.176)
	bcrisis			0.134		
				(0.405)		
Other	FIRST			-0.504		
				(0.213)		
	Constant	9.756*	5.443***	3.927***	1.901**	-0.207
		(0.0545)	(6.09e-05)	(0)	(0.0360)	(0.506)
	Observations	61	62	66	62	67
	R-squared	0.489	0.551	0.446	0.463	0.414
	Adjusted R-squared	0.318	0.484	0.379	0.318	0.297

Note: P-values based on bootstrapped standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Figure 1. Actual and Model Predicted Values of Strategy Ratings



Source: Authors' calculations.

Appendix

Table A1: Description of Variables and Their Data Sources

Variable name	Description	Source
strategy	Sum of 10 indicators from 4 categories: objective, systemic risk, implementation, and trade-off.	Authors' calculation based on the analysis of the national financial sector strategies
objective	Sum of 3 indicators of objective: obj1+obj2+obj3.	Authors' calculation based on the analysis of the national financial sector strategies
risk	Sum of 3 indicators of systemic risk: sys1+sys2+sys3.	Authors' calculation based on the analysis of the national financial sector strategies
implementation	Sum of 3 indicators of implementation: imp1+imp2+imp3.	Authors' calculation based on the analysis of the national financial sector strategies
tradeoff	Trade-off indicator.	Authors' calculation based on the analysis of the national financial sector strategies
inc3group	Income group category (1:HIC; 2:MIC, 3:LIC).	World Development Indicators 2013
inc0711	Ln transformed of average GNI per capita from 2007 to 2011.	World Development Indicators 2013
inflation0711	Average inflation from 2007 to 2011 as measured by the consumer price index.	World Development Indicators 2013
civil	Dummy variable that takes the value 1 if the type of legal system of the country is a civil law system and zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
anycivil	Dummy variable that takes the value 1 if the type of legal system of the country is a civil law and a mixed system with civil law, zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
common	Dummy variable that takes the value 1 if the type of legal system of the country is a common law and zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
anycommon	Dummy variable that takes the value 1 if the type of legal system of the country is a common law and a mixed system with common law, zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
anycustom	Dummy variable that takes the value 1 if the type of legal system of the country is a mixed system with customary law and zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
anyrelig	Dummy variable that takes the value 1 if the type of legal system of the country is a mixed system with religious law and zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
mixed	Dummy variable that takes the value 1 if the type of legal system of the country is a mixed system and zero otherwise.	Authors' calculation based on *The World Factbook* (CIA 2012)
kaopen0610	The 2008 Chinn-Ito index measuring a country's degree of capital account openness (average from 2006 to 2010).	Chinn and Ito 2006, index updated in 2013
trade0711	Average trade as a percentage of GDP from 2007 to 2011.	World Development Indicators 2013
GE_PRANK	Government effectiveness in 2011.	Worldwide Governance Indicators (WGI) 2012
RQ_PRANK	Regulatory quality in 2011.	Worldwide Governance Indicators 2012
VA_PRANK	Voice and accountability in 2011.	Worldwide Governance Indicators 2012
sq	Supervisory quality.	Replicated from Anginer, Demirguc, and Zhu 2012, based on BRSS III 2008

ps0610	Average from 2006 to 2010 of a dummy variable that takes the value 1 if the prudential supervision is within the central bank and zero otherwise.	Melecky and Podpiera, 2012
integ0610	Average from 2006 to 2010 of a dummy variable that takes the value 1 if the microprudential supervision is within the central bank or FSA [Financial Supervisory Authority] and zero otherwise.	Melecky and Podpiera, 2012
cred0711	Average credit to GDP from 2007 to 2011.	FinStats 2013
bank	Average share of banks in the financial system composed of banks, insurance companies, and stock market from 2005 to 2010.	Authors' calculation using the Global Financial Development Database 2012
hhi	Herfindahl-Hirschman Index (HHI) calculated based on banks, insurance companies, and stock market.	Authors' calculation using the Global Financial Development Database 2012
findex1	Measure of financial inclusion on credit and savings data.	Authors' calculation using the Global Financial Inclusion Database
honohan	Honohan (2008) composite measure of access to financial services.	Honohan 2008
foreignbank0509	Average percentage of foreign banks among total banks from 2005 to 2009.	Global Financial Development Database 2012
foreignasset0509	Average percentage of foreign bank assets among total bank assets from 2005 to 2009.	Global Financial Development Database 2012
forowned05	The fraction of banks that are 50% or more owned by foreign investors.	BRSS III 2008
govowned05	The fraction of banks that are 50% or more owned by the government.	BRSS III 2008
entrybr	Entry barrier for banks.	BRSS III 2008
crisis	Total number of systemic banking crises from 1970 to 2011.	Leaven and Valencia 2012
w_crisis	Crises weighted by year of occurrence/2011.	Authors' calculation using Leaven and Valencia 2012
bcrisis	Dummy variable that takes the value 1 if the country has experienced at least one banking crisis and zero otherwise.	Authors' calculation using Leaven and Valencia 2012
repcrisis	Dummy variable that takes the value 1 if the country has repeated banking crises (2) and zero otherwise.	Authors' calculation using Leaven and Valencia 2012
FIRST	Dummy variable that takes the value 1 if the country received FIRST funding to prepare its financial sector strategy and zero otherwise.	FIRST

Table A2: Regressions by Category of Variables: Legal and Macroeconomic Environment

Independent Variables	Full Models					Parsimonious Models				
	Strategy	Objective	Systemic Risk	Implementation	Trade-off	Strategy	Objective	Systemic Risk	Implementation	Trade-off
inc0711	-0.411	-0.226	-0.0196	-0.161	-0.00465	-0.373	-0.259**			
	(0.386)	(0.324)	(0.926)	(0.364)	(0.962)	(0.245)	(0.0113)			
inc3group	-1.161	0.0274	-0.626*	-0.457	-0.106	-1.091*		-0.539***	-0.307**	
	(0.161)	(0.947)	(0.0876)	(0.169)	(0.555)	(0.0844)		(0.00741)	(0.0387)	
inflation0711	-0.0189	-0.00411	0.0403	-0.0300	-0.0250			0.0400		-0.0315**
	(0.840)	(0.945)	(0.314)	(0.595)	(0.191)			(0.308)		(0.0198)
civil	2.029	0.126	0.658	0.504	0.742***	2.164*				0.662***
	(0.329)	(0.873)	(0.345)	(0.479)	(0.00556)	(0.0717)				(0.00388)
anycivil	0.225	0.210	-0.193	0.260	-0.0525				0.775*	
	(0.856)	(0.701)	(0.698)	(0.602)	(0.837)				(0.0788)	
common	1.814	0.232	0.528	0.628	0.425	1.965*			0.512	0.530*
	(0.268)	(0.794)	(0.358)	(0.370)	(0.183)	(0.0598)			(0.317)	(0.0547)
anycommon	0.273	0.325	-0.348	0.194	0.102				0.398	
	(0.742)	(0.341)	(0.311)	(0.455)	(0.703)				(0.188)	
anycustom	1.032	0.141	0.189	0.529*	0.173	1.089*			0.522***	0.176
	(0.277)	(0.724)	(0.577)	(0.0693)	(0.385)	(0.0557)			(0.00300)	(0.184)
anyrelig	0.187	-0.258	0.297	-0.0381	0.186		-0.399			0.157
	(0.852)	(0.590)	(0.475)	(0.921)	(0.367)		(0.228)			(0.265)
mixed	1.431	0.530	0.126	0.386	0.388	1.641	0.581**	-0.362		0.346*
	(0.426)	(0.484)	(0.849)	(0.604)	(0.146)	(0.183)	(0.0418)	(0.176)		(0.0571)
kaopen0610	-0.0118	-0.194*	0.157*	0.0358	-0.0101		-0.183**	0.154**		
	(0.955)	(0.0620)	(0.0652)	(0.692)	(0.858)		(0.0473)	(0.0446)		
trade0711	-0.00189	-0.00113	-0.000306	-0.00250	0.00205*				-0.00285	0.00226*
	(0.710)	(0.678)	(0.867)	(0.210)	(0.0572)				(0.106)	(0.0715)
Constant	9.132	3.183	2.421	3.714*	-0.185	8.490*	3.784***	2.495***	1.879***	-0.370
	(0.148)	(0.286)	(0.385)	(0.0650)	(0.881)	(0.0550)	(1.23e-05)	(5.19e-11)	(0.000593)	(0.207)
Observations	76	76	76	76	76	78	77	77	77	77
R-squared	0.148	0.330	0.316	0.173	0.258	0.145	0.317	0.291	0.173	0.244
Adjusted R-squared	-0.0145	0.202	0.186	0.0151	0.117	0.0723	0.279	0.251	0.102	0.167

Note: P-values based on bootstrapped standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Table A3: Regressions by Category of Variables: Public Governance and Institutional Structure of Financial Sector Supervision

Independent Variables	Full Models					Parsimonious Models				
	Strategy	Objective	Systemic Risk	Implementation	Trade-off	Strategy	Objective	Systemic Risk	Implementation	Trade-off
GE_PRANK	0.0509	0.0285	-0.00367	0.0129	0.0141**	0.0276	0.0222			0.00762***
	(0.128)	(0.164)	(0.782)	(0.381)	(0.0344)	(0.126)	(0.183)			(0.000245)
RQ_PRANK	-0.0574	-0.0405*	0.00603	-0.0157	-0.00567	-0.0420*	-0.0386**			
	(0.116)	(0.0645)	(0.679)	(0.376)	(0.418)	(0.0754)	(0.0278)			
VA_PRANK	0.0148		0.00283	0.0113	-0.00167	0.00228		0.00455	0.00879**	
	(0.409)		(0.685)	(0.175)	(0.707)	(0.876)		(0.414)	(0.0146)	
sq	0.244**	0.0606	0.0370	0.111**	0.0346*	0.0614			0.0950**	0.0348*
	(0.0112)	(0.452)	(0.601)	(0.0334)	(0.0986)	(0.395)			(0.0110)	(0.0945)
ps0610	0.652	0.358	0.165	0.132	-0.0125	0.368	0.534			
	(0.180)	(0.302)	(0.613)	(0.567)	(0.943)	(0.362)	(0.121)			
integ0610	0.0704	-0.367	0.563	-0.0752	-0.0502	-0.367		0.609**		
	(0.893)	(0.407)	(0.117)	(0.798)	(0.743)	(0.331)		(0.0142)		
Constant	2.269	1.392	1.050	0.260	-0.443	1.401	2.123***	1.558***	0.382	-0.546**
	(0.182)	(0.358)	(0.349)	(0.777)	(0.134)	(0.270)	(0.000603)	(1.24e-07)	(0.345)	(0.0432)
Observations	54	54	54	54	54	54	59	59	63	63
R-squared	0.232	0.224	0.133	0.175	0.137	0.224	0.203	0.147	0.135	0.164
Adjusted R-squared	0.134	0.143	0.0226	0.0702	0.0266	0.125	0.159	0.117	0.106	0.136

Note: P-values based on bootstrapped standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Table A4: Regressions by Category of Variables: Structural Characteristics of the Domestic Financial Sector

Independent Variables	Full Models					Parsimonious Models				
	Strategy	Objective	Systemic Risk	Implementation	Trade-off	Strategy	Objective	Systemic Risk	Implementation	Trade-off
cred0711	0.0165*	0.0137	-0.00423	0.00352	0.00345	0.0196***	0.0143***			0.00473**
	(0.0977)	(0.109)	(0.437)	(0.345)	(0.408)	(0.00580)	(0.00172)			(0.0290)
bank	-2.473	0.710	-1.828	0.378	-1.733	-2.993		-2.629	0.502	-1.108
	(0.471)	(0.808)	(0.408)	(0.812)	(0.269)	(0.225)		(0.124)	(0.459)	(0.178)
hhi	4.635	-1.311	3.471	0.0362	2.439	4.601	-0.242	4.080*		1.557
	(0.313)	(0.682)	(0.272)	(0.988)	(0.114)	(0.169)	(0.815)	(0.0910)		(0.150)
findex1	-0.0945	0.0334	-0.0348	-0.184	0.0908				-0.185*	
	(0.762)	(0.860)	(0.861)	(0.153)	(0.434)				(0.0505)	
honohan2008	-0.0182	-0.0332***	0.0159	-0.00370	0.00275	-0.0230	-0.0321***	0.0133**		
	(0.271)	(0.00916)	(0.152)	(0.638)	(0.702)	(0.111)	(0.00191)	(0.0494)		
foreignbank0509	-0.0130	-0.0118	0.00480	-0.00156	-0.00450		-0.0121**			
	(0.458)	(0.402)	(0.679)	(0.870)	(0.604)		(0.0424)			
foreignasset0509	-0.0211	0.00248	-0.0102	-0.0177	0.00426	-0.0228			-0.0195**	
	(0.432)	(0.879)	(0.493)	(0.117)	(0.708)	(0.267)			(0.0408)	
forowned05	3.354*	-0.252	1.658	1.284	0.664	3.150*		1.438**	1.055	0.727**
	(0.0751)	(0.854)	(0.156)	(0.179)	(0.420)	(0.0672)		(0.0217)	(0.273)	(0.0196)
govowned05	3.477*	2.252	0.374	0.260	0.592	3.894**	2.330***	0.834	-0.0498	0.359
	(0.0983)	(0.140)	(0.718)	(0.785)	(0.552)	(0.0315)	(0.00597)	(0.361)	(0.927)	(0.484)
entrybr	0.853*	0.310	0.199	0.252*	0.0917	0.841***	0.336**	0.237	0.226	
	(0.0605)	(0.119)	(0.376)	(0.0924)	(0.502)	(0.000529)	(0.0293)	(0.365)	(0.228)	
Constant	-1.997	0.164	-1.250	0.648	-1.558	-2.313	-0.178	-1.841	1.003	-0.445
	(0.668)	(0.951)	(0.640)	(0.720)	(0.299)	(0.304)	(0.907)	(0.471)	(0.532)	(0.244)
Observations	40	40	40	40	40	41	41	41	41	42
R-squared	0.357	0.589	0.369	0.297	0.244	0.360	0.586	0.342	0.271	0.180
Adjusted R-squared	0.135	0.447	0.152	0.0544	-0.0173	0.201	0.513	0.226	0.142	0.0664

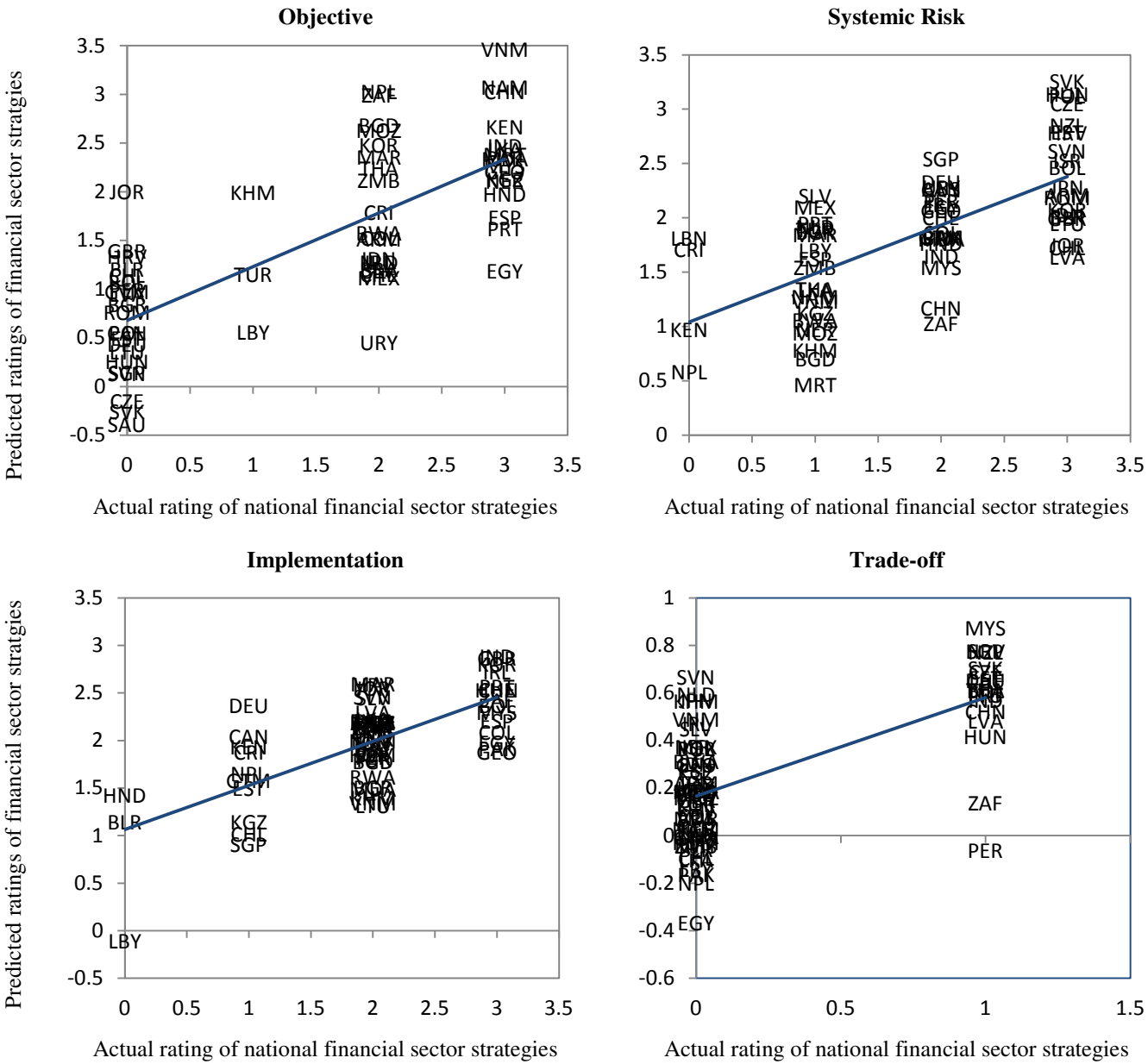
Note: P-values based on bootstrapped standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Table A5: Regressions by Category of Variables: Experience of Banking Crisis

Independent Variables	Full Models					Parsimonious Model				
	Strategy	Objective	Systemic Risk	Implementation	Trade-off	Strategy	Objective	Systemic Risk	Implementation	Trade-off
w_crisis	103.7**	-35.71	47.57	54.86***	36.94***	103.7**	-0.139	51.65	57.66**	37.62***
	(0.0355)	(0.451)	(0.114)	(0.00873)	(0.00857)	(0.0115)	(0.405)	(0.196)	(0.0338)	(0.00105)
crisis	-102.8**	35.19	-47.20	-54.26***	-36.56***	-102.8**		-50.98	-56.85**	-37.19***
	(0.0353)	(0.453)	(0.112)	(0.00870)	(0.00843)	(0.0113)		(0.198)	(0.0347)	(0.00109)
bcrisis	1.001**	0.0826	0.496	0.340	0.0827	1.001				
	(0.0353)	(0.883)	(0.287)	(0.352)	(0.675)	(0.125)				
Constant	4.842***	1.632***	1.474***	1.579***	0.158*	4.842***	1.635***	1.588***	1.658***	0.177**
	(0)	(2.33e-08)	(0)	(0)	(0.0990)	(0)	(0)	(0)	(0)	(0.0208)
Observations	73	73	73	73	73	73	73	73	73	73
R-squared	0.106	0.019	0.073	0.132	0.123	0.106	0.006	0.058	0.121	0.120
Adjusted R-squared	0.0669	-0.0238	0.0332	0.0938	0.0845	0.0669	-0.00804	0.0308	0.0960	0.0954

Note: P-values based on bootstrapped standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Figure A1. Actual and Model Predicted Ratings of National Financial Sector Strategies



Source: Authors' calculations.