Finance and Economic Development: The Role of Government

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Abstract: The empirical literature on finance and development suggests that countries with better developed financial systems experience faster economic growth and enjoy lower levels of poverty and income inequality. If finance is important for development, why do some countries have growth-promoting financial systems while others do not? This paper argues that the governments play an important role in building effective and inclusive financial systems and discusses policies to make finance work for development.

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What is the role of the financial sector in economic development? Economists hold very different views. On the one hand, prominent researchers believe that the operation of the financial sector merely responds to economic development, adjusting to changing demands from the real sector and is therefore overemphasized (Robinson, 1952; Lucas, 1988). On the other hand, equally prominent researchers believe that financial systems play a crucial role in alleviating market frictions and hence influencing savings rates, investment decisions, technological innovation and therefore long-run growth rates. (Schumpeter, 1912; Gurley and Shaw, 1955; Goldsmith, 1969; McKinnon, 1973; Miller 1998).[1]

As the financial crisis that started in the summer of 2007 continues to grow and spread all around the world, the potentially disastrous consequences of weak financial sector policies have moved to the forefront of policy debate once again. At its best, finance works quietly in the background, contributing to growth and poverty reduction; but when things go wrong, financial sector failures are painfully visible. Both success and failure have their origins largely in the policy environment; hence getting the important policy decisions right has always been and continue to be one of the central development challenges.

Despite their inherent fragility, financial institutions underpin economic prosperity. Financial markets and institutions arise to mitigate the effects of information and transaction costs that prevent direct pooling and investment of society's savings. While some theoretical models stress the importance of different institutional forms financial systems can take, more important are the underlying functions that they perform (Levine, 1997 and 2000; Merton and Bodie, 2004). Financial systems help mobilize and pool savings, provide payments services that facilitate the exchange of goods and services, produce and process information about investors and investment projects to enable efficient allocation of funds, monitor investments and exert corporate governance after these funds are allocated, and help diversify, transform and manage risk.

[1] Two famous quotes by Robinson and Schumpeter illustrate these different views. Joan Robinson (1952) argued "Where enterprise leads finance follows," whereas Joseph Schumpeter observed "The banker, therefore, is not so much primarily a middleman…He authorizes people in the name of society …(to innovate)."

While still far from being conclusive, the bulk of the empirical literature on finance and development suggests that well-developed financial systems play an independent and causal role in promoting long run economic growth. More recent evidence also points to the role of the sector in facilitating disproportionately rapid growth in the incomes of the poor, suggesting that financial development helps the poor catch up with the rest of the economy as it grows. These research findings have been instrumental in persuading developing countries to sharpen their policy focus on the financial sector. If finance is important for development, why do some countries have growth-promoting financial systems while others do not? What can governments do to develop their financial systems?

This paper addresses these questions. The next section provides a brief review of the extensive empirical literature on finance and economic development and summarizes the main findings. Section III discusses the governments' role in building effective and inclusive financial systems. Finally, the last section concludes with a discussion of the implications of the still-unfolding financial crisis on financial sector policies going forward.

II. Finance and Economic Development: Evidence

By now there is an ever-expanding body of evidence that suggests countries with better developed financial systems experience faster economic growth (Levine, 1997 and 2005). More recent evidence also suggests financial development not only promotes growth, but also improves the distribution of income. The following sections provide a brief review of this literature and its findings, also discussing the main criticisms, namely issues of identification, problems associated with measurement and nonlinearities, as well as potential counterexamples and outliers.

II.a Finance and Growth

It is by now well-established that significant part of the differences in long run economic growth across countries can be explained by differences in their financial development (King and Levine, 1993; Levine and Zervos, 1998). The finding that better developed banks and markets are associated with faster growth is also confirmed by panel and time-series estimation techniques (Levine, Loazya and Beck, 2000;

Christopoulos and Tsionas, 2004; Rousseau and Sylla, 1999). This research also indicates that financial sector development helps economic growth through more efficient resource allocation and productivity growth rather than through the scale of investment or savings mobilization (Beck, Levine and Loayza, 2000). Furthermore, cross-country time-series studies also show that financial liberalization boosts economic growth by improving allocation of resources and the investment rate (Bekaert, Harvey and Lundblad, 2005).

However, dealing with *identification issues* is always very difficult with aggregate data. Widespread problems include heterogeneity of effects across countries, measurement errors, omitting relevant explanatory variables, and endogeneity, all of which tend to bias the estimated effect of the included variables. Although the studies cited above have made plausible efforts to deal with these concerns relying on instruments and making use of dynamic panel estimation methodologies, questions still remain. Hence researchers have used micro data and tried to exploit firm level and sectoral differences to go beyond aggregates. These studies address causality issues by trying to identify firms or sectors that are more likely to suffer from limited access to finance and see how the growth of these firms and sectors is affected in countries with differing levels of financial development. Demirguc-Kunt and Maksimovic (1998) and Rajan and Zingales (1998) are two early examples of this approach.

Both studies start by observing that if financial underdevelopment prevents firms (or industries) from investing in profitable growth opportunities, it will not constrain all firms (or industries) equally. Firms that can finance themselves from retained earnings, or industries that technologically depend less on external finance will be minimally affected, whereas firms or industries whose financing needs exceed their internal resources may be severely constrained. Looking for evidence of a specific mechanism by which finance affects growth – i.e. ability to raise external finance – allows both papers to provide a stronger test of causality.

Specifically, Demirguc-Kunt and Maksimovic (1998) use firm level data from 8500 large firms in 30 countries and a financial planning model to predict how fast those firms would have grown if they had no access to external finance. And they find that in each country the proportion of firms that grew faster than this rate was higher, the higher the country's financial development and quality of legal enforcement.

Rajan and Zingales (1998) instead use industry level data across 36 sectors and 41 countries and show that industries that are naturally heavy users of external finance benefit disproportionately more from greater financial development compared to other industries. Natural use of external finance is measured by the finance-intensity of U.S. industries since the U.S. financial system is relatively free of frictions, so each industry's use of external finance in the U.S. is assumed to be a good proxy for its demand.

The additional information obtained by working with cross-country firm or industry-level data may not be adequate to satisfy the skeptics, however. For example, although the measure of external financing employed by Demirguc-Kunt and Maksimovic does not require the assumption that external capital requirements in each industry are the same across countries as that of Rajan and Zingales, it is also more endogenous since it relies on firm characteristics. And although Rajan and Zingales' analysis looks at within-country, between-industry differences and is therefore less subject to criticism due to omitted variables, the main underlying assumption that industry external dependence is determined by technological differences may not be accurate. After all, two firms with the same capital intensive technology, may have very different financing needs since their ability to generate internal cash flow would depend on the market power they have or the demand they face. Moreover, the level of competition faced by the firm may itself depend on the development of the financial system, introducing more endogeneity.

Beck, Demirguc-Kunt, Laeven and Levine (2006) use Rajan and Zingales (1998) approach to highlight a distributional effect: They find that industries that are naturally composed of small firms grow faster in financially developed economies, a result that provides additional evidence that financial development disproportionately promotes the growth of smaller firms. Beck, Demirguc-Kunt and Maksimovic (2005) also highlight the size effect, but using firm survey data: they show that financial development eases the obstacles that firms face to growing faster, and that this effect is stronger particularly for smaller firms. More recent survey evidence also suggests that access to finance is associated with faster rates of innovation and firm dynamism consistent with the cross-country finding that finance promotes growth through productivity increases (Ayyagari, Demirguc-Kunt and Maksimovic, 2007b).

Dropping the cross-country dimension and focusing on an individual country often increases the confidence in the results by reducing potential biases due to measurement error and reducing concerns about omitted variables and endogeneity. In a study of individual regions of Italy, Guiso, Sapienza and Zingales (2002) use a household dataset and examine the effect of differences in local financial development on economic activity across different regions. They find that local financial development enhances the probability that an individual starts a business, increases industrial competition, and promotes growth of firms. And these results are stronger for smaller firms which cannot easily raise funds outside of the local area. Another example is Haber's (1997) historical comparison of industrial and capital market development in Brazil, Mexico and the United States between 1830 and 1930. He uses firm level data to illustrate that international differences in financial development significantly affected the rate of industrial expansion.

Perhaps one of the cleanest ways of dealing with identification problems is to focus on a particular policy change in a specific country and evaluate its impact. One example of this approach is Jayaratne and Strahan's (1996) investigation of the impact of bank branch reform in individual states of the United States. Since early 1970s, U.S. states started relaxing impediments on their intrastate branching. Using a difference-in-difference methodology, Jayaratne and Strahan estimate the change in economic growth rates after branch reform relative to a control group of states that did not reform. They show that bank branch reform boosted bank-lending quality and accelerated real per capita growth rates. In another study Bertrand, Schoar and Thesmar (2004) provide firm-level evidence from France that shows the impact of 1985 deregulation eliminating government intervention in bank lending decisions fostered greater competition in the credit market, inducing an increase in allocative efficiency across firms. Of course focusing on individual country cases often raises the question how applicable the results are in different country settings. Nevertheless, these careful country-level analyses boost our confidence in the link between financial development and growth that is suggested by the cross-country studies.

Unfortunately many potential causal factors of development interest do not vary much within a country, and exogenous policy changes do not occur often enough. For example, besides debates concerning the role of finance in economic development, economists have debated the relative importance of bank-based and market-based financial systems for a long time (Golsdmith, 1969; Boot and Thakor, 1997; Allen and Gale, 2000; Demirguc-Kunt and Levine, 2001). Research findings in this area have established that the debate matters much less than was previously thought, and that it is the financial services themselves that matter more than the form of their delivery. Financial structure *does* change during development, with financial systems becoming more market-based as the countries develop (Demirguc-Kunt and Levine, 1996). But controlling for overall financial development, differences in financial structure per se do not help explain growth rates. Nevertheless, these studies do not necessarily imply that institutional structure is unimportant for growth, rather that there is not one optimal institutional structure suitable for all countries at all times. Growth-promoting mixture of markets and intermediaries is likely to be determined by the legal, regulatory, political, policy and other factors that have not been adequately incorporated into the analysis or the indicators used in the literature may not sufficiently capture the comparative roles of banks and markets.

Financial development has also been shown to play an important role in dampening the impact of external shocks on the domestic economy (Beck, Lundberg and Majnoni, 2006; Raddatz, 2006), although financial crises do occur in developed and developing countries alike (Demirguc-Kunt and Detragiache, 1998 and 1999; Kaminsky and Reinhart, 1999). Indeed, deeper financial systems without the necessary institutional development has been shown to lead to a poor handling or even magnification of risk rather than its mitigation. For example, when banking systems grow too quickly, booms are inevitably followed by busts, in which case size and depth may actually reflect policy distortions rather than development as in numerous country case studies discussed in Demirguc-Kunt and Detragiache (2005).

Besides issues of identification, problems associated with *measurement* and *non-linearities* also plague the literature. For example, below a certain level of development, small differences in financial development do not seem to help growth (Rioja and Valev, 2004). Distinguishing between short-run and long-run effects of financial development is also important. Loayza and Ranciere (2005) estimate both effects using a pooled mean group estimator. While they confirm a positive long -run effect, they also identify a negative short-run effect, where short-term surges in bank lending can actually signal the on-set of financial crisis as discussed above. Also, financial development may boost income and allow developing countries catch up, but not lead to an increase in the long run growth rate. Aghion, Howit, and Mayer-Foulkes (2005) develop a model that predicts that low income countries with low financial development will continue to fall behind the rest, whereas those reaching the higher level of financial development will converge. Their empirical results confirm that financial development helps an economy converge faster, but that there is no effect on steady-state growth.

Another challenge to the finance and growth literature comes in the form of individual country *outliers*. For example, China is often mentioned as a counterexample to the findings in finance and growth literature since despite weaknesses in its formal banking system, China is one of the fastest growing economies in the world (Allen, Qian, and Qian 2005). So, is the emphasis on formal financial system development misplaced? Can informal systems substitute for formal systems? Indeed, in China, inter-provincial differences in growth rates are highly correlated with banking debt, but negatively (Boyreau-Debray and Wei, 2005). This emphasizes the importance of focusing on allocation of credit to the private sector, as opposed to all bank intermediation. Hence, mobilizing and pouring funds into the declining parts of the Chinese state enterprise system, as the main Chinese banks were doing, has not been growth promoting. However, focusing on small and medium firms – which account for the most dynamic part of the Chinese economy – shows that those firms receiving bank credit in recent years did tend to grow more quickly compared to those receiving funds from informal sources (Ayyagari, Demirguc-Kunt and Maksimovic, 2007). This suggests that the ability of informal mechanisms to substitute for formal financial systems is likely to be exaggerated.

II.b Finance, Income Distribution and Poverty

If finance promotes growth, over the long term financial development should also help reduce poverty by lifting the welfare of most households. But do poor households benefit proportionately from financial development? Could there be a widening of income inequalities with the deepening of financial systems? And how important is direct access to financial services in this process?

Theory provides conflicting predictions in this area.[2] Some theories argue that financial development should have a disproportionately beneficial impact on the poor since informational asymmetries produce credit constraints that are particularly binding on the poor. Poor people find it particularly difficult to become entrepreneurs and fund their own investments, or invest in their education internally or externally since they lack resources, collateral and political connections to access finance (see for example, Banerjee and Newman, 1993; Galor and Zeira, 1993; Aghion and Bolton, 1997). More generally, some political economy theories also suggest that better functioning financial systems make financial services available to a wider segment of the population, rather than restricting them to politically connected incumbents (Rajan and Zingales, 2003; Morck, Wolfenzon and Young, 2005). Yet others argue that financial access, especially to credit, only benefits the rich and the connected, particularly at early stages of economic development and therefore, while financial development may promote growth, its impact on income distribution is not clear (Lamoreaux, 1994; Haber, 2005).

Finally, if access to credit improves with aggregate economic growth and more people can afford to join the formal financial system, the relationship between financial development and income distribution may be non-linear, with adverse effects at early stages, but a positive impact after a certain point (Greenwood and Jovanovic,1990). Hence, at the outset, expanding access to finance may actually increase inequality, as new entrepreneurs who manage to finance their investments will experience a surge in their incomes. Only after labor and product market effects start becoming significant, increasing employment opportunities and wages of the poor, we would see a reduction in income inequality. This is indeed what Gine and Townsend (2004) find when they build a general equilibrium model of Thai growth and use

[2] See Demirguc-Kunt and Levine (2007) for an extensive review of the theoretical literature in this area.

household data over the 1976-96 period to estimate some of the model's parameters and calibrate others. Their simulations suggest net welfare benefits of financial development to be substantial, though they are initially disproportionately concentrated on a small group of talented, low-income individuals who were unable to become entrepreneurs without access to credit. But eventually, the greatest impact of financial deepening on income inequality and poverty comes through indirect effects, as more people enter the labor market and the wages increase. Although these calibrated theoretical models illuminate important aspects of the financial development process, their results need to be interpreted with care since, despite their complexity, it is very difficult to model all relevant aspects of the growth and inequality processes.

There is also considerable empirical work on the impact of access to finance on the poor from the microfinance literature (see Armendariz de Aghion and Morduch, 2005). Although success stories of microfinance are well documented in the practitioner literature, a rigorous evaluation requires careful distinction between those changes that can clearly be attributed to financial access from those that might have happened anyway or are due to other changes in the environment in which microfinance clients operate. In other words, identification issues again complicate the analysis. The debate surrounding the most famous microfinance institution, Bagladesh's Grameen Bank illustrates how difficult this task has been. While Pitt and Khandker (1998) found a significant effect of use of finance on household welfare, more careful analyses and greater attention to identification issues by Morduch (1998) and Khandker (2003) found insignificant or much smaller effects. There is quite a bit of on-going research in this area and this research using randomized experiments to address identification issues will likely shed more light on the issue of impact (see World Bank, 2007). However, it is fair to say that at present, the large body of empirical research evidence on the benefits of microfinance is not conclusive (see Cull, Demirguc-Kunt and Morduch, 2008).

But to evaluate the impact of finance on poverty and income distribution one needs to look beyond the direct impact on the households anyway, since the theoretical models discussed above suggest the spill-over effects of financial development through labor and product markets are likely to be significant. Given that these effects cannot be analyzed through micro studies, a more macro approach helps complete the picture.

For example, in cross-country regressions, Beck, Demirguc-Kunt and Levine (2007) investigate the relationship between financial depth and changes in both income distribution and absolute poverty. Looking at the 1960-2005 period, they find that not only does a deeper financial system accelerate national growth, but it is associated with a faster increase in the income share of the poorest group. They also find a negative relationship between financial development and the growth rate of the Gini coefficient, suggesting that finance reduces income inequality.[3] These findings are not only robust to controlling for other country characteristics associated with economic growth and changes in income inequality, but the authors make an attempt to control for potential reverse causality using instrumental variables, as well as using panel techniques that control for omitted variable and endogeneity bias.

Although they are able to capture spill-over effects, these results obtained in cross-country regressions are subject to caveats given the difficulty of resolving identification issues as discussed above. But these results are also consistent with the findings of the general equilibrium models which suggest that in the long run, financial development is associated with reductions in income inequality.

If financial development promotes growth and improves income inequality, it should also reduce poverty. Beck, Demirguc-Kunt and Levine (2007) also estimate the change in the share of each country's population below international poverty lines resulting from financial deepening. Again, they find a positive effect of finance on poverty reduction. Countries with higher levels of financial development experience faster reductions in the share of population living on less than a dollar a day over the 1980s and 1990s. Investigating levels rather than growth rates, Honohan (2004) also shows that even at the same average income, economies with deeper financial systems have fewer poor people.

As in the case of finance and growth literature, here too further evidence comes from case studies that investigate the impact of specific policy changes to better deal with identification issues. Following the

[3] Looking at levels, rather than growth rates Clarke et al. (2003) provide further evidence that financial development is associated with lower levels of inequality.

Jayaratne and Strahan (1996) approach discussed above, Beck, Levine and Levkov (2007) exploit the same policy change to assess the effect of US branch deregulation, this time on income inequality. They find that states see their Gini coefficient decrease by a small but statistically significant amount in the years after deregulation relative to other states, and relative to before the deregulation. They also find that the main decrease on income inequality comes not from enhancing entrepreneurship, but rather through indirect effects of higher labor demand and higher wages.

Another study looks at the branching restrictions policy imposed by the Indian Government between 1977 and 1990, which allowed new branching in a district that already had bank presence, only if the bank opened four branches in districts without bank presence. This led to the opening of 30,000 new rural branches over this period. Burgess and Pande (2005) find that this branch expansion during the policy period accounted for 60 percent of rural poverty reduction, largely through an increase in non-agricultural activities and especially through an increase in unregistered or informal manufacturing activities. Although the poverty impact is striking, there were also large losses incurred by the banks due to subsidized interest rates and high loan losses suggesting significant long term costs.

Although a large body of evidence suggests that financial development reduces income inequality and poverty, we are still far from understanding the channels through which this effect operates. For example, how important is direct provision of finance to the poor? Is it more important to improve the functioning of the financial system so that it expands access to existing firms and households or it is more important to broaden access to the underserved (including the non-poor who are often excluded in many developing countries)? Of course, efficiency and access dimensions of finance are also likely to be linked; in many countries improving efficiency would have to entail broader access beyond concentrated incumbents. Much more empirical research using micro datasets and different methodologies will be necessary to better understand the mechanisms through which finance affects income distribution and poverty.

Qualifications and caveats notwithstanding, taken as a whole, the empirical evidence reviewed in this section suggests that countries with better developed financial systems grow faster and that this growth disproportionately benefits the poorer segments of the society. Hence, for policymakers, making financial development a priority makes good sense. Yet, financial system development differs widely across countries. What makes some countries develop growth-promoting financial systems, while others cannot? If finance is crucial for economic development, what can governments do to ensure well-functioning financial systems? I turn to these questions next.

III. Policy Choices in Finance: Government's Role in Making Finance Work

Although finance thrives on market discipline and fails to contribute to development process effectively in the presence of interventionist policies, governments do have a very important role to play in promoting well-functioning financial systems. Below, I discuss different government policies and, where applicable, the evidence on pros and cons of these policies.

III.a Political and Macroeconomic Environment

Even if historical factors are favorable to financial development, political turmoil may lead to macroeconomic instability and deterioration in business conditions.[4] Civil strife and war destroys capital and infrastructure, and expropriations may follow military takeovers. Corruption and crime thrive in such environments, increasing cost of doing business and creating uncertainty about property rights. Detragiache, Gupta and Tressel (2005) show that for low income countries political instability and corruption have a detrimental effect on financial development. Investigating the business environment for 80 countries using firm level survey data, Ayyagari, Demirguc-Kunt and Maksimovic (2005) find that political instability and crime are important obstacles to firm growth, particularly in African and Transition countries. Further, Beck, Demirguc-Kunt and Maksimovic (2005) show that the negative impact of corruption on firm growth is most pronounced for smaller firms.

Given a stable political system, well functioning financial systems also require fiscal discipline and stable macroeconomic policies on the part of governments. Monetary and fiscal policies affect the taxation

[4] There is also a large literature that discusses the historical determinants of financial development – such as legal origin, religion and culture, ethnic diversity and initial geographic endowments. See Beck, Demirguc-Kunt and Levine (2003a) and Ayyagari, Demirguc-Kunt and Maksimovic (2006, 2008) for a discussion and evaluation of these theories.

of financial intermediaries and provision of financial services (Bencivenga and Smith, 1992; Roubini and Sala-i-Martin, 1995). Often large financing requirements of governments crowd out private investment by increasing the required returns on government securities and absorbing the bulk of the savings mobilized by the financial system. Bank profitability does not necessarily suffer given the high yields on these securities, but the ability of the financial system to allocate resources efficiently is severely curtailed. Empirical studies have also shown that countries with lower and more stable inflation rates experience higher levels of banking and stock market development (Boyd, Levine and Smith, 2001) and high inflation and real interest rates are associated with higher probability of systemic banking crises (Demirguc-Kunt and Detragiache, 1998 and 2005).

III.b Legal and Information Infrastructure

Financial systems also require developed legal and information infrastructures to function well. Firms' ability to raise external finance in the formal financial system is quite limited if the rights of outside investors are not protected. Outside investors are reluctant to invest in companies if they will not be able to exert corporate governance and protect their investment from controlling shareholders/owners or the management of the companies. Thus, protection of property rights and effective enforcement of contracts are critical elements in financial system development.

Empirical evidence shows firms are able to access external finance in countries where legal enforcement is stronger (La Porta et al., 1997; Demirguc-Kunt and Maksimovic, 1998; Beck, Demirguc-Kunt and Maksimovic, 2005), and that better creditor protection increases credit to the private sector (Djankov, McLiesh and Shleifer, 2007). More effective legal systems allow more flexible and adaptable conflict resolution, increasing firms' access to finance (Djankov et al., 2007; Beck, Demirguc-Kunt and Levine, 2005). In countries where legal systems are more effective, financial systems have lower interest rate spreads and are more efficient (Demirguc-Kunt, Laeven and Levine, 2004).

Timely availability of good quality information is equally important, since this helps reduce information asymmetries between borrowers and lenders. The collection, processing and use of borrowing history and other information relevant to household and small business lending – credit registries - have been rapidly growing in both the public and private sectors (see Miller, 2003, for an overview). Computer technology has also greatly improved the amount of information that can be analyzed to assess creditworthiness, such as through credit scoring techniques. Governments can play an important role in this process, and while establishment of public credit registries may discourage private entry, in several cases it has actually encouraged private registries to enter in order to provide a wider and deeper range of services. Governments are also important in creating and supporting the legal system needed for conflict resolution and contract enforcement, and strengthening accounting infrastructures to enable financial development.

Empirical results show that the volume of bank credit is significantly higher in countries with more information sharing (Jappelli and Pagano, 2002; and Djankov, McLeish and Shleifer, 2007). Firms also report lower financing obstacles with better credit information (Love and Mylenko, 2003). Detragiache, Gupta and Tressel (2005) find that better access to information and speedier enforcement of contracts are associated with deeper financial systems even in low income countries. Indeed, compared to high income countries, in lower income countries it is credit information more than legal enforcement that matters (Djankov et al., 2007).

III.c Regulation and Supervision

For as long as there have been banks, there have also been governments regulating them. While most economists agree that there is a role for government in the regulation and supervision of financial systems, the extent of this involvement is an issue of active debate (Barth, Caprio and Levine, 2006). One extreme view is the laissez-faire or invisible-hand approach, where there is no role for government in the financial system, and markets are expected to monitor and discipline financial institutions. This approach has been criticized for ignoring market failures as depositors, particularly small depositors, often find it too costly to be effective monitors.

On the other extreme is the complete interventionist approach, where government regulation is seen as the solution to market failures (Stigler, 1971). According to this view, powerful supervisors are expected to ensure stability of the financial system and guide banks in their business decisions through regulation and supervision. To the extent that officials generally have limited knowledge and expertise in making business decisions and can be subject to political and regulatory capture, this approach may not be effective (Becker and Stigler, 1974; Haber et al. 2003).

Between the two extremes lies the private empowerment view of financial regulation. This view simultaneously recognizes the potential importance of market failures which motivate government intervention, and political/regulatory failures, which suggest that supervisory agencies do not necessarily have incentives to ease market failures. The focus is on enabling markets, where there is an important role for governments in enhancing the ability and incentives of private agents to overcome information and transaction costs, so that private investors can exert effective governance over banks. Consequently, the private empowerment view seeks to provide supervisors with the responsibility and authority to induce banks to disclose accurate information to the public, so that private agents can more effectively monitor banks (Barth, Caprio and Levine, 2006).

Empirical evidence overwhelmingly supports the private empowerment view. While there is little evidence that empowering regulators enhances bank stability, there is evidence that regulations and supervisory practices that force accurate information disclosure and promote private sector monitoring boost the overall level of banking sector and stock market development (Barth, Caprio and Levine, 2006).

Beck, Demirguc-Kunt and Levine (2006) show that bank supervisory practices that force accurate information disclosure ease external financing constraints of firms, while countries that empower their official supervisors actually make external financing constraints more severe by increasing the degree of corruption in bank lending. Consistent with these findings, Demirguc-Kunt, Detragiache and Tressel (2008) investigate compliance with Basel Core Principles of regulation and supervision and show that only information disclosure rules have a significant impact on bank soundness. Finally, Detragiache, Gupta and Tressel (2005) find little significant impact of regulatory and supervisory practices on financial development of low income countries. Where there is significance, greater supervisory powers seem to be negatively associated with financial depth.

Related to the debate on different approaches for regulation and supervision, is the important debate on whether prudential regulation and safety nets designed for developed countries can be successfully transplanted to developing countries. For developing countries, these results have important implications for which aspects of the Basel II accord (which was designed for and by regulators in advanced economies) to adopt and over what time period. In particular, the complicated rules and procedures for determining bank capital adequacy pre-suppose expertise and governance conditions which simply do not exist in most low income countries. Caprio, Demirguc-Kunt and Kane (2008) discuss how the recent financial crisis exposed fundamental flaws in the Basel approach and argue that true reform of regulation and supervision must go beyond improving transparency but address incentive conflicts and increase accountability in government and industry alike.

Similarly, research has questioned safety net design, particularly adoption of deposit insurance in developing countries by highlighting the potential costs of explicit schemes –lower market discipline, higher financial fragility, and lower financial development – in countries where complementary institutions are not strong enough to keep these costs under control (Demirguc-Kunt and Kane, 2002; Demirguc-Kunt and Detragiache, 2002; Demirguc-Kunt and Huizinga, 2004; Cull, Senbet and Sorge, 2005). These findings are particularly important for lower income countries with underdeveloped institutions. For example, Detragiache, Gupta and Tressel (2005) also find that presence of an explicit deposit insurance system does not lead to more deposit mobilization in low income countries; to the contrary it is associated with lower levels of deposits. Demirguc-Kunt, Kane and Laeven (2008) summarize the cross-country evidence on the impact of deposit insurance and assess the policy complications that emerge in developing countries by reviewing individual-country experiences with DI: including issues raised by the EU's Deposit Insurance directive, banking reform in Russia, and policy efforts to protect depositors in China.

III.d Contestability and Efficiency

Policymakers around the world frequently express concern about whether their countries' bank competition policies are appropriately designed to produce well-functioning and stable banks. Globalization and the resulting consolidation in banking have further spurred interest in this issue, leading to an active public policy debate. Competition policies in banking may involve difficult trade-offs. While greater competition may enhance the efficiency of banks with positive implications for economic growth, greater competition may also destabilize banks with costly repercussions for the economy.

Recent research has shown that contrary to conventional wisdom, the trade-offs are exaggerated when it comes to bank competition. Greater competition – as captured by lower entry barriers, fewer regulatory restrictions on bank activities, greater banking freedom, and better overall institutional development – is good for efficiency, good for stability, and good for firms' access to finance (see Berger et al., 2004). Indeed, regulations that interfere with competition make banks less efficient, more fragile, and reduce firms' access to finance. Thus, it seems to be a good idea for governments to encourage competition in banking by reducing the unnecessary impediments to entry and activity restrictions. Similarly, improving the institutional environment and allowing greater freedoms in banking and economy in general would lead to desirable outcomes.

III.e Government Ownership of Financial Institutions

Ownership is another important dimension of competition in banking. Policymakers in many countries have felt the need to retain public ownership of banks. However, research has shown that government ownership of banks everywhere, but especially in developing countries, lead to lower levels of financial development, more concentrated lending and lower economic growth, and greater systemic fragility (La Porta et al., 2002). The inefficient allocation of credit by state-owned banks to politically-favored and commercially unviable projects frequently necessitates costly recapitalizations (Cole, 2005; Dinc, 2005). Even in the area of access to financial services, recent evidence suggests that bank customers face higher barriers to credit services in banking systems which are predominantly government-owned (Beck, Demirguc-Kunt, Martinez Peria, 2007). More recently a handful of government financial institutions have moved away from credit, and evolved into providers of more complex financial services, entering into public-private partnership to overcome coordination failures and first-mover disincentives (De la Torre, Gozzi and Schmukler, 2008). Ultimately however, without a large presence of state institutions these initiatives could have been undertaken by the private sector, but the state had a useful role in jump-starting these initiatives. Overall, a large body of empirical evidence suggests that the ownership of financial firms is an area where the public sector tends not to have a comparative advantage; such ownership weakens the financial system and the economy.

Nevertheless, privatization also entails risks and needs careful design. Studies of privatization processes suggest the preferred strategy is moving slowly but deliberately with bank privatization, while preparing state banks for sale and addressing weaknesses in the overall incentive environment. On average, bank privatization tends to improve performance over continued state ownership, there are advantages to full rather than partial privatizations, and in weak institutional environments selling to a strategic investor and inviting foreign interests to participate in the process increase the benefits (see Clarke, Cull, Shirley, 2005, for an overview). Privatization, however, is not a panacea, and privatizing banks without addressing weaknesses in the underlying incentive environment and market structure will not lead to a deeper and more efficient financial system.

III.f Financial Liberalization

In comparison with the scale of global finance, financial systems in individual developing countries are often very small. Small financial systems underperform because they suffer from concentration of risks, cannot exploit economies of scale and are thus more vulnerable to external shocks. Theoretically, these countries fall short of minimum efficient scale and have much to gain by liberalizing and sourcing some of their financial services from abroad.

There is a very large literature on macroeconomic and international financial issues which is outside the scope of this paper. In this section I limit my discussion to a brief review of the impact of financial liberalization on financial development and the importance of sequencing liberalization and institutional reforms; and the impact of foreign entry on financial development.

Financial liberalization, financial development and the sequencing of reforms. Many countries have liberalized their financial systems in the 1980s and 1990s with mixed results. Liberalization, including deregulation of interest rates and more relaxed entry policies, often led to significant financial development, particularly in countries where there was significant repression, but the enthusiasm with which financial liberalization was adopted in some countries in the absence of or slow implementation of institutional development also left many financial systems vulnerable to systemic crises (Demirguc-Kunt and Detragiache, 1999). Poor sequencing of financial liberalization in a poorly prepared contractual and supervisory environment contributed to bank insolvencies as banks protected by implicit and explicit government guarantees aggressively took advantage of new opportunities to increase risk, without the necessary lending skills. Banking crises in Argentina, Chile, Mexico and Turkey in the 1980s and 1990s have been attributed to these factors (Demirguc-Kunt and Detragiache, 2005).

On the other hand, many Sub-Saharan African countries that have also liberalized their interest rates and credit allocation and privatized their institutions by allowing entry of reputable foreign banks did not suffer instability but from lower intermediation and in some cases lower access to financial services. Some of this was due to the absence of an effective contractual and informational framework (Honohan and Beck, 2007). This has also resulted in claims of failed liberalizations in these countries and calls for greater government intervention in the financial sector. Both of these experiences with financial liberalization underline the importance of sequencing liberalization and institutional improvements.

Impact of foreign entry. With financial liberalization, more and more developing economies also allow entry of foreign financial institutions. While governments have worried about whether allowing foreign banks to take a large ownership share in the banking system could damage financial and economic performance, the bulk of the empirical research in this area, particularly drawing on the experience of Latin American and Eastern European countries, suggests that facilitating entry of reputable foreign institutions to the local market should be welcomed. Arrival or expansion of foreign banks can also be disruptive as the Indian experience shows evidence of cream-skimming by foreign banks (Gormley, 2004). Even there however, in the years following entry, foreign banks have started expanding their clientele base. Overall, a large body of evidence suggests that over time foreign bank entry brings competition, improves efficiency, lifts the quality of the financial infrastructure and expands access (Claessens, Demirguc-Kunt and Huizinga, 2001; Clarke, Cull and Martinez Peria, 2001).

However, as the African experience discussed above illustrates, foreign bank entry cannot guarantee rapid financial development in the absence of sound contractual and informational weaknesses. Such weaknesses can prevent low income countries from reaping full benefits of opening their markets to foreign providers of financial services, and can potentially explain the finding that greater foreign bank penetration is associated with lower levels of financial development (Detragiache, Tressel, Gupta, 2006). For example, while in some countries like Pakistan, foreign banks have been shown to lend less to smaller more opaque borrowers because they rely on hard information (Mian, 2006), evidence from Eastern Europe has shown that foreign banks eventually go down market increasing small business lending (De Haas and Naaborg, 2005). Overall, addressing institutional weaknesses is likely to allow foreign banks to act as an important catalyst for the sort of financial development that promotes growth.

III.g Facilitating Access

Access to financial services has increasingly been receiving greater emphasis over the recent years, becoming a focal part of the overall development agenda. One reason is that modern development theory sees the lack of access to finance as a critical mechanism for generating persistent income inequality, as well as slower growth. Another is the observation that small enterprises and poor households face much greater obstacles in their ability to access finance all around the world, but particularly in developing countries.

What does access to finance mean? Broad access to financial services implies an absence of price and non-price barriers. It is difficult to define and measure because there are many dimensions of access, including availability, cost, and range and quality of services being offered. While there is much data on financial sector development more broadly, until recently there was very little data on usage and access to finance, both for households and firms. Hence, there is also very limited analysis on the impact of access to finance on economic development. Research using firm level survey data suggests that financing obstacles are the most constraining among different barriers to growth (Ayyagari, Demirguc-Kunt and Maksimovic, 2005). Financing obstacles are also found to be highest and most constraining for the growth of smaller firms (Beck, Demirguc-Kunt and Maksimovic, 2005). At the household level, lack of access to credit is shown to perpetuate poverty because poor households reduce their children's education (Jacoby and Skoufias, 1997). Similarly, Dehejia and Gatti (2003) find that child labor rates are higher in countries with under-developed financial systems, while Beegle et al. (2007) show that transitory income shocks to greater increases in child labor in countries with poorly functioning financial systems. A better understanding of what the chief obstacles to improving access are, and access to which type of financial services has the greater impact on reducing poverty and promoting growth, will need to wait for availability of better data and analysis in this area (see World Bank, 2007 for a discussion).

There are many different reasons why the poor do not have access to finance –loans, savings accounts, insurance services. Social and physical distance from the formal financial system may matter. The poor may not have anybody in their social network who knows the various services that are available to them. Lack of education may make it difficult for them to overcome problems with filling out loan applications, and the small number of transactions they are likely to undertake may make the loan officers think it is not worthwhile to help them. As financial institutions are likely to be in richer neighborhoods, physical distance may also matter, banks simply may not be near the poor. Specifically for access to credit services, there are two important problems. First, the poor have no collateral, and cannot borrow against their future income because they tend not to have steady jobs or income streams to keep track of. Second, dealing with small transactions is costly for the financial institutions. Ceilings on the rates financial institutions can charge backfire and limit access to the poor even more.

Microfinance –specialized institutions that serve the poor - tries to overcome these problems in innovative ways. Loan officers come from similar social status as the borrowers and go to the poor instead of waiting for the poor to come to them. Microcredit also involves education as much as it provides credit. Group lending schemes not only improve repayment incentives and monitoring through peer pressure, but they are also a way of building support networks and educating borrowers.

Has microfinance fulfilled its promise? Microfinance allows poor people to have more direct access, but development of microfinance around the world has been very non-uniform, with significant penetration rates only in a few countries like Bangladesh, Indonesia and Thailand (Honohan, 2004). Group lending is very costly since labor cost per dollar of transactions needs to be high by design. The most controversial aspect of microfinance, however, has been the extent of subsidy required to provide this access. Overall, the microfinance sector remains heavily grant and subsidy dependent. Skeptics question whether microfinance is the best way to provide those subsidies and point out that development of mainstream finance is a more promising way to reach the poor and alleviate poverty in significant ways.

There are also good political economy reasons why we should not focus on the poor and ask how we can make microfinance more viable, but instead ask how financial services can be made available for all (Rajan, 2006). The poor lack the political clout to demand better services, and subsidies may spoil the credit culture. By defining the issue more broadly to include the middle class who often also lack access, would make it more likely that promotion of financial assess will be made a priority.

What can governments do to promote access? Many of the policies recommended above to enhance the overall development of the financial sector will also help increase access. However, the overlap is not perfect, and explicit prioritization of access is therefore important. For example, certain regulations aimed at financial stability or combating terrorism can restrict access of small firms and poor households. Or focusing on development of offshore financial centers to export wholesale financial services may lead to the neglect of onshore financial infrastructures necessary for access of small firms and individuals. Also, it is important to set realistic goals; not all potential borrowers are creditworthy, and many banking crises were precipitated by overly relaxed credit policies, including the latest crisis of structured securitization. These tensions between improving access without increasing vulnerabilities are discussed in World Bank (2007).

First and foremost, governments can further access by making and encouraging infrastructure improvements. However, prioritizing different reform efforts is important and recent research also suggests that in low income countries improving information infrastructures seems to yield more immediate access benefits than legal reforms (Djankov et al., 2007). But legal reforms are also important, and among those there is evidence that while protection of property rights against the state is more important for financial development generally, other aspects of contract enforcement (such as institutions relating to collateral) may be more important for access (Haselmann, Pistor and Vig, 2006).

Institutional reform is a long term process and specific policy actions can help boost access sooner. There are a wide range of such measures, ranging from specific legislation to underpin nonblank intermediation including leasing and factoring; technologies based on the internet and mobile phones; development of credit registries; protection against money laundering and terrorist finance without jeopardizing household access and others.

For example, at the household level, giving each individual a national identification number and creating credit registries where lenders share information about their clients' repayment records would help since all borrowers could then borrow using their future access to credit as collateral (Rajan, 2006). Reducing costs of registering and repossessing collateral is also crucial. In Brazil for example, inability to repossess property has contributed to the cost of the housing finance program, keeping the mortgage rates too high to be affordable for the poor. Governments can also be instrumental in facilitating innovative technologies to improve access. For example in Mexico, a program developed by Nafin, a government development bank, allows many small suppliers to use their receivables from large credit-worthy buyers to receive working capital financing (Klapper, 2006). This type of trade finance is called reverse factoring and effectively allows small firms to borrow based on the creditworthiness of their buyers, allowing them to borrow more at cheaper rates.

Government regulation can also help. Removal of interest ceilings, or usury laws, would allow institutions to charge the rates that they need to be profitable and improve access. These regulations end up hurting the very poor they are trying to protect as the supply of these services completely dry up. Anti-predatory lending or truth-in-lending requirements are also very important since households may also be forced into over-borrowing by unscrupulous lenders, as the latest sub-prime mortgage crisis amply illustrates. Anti-discrimination policies may also help against cases of active or passive discrimination against the poor or different ethnic groups.

It is also important to ensure that other complex regulations – such as Basel II regulations that are intended to help banks minimize costly bank failures – do not inadvertently penalize small borrowers and hurt access by failing to make full allowance for the potential for a portfolio of small and medium enterprise loans to achieve risk pooling. Financial regulations can also prevent the emergence of institutions better suited to the needs of lower income households or smaller firms. Rigid chartering rules, high capital adequacy requirements, very strict accounting requirements may reduce the ability of institutions to serve the poorer segments of the society. As many households are interested in savings services but not in credit services, considering and regulating savings mobilization separately from credit services may be helpful (Claessens, 2005). For example in South Africa, extension of bank regulation and supervision to microfinance institutions reduced their capacity to offer their services profitably.

Governments can also opt to stimulate access more directly. The US Treasury's Electronic Transfer Accounts (ETAs) to increase use of bank accounts, US Community Reinvestment Act (CRA) to improve access to credit services, legal measures adopted by the UK, France, Sweden, and Ireland among others, are such examples. However, there is little consensus on the success of those schemes (Claessens, 2005) and whether they can be replicated in developing countries. The experiences with credit extensions, especially to improve the maturity structure of debt and reach the SMEs, are extensive in both developed and developing countries. However, both the rationale for and effectiveness of those interventions are much more doubtful (see Caprio and Demirguc-Kunt, 1997; Beck and Demirguc-Kunt, 2006). As already discussed above, interventions through ownership of government institutions have also not been successful, overall.

Last but perhaps most importantly, governments can improve access by increasing competition in the financial sector. As financial institutions find their traditional business coming under competition, they seek out new lines of profitable opportunities, including lending to the SMEs and the poor. Given the right incentives, private sector can develop and make use of new technologies – like credit scoring – to reach the underserved segments. As already discussed above, foreign banks' role in improving the competition environment and improving access is important. There is accumulating evidence that over time, foreign banks can enhance access. Indeed, multinational banks have been leading the way in expanding access all around the world.

IV. Conclusions

As this paper was still being written, the financial turmoil that started as a meltdown in structured securitization instruments in the summer of 2007 in the U.S. and U.K. quickly spread and has become a full-blown financial crisis. In an effort to contain the crisis from spreading, the authorities in the US and many European governments have taken unprecedented steps of providing extensive liquidity, giving assurances to bank depositors and creditors that include blanket guarantees, structuring bail-out programs that include taking large ownership stakes in financial institutions, in addition to establishing programs for direct provision of credit to non-financial institutions. These policy responses to the crisis have shaken the confidence of developed and developing countries alike in the very blueprint of financial sector policies that underlie the western capitalist systems.

Demirguc-Kunt and Serven (2008) draw on a large body of econometric evidence and country experience to argue that the financial sector policy advice provided in this paper is still valid. For the most part, the confusion arises from not being able to recognize incentive conflicts and trade-offs inherent in short-term and long-term responses to a systemic crisis. Policies employed to contain a crisis - often in a haste to reestablish confidence and with inadequate consideration of long-term costs- should not be interpreted as permanent deviations from well-established policy positions.   The fact that governments may end up providing blanket guarantees or owning large states in the financial sector in an effort to contain and deal with the crisis does not negate the fact that generous guarantees over the long term are likely to backfire or that government officials make poor bankers.

In conclusion, should all countries follow the recommendations outlined in this paper? While the general messages will not be dissimilar, the directions in which financial sector needs improvement in different countries will be based on their initial conditions (World Bank, 2001 and 2007). Furthermore, good policy making draws inputs from many sources, and research is only one such input. Implementation of policy requires complementing the results of research analysis with practitioner experience, hence tempering and tailoring this advice to individual country circumstances. In general, these reforms are likely to be most challenging for low income countries, where the legacy of financial repression and state ownership has generally hampered the development of a vigorous private financial system, where the underlying legal and information infrastructure is weak, and achieving minimum efficient scale will be difficult.

Despite their inherent fragility, financial systems underpin economic development. The challenge of financial sector policies is to align private incentives with public interest without taxing or subsidizing private risk-taking. The task is becoming increasingly complex for all countries in an ever more integrated and globalized financial system.

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