Finance, Regulation and Inclusive Growth

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Abstract

Regulatory agencies that foster competition among private financial institutions, promote transparency throughout the financial system and work relentlessly to reform policies that perversely distort the incentives of private institutions encourage inclusive growth. In contrast, regulations that stymie competition in the name of stability and policies that funnel credit to politically-favored ends in the name of the poor typically curtail inclusive growth. Political economy factors are paramount in shaping the design and implementation of financial regulatory policies since powerful segments of society may seek exclusive—not inclusive—growth.

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1. Introduction

Finance matters for inclusive growth (Beck et al., 2007, 2008; Demirgüç-Kunt and Levine, 2009; Levine, 2008). It shapes whether credit—and hence opportunity—flows to those with the best entrepreneurial ideas, or whether economic opportunities are restricted to those with the most accumulated wealth and the strongest political connections. The financial system influences who can start a business and who cannot, who can invest in human capital accumulation and who cannot, and whether people live in a dynamic, growing economy or whether they must find work in a more stagnant environment. Consequently, finance exerts a powerful influence over the efficiency of resource allocation, the nature of labor markets and each person's economic horizons.

Past research provides guidance on which financial regulatory strategies foster inclusive growth and which policies impede it. On the positive side, Barth, Caprio and Levine (2006), Barth et al. (2009), Beck, Demirgüç-Kunt and Levine (2006), Beck, Levine and Levkov (2010), and Houston, Lin and Ma (2010) advertise the value of regulations and supervisory practices that foster competition and transparency and that continuously seek to eliminate policies that create incentives for financiers to undertake socially harmful—though privately profitable—investments. Such regulatory practices increase the quality of financial services, reduce the cost of those services, discourage corruption in credit allocation and exert a disproportionately large impact on the living standards of lower income households.

On the negative side, Barth, Caprio and Levine (2006), Barth et al. (2009), Beck, Levine and Demirgüç-Kunt (2006), Beck, Levine and Levkov (2010), Dinc (2005), Houston, Lin and Ma (2010), Khwaja and Mian (2005), Sapienza (2004) and many others raise

cautionary flags regarding activist policies designed with the intention of directing credit to those excluded from normal credit channels. Greater government involvement typically tilts the flow of credit to large, politically connected firms, thereby boosting the opportunity for corruption, slowing growth and limiting the economic opportunities of many in society. This does not mean that government interventions are never efficacious; what it does indicate is that when the government takes a more hands-on approach to the flow of credit, this often has deleterious effects on growth and the inclusiveness of economic activity.

There are central political economy challenges to creating policies that foster inclusive growth. Some powerful people do not want well-functioning financial systems that give the economically disenfranchised greater opportunities; rather, they want exclusive access to credit. Put differently, since a better functioning financial system will increase the degree to which credit flows to those with the best ideas and decrease the importance of accumulated wealth and political influence, the wealthy and connected might feel threatened by improvements in the financial system. Furthermore, even when policymakers enact well-intentioned policies to expand economic opportunities, many groups will have powerful incentives and ample capabilities to undermine those policies. These political economy considerations advertise the difficulty in promoting inclusive growth either directly through targeted credit-type programs or indirectly by enhancing the competiveness, transparency and incentives of the financial system.

2. Finance matters for inclusive growth

2.1. Growth

As reviewed by Levine (2005), a large and growing body of research shows that the services provided by financial markets and intermediaries exert a first-order impact on the rate of long-run economic growth:

(1) Countries with better functioning financial systems grow faster over many decades (e.g. Levine and Zervos, 2008).

(2) Improvements in the operation of financial systems accelerate the rate of economic growth within particular economies (e.g. Haber et al., 2003).

Financial markets and intermediaries provide four critical services. They mobilize savings, choose where to allocate those savings, monitor the use of those savings by firms and individuals, and provide mechanisms for pooling and diversifying risk. Thus, the financial system affects the savings rate and the efficiency of resource allocation, with enduring ramifications on economic activity.

To the extent that the financial system performs these functions well, economies tend to grow correspondingly faster. For example, when banks screen borrowers effectively and identify firms with the most promising prospects, this is a first step in boosting productivity growth. When financial markets and institutions mobilize savings from disparate households to invest in these promising projects, this represents a second crucial step in fostering economic growth. When financial institutions monitor the use of investments after financing firms and scrutinize their managerial performance, this is an additional, essential ingredient in boosting the operational efficiency of corporations, reducing waste and fraud, and spurring economic activity. Furthermore, when securities

markets allow individuals to diversify risk inexpensively, this encourages investment in higher-return projects that might be shunned without effective risk management vehicles.

Of course the opposite is also true: to the extent that a financial system simply collects funds with one hand and passes them along to cronies, existing elites and the politically-connected with the other hand produces a less efficient allocation of resources, which implies slower economic growth and greater exclusivity in the availability of economic opportunities. Furthermore, when the financial system provides low quality financial services, investment can be discouraged as both returns are low and the risk of expropriation is high. Thus, finance affects both the quantity of investment and the efficiency with which capital is allocated and employed.

The evidence suggesting that finance exerts a first-order impact on economic growth emerges from cross-country and time-series studies, research using instrumental variables to reduce concerns about reverse causality, analyses that employ industry-level and firm-level data to assess the mechanisms linking finance and economic growth, and historical case studies that trace economic performance over a century or more (Levine, 2005). Furthermore, Jayaratne and Strahan (1996) show that when policy reforms intensify competition in the financial system, financial services improve, accelerating economic growth. Although more research is needed on the linkages between economic growth and specific financial services —e.g., the mobilization of savings, the allocation of capital, the monitoring of how that capital is employed, and the management of risk --, existing research indicates that the operation of the financial system exerts a powerful influence on long-run economic performance.

2.2. Entrepreneurship

One of the ways in which a better functioning financial system promotes economic growth is by spurring entrepreneurship. Indeed, one way to define a better financial system is that it does a superior job of screening firms and households, and allocating capital to those with the best projects, ideas and entrepreneurial energy. As described in Aghion and Howitt (2010), finance shapes the Schumpeterian process of creative destruction: finance can foster competition by allowing new, more promising firms to enter the market, which forces less efficient incumbent firms to exit, or it can become an impediment to entrepreneurship and growth.

Recent research, for example, shows that financial policy reforms that intensified competition in the financial system:

(1) Enhanced the quality of financial services provided to the non-financial sectors;

(2) Lowered entry barriers facing non-financial firms, thereby intensifying competition through the non-financial sector; and

(3) Increased both the rate of new firm entry and old firm exit.

Specifically, greater competition among financial institutions induced them to lower interest rates on loans and improve the techniques for screening and monitoring firms and households (Hubbard and Palia, 1995). This improved the efficiency of credit allocation, reduced the proportion of bad loans (Jayaratne and Strahan, 1998), and lowered collateral requirements (Tewari, 2011), which made it easier for new firms to enter the market and compete with existing firms (Kerr and Nanda, 2009). Thus, a better functioning financial system reduced the degree to which accumulated wealth shaped credit allocation and

increased the degree to which the likelihood of future economic success determined the flow of credit.

Indeed, improvements in the quality of financial services both eased the entry of excellent new firms and expedited the exit of relatively low-quality old firms (Black and Strahan, 2002; Kerr and Nanda, 2009). Cetorelli and Strahan (2006) show that reforms that boosted competition in the banking sector had a particularly large impact on competition in non-financial industries, which are naturally heavy users of bank credit. Furthermore, Beck, Demirgüç-Kunt, Laeven and Levine (2008) find that financial development had a large, positive impact on small firms, again suggesting that improvements in financial services foster competition and efficiency throughout the economy.

2.3. Inclusive growth

So who benefits from a better financial system? Does financial development induce an increase in per capita Gross Domestic Product (GDP) only because the very rich get even richer or does finance expand economic opportunities for the bulk of society?

Economic theory suggests that finance shapes the distribution of economic opportunities. The financial system affects the degree to which a person's economic opportunities are defined by individual skill and initiative, or by family wealth, social status and political connections. It influences who can launch a new business venture and who cannot, who can acquire education and who cannot, who can live in a neighborhood that fosters the cognitive and non-cognitive development of their children and who cannot, who can pursue one's economic dreams and who cannot.

Though much less well-developed than the literature on finance and growth, a growing body of research indicates that more competitive, better functioning financial systems exert a disproportionately positive impact on relatively low-income families. This evidence emerges both from broad cross-country assessments and from individual country studies based on microeconomic evidence.

For example, Beck, Demirgüç-Kunt and Levine (2007) examine:

(1) The relationship between financial development and the fraction of the population living on less than $2/day;

(2) The degree of income inequality as measured by the Gini coefficient of income inequality.

They use data on poverty from 68 countries over the period 1980-2005 and data on income distribution from 72 countries over the period 1960-2005. One problem with conducting cross-country studies of finance and poverty is the difficulty in measuring financial development. The theory focuses on what the financial system does: it ameliorates informational problems before investments are made; it affects corporate governance by reducing informational problems after investments are initiated; it facilitates risk diversification; and it eases the mobilization of savings by lowering information and transactions costs. The empirical measures of financial development, however, too frequently do not bear a clear resemblance to these concepts of financial development. A common measure of financial development is the variable Private Credit, which equals the value of credit going to privately-owned firms as a fraction of a country's GDP. Private Credit isolates the intermediation of credit that goes to private firms and excludes credit that flows to the state or state-owned enterprises; however, it is not a direct measure of

overcoming information or transaction costs to improve credit allocation, corporate governance and risk management. Nonetheless, in cross-country studies, these broad indicators of financial development are sometimes the best measures that we have.

Beck, Demirgüç-Kunt and Levine find a robust negative relationship between financial development and both poverty alleviation and change-in-income inequality. This result holds even when controlling for average growth, initial income and a wide array of country traits.

It is worth emphasizing that the negative relationships between financial development and both poverty alleviation and income inequality hold when controlling for average growth. It is not just that finance accelerates economic growth, which trickles down to the poor; rather, finance exerts a disproportionately positive influence on lower income households.

Moving to a more microeconomic-based study, Beck, Levkov and Levine (2010) test whether a policy reform that spurred competition in the banking industry -- and hence improved the quality of banking services -- increased, decreased or had no effect on the distribution of income. They examine the individual states of the United States (USA) that removed regulatory prohibitions on opening branches within their state boundaries in different years over a 20-year period ranging from the mid-1970s to the mid-1990s. This deregulation intensified the contestability of banking markets and improved the provision of financial services.

Methodologically, the deregulation of intra-state branching provides a natural setting for identifying and assessing the impact of a regulatory reform that enhanced the quality of financial services on the distribution of income. Kroszner and Strahan (1999)

show that national technological innovations triggered deregulation, which was exogenous to income distributional changes within individual states. The invention of automatic teller machines (ATMs), in conjunction with court rulings that ATMs are not bank branches, weakened the geographical bond between customers and banks. Checkable money market mutual funds facilitated banking by mail and telephone, which weakened local bank monopolies. Improvements in communications technology lowered the costs of using distant banks. These innovations reduced the monopoly power of local banks and therefore weakened their ability and desire to fight deregulation. Kroszner and Strahan (1999) further show that cross-state variation in the timing of deregulation reflected the interactions of these technological innovations with pre-existing conditions. Thus, the driving forces behind deregulation and its timing were largely independent of state-level changes in income distribution. Consequently, Beck, Levkov and Levine (2010) exploit the cross-state, cross-year variation in income distribution and deregulation to assess the impact of a single policy change on different state economies.

It was not the realization that branching restrictions were economically inefficient that induced policymakers to remove these restrictions; rather, technological innovations reduced the rents produced by these restrictions for banks. Thus, technological innovations undermined the value of regulatory restrictions on competition.

Beck, Levkov and Levine (2010) find that regulatory reforms that intensified competition in the banking sector reduced income inequality by disproportionately helping lower income individuals and households. After controlling for national trends in income inequality, the Gini coefficient of income inequality drops after bank branch deregulation. The drop becomes statistically significant three years after deregulation. The negative

impact of bank branch deregulation on income inequality is a level effect that fully materializes over the six years following deregulation. While income inequality widened in the USA during this period, they show that branch deregulation lowered income inequality relative to this national trend by using year-fixed effects. The magnitude is consequential: deregulation explains 60% of the variation of income inequality during the sample period relative to state and year averages. Furthermore, deregulation reduces income inequality by exerting a disproportionately positive impact on the poor, not by hurting the rich.

This body of research provides lessons for financial policy. Better functioning financial systems foster economic growth and intensified competition within the financial system tends to enhance its functioning with positive ramifications on economic output.

2.4. Discrimination

Discrimination is another channel through which the operation of the financial system affects "inclusiveness". Gary Becker noted in 1957 that some employers might discriminate against particular workers based on race, gender, religion, sexual orientation, culture, etc. Without loss of generality, let us consider racial discrimination within the USA. With this type of "taste-based" discrimination, blacks with exactly the same skills as whites might receive lower wage rates because employers are willing to lose some profits in order to satisfy their preferences for hiring only white workers.

Becker (1957) argued that discrimination is cheaper when there is little competition. When an owner is earning large rents, the marginal cost of hiring a more expensive white worker rather than an equally productive and less expensive black worker is not a very large share of the profits. With more intense competition and smaller profit margins, the

cost of discrimination increases. Thus, competition reduces the manifestation of racial prejudices in labor market outcomes. Competition does not necessarily change prejudices; rather, it works to eliminate inefficiencies, such as hiring lower quality white workers and paying them more than higher quality black workers.

As emphasized earlier, financial sector reforms can spur competition among financial intermediaries and therefore enhance the quality of the financial services that are provided to the rest of the economy. Furthermore, improvements in the provision of financial services tend to lower barriers to the entry of non-financial sector firms. Put simply, by enhancing the functioning of the financial system, financial policies affect competition throughout the entire economy, not just the financial system itself. By intensifying competition throughout the economy, financial policies can thus affect racial discrimination in labor markets across all industries and sectors—not just in the financial sector.

Levine, Levkov and Yona Rubinstein (2011) examine whether the financial reforms that intensified competition throughout the US economy affected racial discrimination. They use bank branch deregulation across the 50 states as a state-time exogenous increase in competition. They examine data on hundreds of thousands of individuals for the period 1976 to 2005.

They find that the race gap—the difference in wages between "identical" white and black workers—fell after financial reforms intensified competition in banking and hence throughout the entire economy. After conditioning on individual characteristics, as well as on state and year-fixed effects, the race gap dropped by about 20% following a state's removal of restrictions on intra-state branching. More specifically, before a state

deregulates, a white man with identical observable characteristics to a black man earns 14% more. After deregulation, the race gap falls to 11%. These findings suggest that improving the financial system reduces discrimination, disproportionately expanding the economic horizons of historically oppressed groups.

2.5. Financial innovation matters in a growing economy

Before turning to a discussion of the types of policies that promote inclusive growth, let us consider financial innovation. The literature on economic growth over the last two decades, if not the last six decades, has placed technological innovation in the starring role and yet the literature on finance and growth has largely ignored financial innovation. History suggests that this is a mistake. As stressed by Laeven, Levine, Michalopoulos (2011), financial and technological innovations are inextricably linked.

Financial innovations have been essential for permitting improvements in economic activity for several millennia. Whether it was (i) the design of new debt contracts six thousand years ago that boosted trade, specialization and hence innovation; (ii) the creation of investment banks, new accounting systems and novel financial instruments in the 19th century to ease the financing of railroads; or (iii) the development and modification of venture capital firms to fund the development of new information technologies and innovative biotechnology initiatives, financial innovation has been a critical component of fostering entrepreneurship, invention and improvements in living standards.

The evidence does not imply that financial innovation is unambiguously positive. Financial innovations are frequently implemented simply to avoid regulations and, indeed,

they played a prominent role in triggering our current suffering. At the same time, the evidence does suggest that financial innovation is important in fostering economic growth and expanding economic opportunities. For example, there are at least three policy implications to the observations that (i) finance shapes the rate of long-run economic growth, (ii) finance affects the distribution of economic opportunities and (iii) financial innovation is a pivotal input into the quality of the financial services provided to the non-financial sector. They are:

(1) Improvements in the financial system will generate winners and losers, which suggests that the political power of particular constituencies will play a central—if not *the* central—role in determining the degree to which a country selects financial policies that encourage inclusive growth, as emphasized by Calomiris and Haber (2011), Haber (forthcoming) and many others.

(2) The financial regulatory regime should not focus exclusively on stability since financial development and financial innovation influence human welfare by shaping economic growth and the distribution of economic opportunities.

(3) The regulatory regime must adapt to financial innovation or well-reasoned, well-intentioned, well-structured regulations will become obsolete and potentially detrimental to economic prosperity as a country grows.

3. What types of regulatory strategies work?

3.1. What works worst?

Abundant evidence warns against financial regulatory strategies that give official agencies excessive power over the allocation of capital (Shleifer and Vishny, 1998; Barth,

Caprio and Levine, 2006) even when the advertised goals of these powers are to enhance the safety and soundness of credit allocation. For example, the recent crisis has provoked calls for "stronger" regulation; however, to the extent that this means greater direct government control over the flow of credit, past research suggests that such policies tend to reduce the quality of financial services. Similarly, there are frequently calls for policies that funnel credit to lower-income households and smaller enterprises in the name of inclusive growth. Again, research indicates that powerful groups often hijack such policies and use them to promote their own interests rather than to expand the economic opportunities for society. Whether it is Brazil or Mexico, India or Pakistan, Italy or the USA, publicly-owned, government-controlled and state-protected banks are associated with slower growth, not more rapid rates of economic development. Moreover, these government-influenced banks often lend the bulk of their funds to politically connected firms, not to the poor and economically disenfranchised.

For example, Kwaja and Mian (2005) show that government-owned banks in Pakistan stymie inclusive growth and instead protect and promote the interests of firms with strong political ties. They examined 90,000 corporate loans in Pakistan over the period 1996-2002, together with information on the political affiliation of the companies and the ownership of the banks involved. They have several findings suggesting that the government-owned banks stymie inclusive growth and work to help the politically influential. Khwaja and Mian (2005) find that government-owned banks favor firms with politically connected executives, but—and this is a critical distinction—privately-owned banks do not; private banks do not lend disproportionately to politically connected firms. Furthermore, private banks lend relatively more to small and medium-sized enterprises than government banks,

while government-owned banks lend comparatively more to large firms. Thus, government-owned banks are not expanding access; rather, they are supporting large, politically connected firms.

Similar evidence emerges from Cole's (2009) examination of lending in India. Credit from government-controlled banks flows disproportionately to politically important regions, i.e. regions where there is an election. Officials use the banks to maintain or obtain political power, not to expand access to credit.

Sapienza (2004) shows that government-owned banks in Italy also favor large, politically connected firms and that they favor the entrenched incumbents. She examines almost 100,000 loan contracts in Italy over the period 1991-1995. Given information on both the characteristics of the borrowing firm and the traits of the lender, Sapienza (2004) assesses differences between the lending decisions of private and government banks. Government-owned banks in Italy charge lower interest rates to large firms than their privately-owned counterparts, but do not charge lower interest rates to comparable small firms than private banks. Furthermore, firms pay lower interest rates in localities where the local government-owned bank's chairperson has the same party affiliation as the ruling political party.

Similarly, cross-country comparisons indicate that direct government involvement in credit allocation, either through government-owned banks, directed credit programs, or powerful regulatory guidance on credit allocation, breeds corruption in the lending process and lower quality financial services, and hence curtails inclusive growth (Barth, Caprio and Levine, 2005; Beck, Demirgüç-Kunt and Levine, 2006). Furthermore, Houston, Lin and Ma (2010) find that state ownership of the media intensifies the impact of government-owned

banks on corruption in lending, emphasizing the "grabbing hand" of government, as argued by Shleifer and Vishny (1998). Direct government involvement in the allocation of credit tends to increase the flow of capital to the politically connected, limiting opportunities and retarding economic activity.

Dinc (2005) further emphasizes that politicians use government-owned financial institutions to maintain positions of power by increasing their lending before elections. In a cross-country, cross-bank empirical investigation, Dinc (2005) finds that government-owned banks increase their lending in election years relative to private banks. Again, government-owned banks are not necessarily used to promote inclusive growth: they are used to maintain incumbent officials in power.

Although there are sound economic theories for government-owned banks, directed credit programs and policies to encourage the flow of credit to particular ends, these programs in practice frequently go awry (Easterly, 2002). For example, governments might have superior information about the social returns related to particular investments. Thus, government programs could enhance social welfare. Similarly, problems with contract enforcement and collateral requirements might prevent capital from flowing to high-return endeavors. Under such conditions, governments can play a catalyzing role. Moreover, private financial institutions might find it more difficult than governments to diversify some risks, suggesting that government guarantees could foster a more efficient allocation of capital. However, in practice, well-intentioned government interventions are frequently captured by the political and economically powerful and used to increase their slice of the economic pie, not to increase the size of the pie itself.

I am not arguing that government interventions have never had positive effects or that they never will; rather, I am simply observing that the accumulated stock of evidence suggests that directed credit-type policies are not, in general, an effective mechanism for promoting inclusive growth. Indeed, the accumulated evidence advertises the comparative advantage of an alternative financial regulatory strategy.

3.2. What works best?

Research provides guidance on how to build a sound financial regulatory strategy: focus on competition and transparency, and do not perversely distort the incentives of financial markets' participants. Specifically, Barth, Caprio and Levine (2006) find the following:

(1) Countries that force financial institutions to disclose information in a transparent, easily comparable manner enhance the functioning of financial markets.

(2) Legal and regulatory systems that both facilitate and compel equity and debt holders to oversee the management of financial institutions create more efficient, competitive financial systems that foster economic prosperity; or, put differently, growth-promoting financial intermediaries arise with a greater probability when governments refrain from enacting and implementing regulations that interfere with the ability and incentives of shareholders and creditors to monitor financial intermediaries.

(3) Regulatory agencies that remove, rather than impose, barriers to competition boost the quality of financial services and expand access to financial services and private financial market participants compete for profits.

Furthermore, a broad array of research stresses the importance of incentives. For example, reasonable people can disagree about the efficacy of deposit insurance: some will argue that it is bad because it reduces monitoring by depositors, intensifying the moral hazard problem; others will argue that deposit insurance reduces extremely costly and contagious bank runs and that regulators can monitor banks and contain the moral hazard problem. Both sides of this argument should agree, however, that if there is deposit insurance, then either the regulators must monitor the banks to restrain risk or the regulators must devise other mechanisms to induce other investors in the bank to contain moral hazard incentives. Both sides should agree that insuring depositors (or other debt holders) with no concomitant actions by regulators to control risk would tend to create perverse incentives, increasing the likelihood that the bank will take excessive risk. This one, simple example emphasizes a critical point: regulations should focus on incentives, especially in an environment in which there are many policy distortions.

In summary, research indicates that the most effective strategy for triggering enduring, inclusive growth is to emphasize competition, transparency and the removal of perverse incentives, as opposed to focusing on the concoction of directive credit-type polices to funnel resources toward favored ends. Although this approach does not provide an immediate link between a policy action and the poor receiving resources, which might make it seem disconnected from real, human problems, a regulatory strategy focused on competition, transparency and incentives has the advantage of fostering enduring, inclusive growth.

3.3. Post-crisis re-evaluation

Does the recent US financial crisis conflict with these policy conclusions?

The answer is no; it reinforces the earlier findings (Barth, Caprio and Levine, 2011; Levine, 2010a, b). A series of regulatory policies in the USA: (i) hindered transparency; (ii) erected barriers to shareholders and creditors, effectively monitoring the activities of financial institutions; and (iii) created incentives for financial institutions to take excessive risks.

Thus, the USA did not follow the basic lessons about financial regulations with respect to competition, transparency and incentives. It is inaccurate, and ultimately unhelpful, to view the crisis as a failure of the market. The USA had, and has, lots of regulations and very powerful regulators. It is more accurate and more useful to identify the regulatory and political failures that produced the crisis, so that the USA and other countries can enact more growth-enhancing policies.

To give an example of how US regulatory policies reduced transparency, let us consider the Over-The-Counter (OTC) derivatives market. Powerful regulators and policymakers thwarted efforts to make the Credit Default Swap (CDS) market more transparent. The Federal Reserve (under Alan Greenspan), the Treasury (under Robert Rubin and then Larry Summers) and the Securities and Exchange Commission (SEC; under Arthur Levitt) squashed attempts by Brooksley Born of the Commodity Future Trading Commission (CFTC) to shed light on the multi-hundred-trillion dollar OTC derivatives market, which included CDSs, at the end of the 1990s.

Incidents of fraud, manipulation, and failure in the OTC derivatives market began as early as 1994, with the sensational bankruptcy of Orange County and court cases involving

Gibson Greeting Cards and Proctor & Gamble against Bankers Trust. Numerous problems, associated with bankers exploiting unsophisticated school districts and municipalities, plagued the market. Furthermore, OTC derivates played a dominant role in the dramatic failure of long-term capital management (LTCM) in the summer of 1998. Indeed, no regulatory agency had any warning of LTCM's demise, or the potential systemic implications of its failure, because it traded primarily in this opaque market.

In light of these problems and the lack of information on the OTC derivatives market, the CFTC issued a "concept release" report in 1998 calling for greater transparency of OTC derivatives. The CFTC sought greater information disclosure, improvements in record keeping and controls on fraud. The CFTC did not call for draconian controls on the derivatives market; it called for more transparency.

The response by the Federal Reserve, the Treasury and the SEC was swift: they stopped the CFTC. First, they obtained a six-month moratorium on the CFTC's ability to implement the strategies outlined in its concept release. Second, the President's Working Group on Financial Markets, which consists of the Secretary of the Treasury, the Chairman of the Board of Governors of the Federal Reserve System, the Chairman of the SEC and the Chairman of the CFTC, initiated a study of the OTC derivatives market. Finally, they helped convince US Congress to pass the Commodity Futures Modernization Act of 2000, which exempted the OTC derivates market – and hence the CDS market – from government oversight.

This example emphasizes that the US regulatory authorities implemented policies that are inconsistent with one of the core lessons from research on financial regulation: the need to foster transparency. Senior regulators and policymakers lobbied hard to keep

CDSs and other derivatives in opaque markets. This should not be interpreted as either failure of too little or too much regulation; it should be viewed as an additional example of the wrong type of regulation. This example does not suggest that the government should have thwarted OTC trading; it emphasizes the dangers of regulators imposing opaqueness.

As a second example of the failure of the US regulatory authorities to follow the basic precepts of competition, transparency and a focus on incentives, consider the SEC's supervision of investment banks. In 2004, the SEC enacted a rule that induced the five major investment banks to become "consolidated supervised entities" (CSEs), with the SEC overseeing the entire financial firm. Specifically, the SEC now had responsibility for supervising the holding company, broker-dealer affiliates and all other affiliates on a consolidated basis. These "other affiliates" include other regulated entities, such as foreign-registered broker-dealers and banks, as well as unregulated entities such as derivatives dealers. The SEC was charged with evaluating the models employed by the broker-dealers in computing appropriate capital levels and assessing the overall stability of the consolidated investment bank. Given the size and complexity of these financial conglomerates, overseeing the CSEs was a systemically important and difficult responsibility.

An obvious and well-known implication of a major regulatory agency emphasizing publicly that it is effectively monitoring the risk-taking of a class of large financial institutions is that it reduces the incentives for private market participants to monitor the risk-taking of those financial institutions. This is the case for the commercial banks where the Federal Reserve, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency and others supervise them. It was also the case for the major

investment banks. Once the SEC formally began supervising investment banks—and once the SEC argued that it was uniquely capable of and successful at conducting this oversight—private investors had weaker incentives to scrutinize the activities of these banks. This is a classic moral hazard issue that would typically be resolved by the SEC actually doing the monitoring.

However, although the SEC advertized that it was supervising the investment banks, it actually neutered its ability to conduct consolidated supervision effectively. Although the SEC promised to hire high-skilled supervisors to assess the riskiness of investment banking activities, it did not. In fact, the SEC had only seven people to examine the parent companies of the investment banks, which controlled more than $4 trillion in assets. Under Christopher Cox, who became chairman in 2005, the SEC eliminated the risk management office and failed to complete a single inspection of a major investment bank in the year and a half before the collapse of those banks. Cox also weakened the Enforcement Division's freedom to impose fines on financial firms under its jurisdiction.

The tragic disregard for incentives contributed to the failure, takeover or government bailout of all of the five major investment banks. While one can logically advance the view that sound regulations should foster market monitoring of investment banks by credibly eliminating official supervision of those banks, it is dangerous for officials to claim to supervise the investment banks and then fail to do so. This schizophrenic policy reduces the incentives of private investors to monitor without replacing this monitoring with official oversight. This disastrous mixture is not a failure of free markets; rather, it is an example of how a failure to focus on incentives can produce disastrous, systemically important consequences.

Barth, Caprio and Levine (2011) and Levine (2010a, b) provide numerous additional examples of how policymakers and regulators in the USA and abroad enacted and implemented policies that:

(1) Failed to foster transparency;

(2) Ignored the incentive effects of their policies; and

(3) Frequently stymied competition in the decade leading up to the most recent financial crisis.

They show that it was not too little regulation; it was bad regulation that contributed to the collapse of the global financial system.

4. Conclusions

In conclusion, the operation of the financial system exerts a first-order impact on the rate of long-run economic growth and the distribution of economic opportunities in society. Well-functioning financial systems mobilize and allocate resources efficiently, funneling credit and opportunity to the best and the brightest. Poorly-functioning financial systems, in contrast, funnel credit to the rich and powerful, limiting economic opportunity and prosperity to only a few.

Thus, financial regulation is about much more than avoiding crises. This is not the same as concluding that financial stability is unimportant. In developing economies, the fiscal costs of banking crises in the last two decades of the 20th century were greater than all of the non-military international aid provided to developing countries during the 20th century. In the USA, the International Monetary Fund estimates the cost of the financial crisis at about $3 trillion, which is about $20,000 per US taxpayer and exceeds educational

expenditures by US federal, state and local governments during the last decade. However, finance matters beyond stability and finance regulation also matters for growth and opportunity.

While far from conclusive, research provides useful guidelines regarding which financial policies have been most successful at achieving inclusive growth. Policies focused on competition, transparency and incentives have achieved the greatest success on average, while those stressing direct government guidance in the allocation of credit have had correspondingly less success. With regards to enacting and implementing sound regulatory policies, the greatest difficulty lies in creating regulatory agencies that are powerful enough to foster competition, transparency and sound incentives while also obliging these powerful regulatory agencies to act in the best interests of the public.

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