Market Failures in the Financial System: Implications for Financial Sector Policies, especially in Developing Countries?

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Throughout the world, banks and the financial sector more generally have become widely criticized. They didn't do what they were supposed to do, and they did what they weren't supposed to. I have likened the financial sector to the brain of the economy: it is central to the management of risk and the allocation of capital. It runs the economy's payment mechanism. It intermediates between savers and investors, providing capital to new and growing businesses. When it does its functions well, economies prosper, when it does its jobs poorly, economies and societies suffer. Unfortunately, there is a growing sentiment that in recent years, banks in many countries—including the US and Europe—didn't do their job well. The resulting losses are enormous—in terms GDP alone, in the trillions of dollars.

Regulators have been blamed, but mainly for not doing their job, of preventing these abuses. For this, there is no excuse: There have been periods (notably in the decades beginning in the mid-30s) in which regulation worked. But then interests and ideology combined to push an agenda of deregulation and liberalization. Even before that ideology had become fashionable in the 1980s, economic science had explained why markets in general and financial markets in particular were, on their own, neither efficient not stable, a perspective reinforced by a wealth of historical experience.

Recent scandals throughout the world entailing bankers engaged in predatory and discriminatory lending, abusive credit card practices, market manipulation (the libor rate) and a host of other misdeeds has led to the view that there is a moral deficiency, a culture of corruption. In each instance, the bankers attempt to claim that there were a few rogue actors (a few rotten apples); but the pervasiveness and frequency of the problems reinforces the view that there is a systemic problem. While banking may attract those that are more motivated by financial rewards, than say the intrinsic rewards of public service or the pursuit of knowledge, the fact is that my students who went into banking did not seem that different from the others, to have this evident lack of a moral compass. The answer, it would seem, is that there have been incentives and opportunities that have led to this kind of behavior.

And this then is the key point: we need regulations to oversee the financial sector, to make sure that private incentives are better aligned with social returns. This alignment hasn't happened on its own, and it won't happen on its own. It is only when private rewards equal social returns that markets are efficient, that Adam Smith's "invisible hand" has any chance of working.

When I was chair of President Clinton's Council of Economic Advisers, I was charged with reviewing the regulatory structure of the US financial system, asking what we hoped from our regulatory system, why we had these regulations, and could we design a system that achieved its objectives more efficiently. Later, as chief economist of the World Bank, I confronted similar issues. Much of this was before the rash of scandals over the past decade. But even then there was a concern that banks weren't necessarily doing what they should be doing. Too many seemed more focused on investing in

government bonds or speculating on foreign exchange than providing loans to local enterprises. More recently, they have found it easier to make money lending to consumers than to businesses.

Too many seemed to be enjoying the good life, taking in deposits at low interest rates, and relending the money to government at high interest rates. IMF policies, insisting that these banking activities be undertaken by the private sector, but, in the fight to fight inflation, leading to high interest rates, meant a transfer of large sums of money to the private banking sector. These transfers could not be justified in terms of a distinctive service that they provided, but were rather evidence that markets weren't working the way they should—with competition the spread between the lending rate (especially to the government) and the deposit rate should have been minimal.

With the near collapse of the global economy in 2008, there is an increased awareness of the importance of market failures, those circumstances in which markets fail to act in an efficient and stable manner, in the way that they are supposed to. I already suggested one of the fundamental reasons for these market failures—a misalignment between private rewards and social returns. Nowhere are market failures more pervasive or more important, with such profound consequences for our economic system, than in the financial sector. In this lecture, I will provide taxonomy of these market failures and how regulatory and other policies can help overcome them. But rather than providing a simple list of the key market failures—from imperfections of competition, asymmetries of information, incompleteness of markets, coordination failures, externalities—I approach the subject from the perspective of the taxonomy of interventions—the key areas in which governments, all over the world, have intervened in financial markets, to help make them serve the public interest better.

Safety and soundness

Depositors put their money into banks, in the expectation that they will be able to get their money out when they need it. Banks, of course, don't leave the money idle. They know that they can "use" the money to earn returns—and in a competitive world, those returns (less charges for managing the money) are returned to the depositors. There are two difficulties: (a) the bank may not invest the money well, in which case there won't be any money to repay the depositors; or (b) the best use of the money is long term investments, but individuals may demand their money before the projects reach maturation. Other investors may not have confidence in the project(s) the bank has undertaken, and so it cannot sell the project for what it had hoped to get. This latter problem is known as that of maturity transformation—short term funding for long term projects. The inability to get funds is referred to as a liquidity problem, as distinct from the solvency problem (where the bank has, say, squandered the money). But the distinction between liquidity and solvency is somewhat artificial: if everyone could agree on the value of the long term project, presumably there would be someone to whom the bank could sell the project to reap the long term returns now. (There is a *macro-economic* liquidity problem, where the Central Bank has so tightened credit, in an unexpected way, that there is simply no one able to purchase the project. Our focus now, however, is primarily on a liquidity problem facing a particular bank, not the financial system as a whole.)

The incentive, in the absence of oversight, for banks to take individuals money and not repay is enormous. Even when there is not outright fraud, if they lend to their friends and family at low rates, without adequate scrutiny, they can walk off with profits when the gambles pay off, with depositors bearing the losses when things don't go well. The problems are even worse for undercapitalized banks, for the franchise value—the value of the firm as an ongoing enterprise—is then diminished, and it has incentives to gamble on resurrection.

Ensuring safety and soundness

There are several ways that regulators can deal with these problems. Unfortunately, banks have often used their political influence to ensure that regulators do not use the full set of possible instruments, so that the problems of safety and soundness appear even in seemingly well-regulated banking systems—as we as evident in the US, when the entire banking system faced collapse in 2008. Here is a short list of some of the key regulations

(a) They shut down banks that are undercapitalized; they want to make sure that the owners of the bank have substantial sums at risk, including the franchise value;

(b) They restrict connected lending;

(c) They attempt to ensure that bank owners (and managers) are "reputable";

(d) They restrict excessive risk taking;

(e) This includes restricting excessive leverage, and impose a variety of other liquidity and capital constraints, and restricting lending practices (e.g. imposing minimum standards for mortgages, for instance on the size of the downpayment, and other restrictions on the form of mortgages)

(f) They restrict the incentive structures of bank officers, so that they do not have incentives for excessive risk taking and excessively short sighted behavior;

(g) They prevent banks from becoming too big to fail, knowing that such banks have an incentive to engage in risk taking, since taxpayers are bearing part of the downside risk

(h) They prevent banks from becoming too intertwined to fail, or too correlated to fail, knowing too that banks have an incentive to do so, knowing that then taxpayers will have to bail them out.

(i) They insist on transparency and good accounting standards, so that market participants—and not just regulators—can exercise oversight, and make judgments about the viability of the institutions.

(j) They attempt to restrict conflicts of interest (such as those which arise when the same bank issues securities and makes loans), realizing that this both undermines confidence in capital markets and increases the likelihood of bad lending.

From this brief list of what regulators *could do* it is apparent that many regulators don't use the full panoply of instruments. For instance, in the US, regulators have been lax in capital requirements, not

adequately restricted incentive schemes, done little about the too-big-to-fail banks, have allowed banks to use flawed accounting standards, and have not insisted on adequate transparency. Consider, for instance, the issue of transparency in CDS's and other derivatives. Not even the ECB was able to forecast the consequences of what would happen in the event of a deep restructuring of Greek debt, or to assess the differences that might arise from a voluntary or involuntary restructuring. It was lack of transparency that contributed to the freezing of the interbank market after the collapse of Lehman brothers, and it is lack of transparency that is contributing to the weaknesses in that market today.

Because it is so hard to control the behavior of banks directly (it's hard for regulators and supervisors to observe and monitor every transaction), regulators have regulated not just organizational and individual incentives, but the structure of the banking system itself. The separation of commercial and investment banking helps avoid some conflicts of interest, and avoids contaminating commercial banks (which are supposed to invest the savings of ordinary households safely) with the risk taking culture of investment banks. Moreover, at least in the United States, after the repeal of the Glass-Steagall Act which separated the two kinds of banks, concentration in the banking system increased rapidly; the problem of too-big-to fail became much worse.

Market failures and safety and soundness

The underlying *market failure* is, of course, that of imperfect information. If depositors could perfectly observe (and evaluate) what the bank was doing with its money, then the moment it did something that might put the depositors' money at risk, they could and presumably would withdraw their money; and this would exercise effective discipline over bank officers. But bank officers know that they have considerable discretion.

Similarly, the 'agency" problem that arises from distorted bank manager incentives arises because the bank (and ultimately, the banks depositors, shareholders, and bondholders) can't perfectly monitor what the bank managers are doing, the riskiness of the loans, etc. What can be monitored (if only imperfectly) are things like leverage, connected lending, and most importantly, the incentive structures. (In my judgment, it is scandalous that regulators allowed banks to provide their officers with -compensation schemes that incentivized excessive risk taking—and didn't even succeed in increasing shareholder value.)

That is also why it is important to ensure that there are appropriate *organizational* incentives; for if there are perverse organizational incentives, there is a risk that such incentives will get translated in subtle ways into the behavior of managers. That's why there has to be regulations preventing the growth of too-big-to fail banks.

But there are two further subtle market failures. The first is that because of the implicit guarantee for too big to fail banks, they are subsidized, and they grow at the expense of others not necessarily because they are more efficient or provide better services, but because they are more subsidized. Unless government takes action to offset this implicit subsidy, financial markets will be distorted.

The same thing is true, of course, in looking at banks from different countries, as is increasingly becoming apparent in Europe. A country's banks are backed by its government, but the strength of that implicit guarantee depends on the fiscal strength of the government. American banks are thus the beneficiary of a larger implicit subsidy (an implicit subsidy that was made explicit in 2008-2009). Within Europe, German banks are the beneficiary of a differential subsidy. Inevitably, there is no level playing field.

If we are to have an efficient financial sector, governments have to "level out" this playing field. This is especially important because there are biases in the patterns of lending of large banks and of foreign banks (which I will discuss at greater length later.) Large banks tend to lend less to small and medium sized enterprises, and more to governments and large enterprises; and so to for foreign banks—except that, in addition, they have a preference for firms from their own country or multi-nationals more generally.

Because with banking crises, there will inevitably be bailouts, and markets know this, there is an incentive, as we have noted, for banks to become too intertwined and too correlated to fail. They have an incentive to create systemic risk problems. (And these incentives are exhibited at the individual level as well: when managers follow the herd, and the herd fails, they are not likely to be punished. "Everyone else did it." "Who could have foreseen these problems?" These are the refrains that one repeatedly hears. (See Nalebuff and Stiglitz, 1983).

Size is easy to observe. "Intertwining" is more difficult. Correlated behavior is often hard to observe, but even when observed, harder to prevent.

While intertwining is difficult to observe, some of the worse forms—those that impose the most systemic risk-- can easily be stopped: the buying and selling of CDS's on each other.

Correlated (herd) behavior characterized the stampede into subprime mortgages in the last decade, and into Latin American loans in the 80s, and into East Asia in the 90s. The creation of universal banks has, I believe, made matters worse, as had the increasing prevalence of short term investors. All are pursuing the same short sighted goals and all face the same opportunity set. Creating a more diverse "financial eco-system"—with some firms specializing in housing, others in insurance, others in long term investments, others in commerce—has not only benefits from specialization (returns to scale in gathering and processing information), but in creating institutions that have different objectives and face different constraints and opportunities. While there is some loss of diversity *within* the institution, there is still full diversification within the economy, and it is that which matters most. Investors who want to diversify their risks still can. While the probability of some firms going bankrupt might increase, the probability of systemic risk would decrease. The system as a whole would become more resilient, especially to large shocks (e.g. macro-economic disturbances.)

But the information market failures are multi-layered. Not only can't regulators monitor banks well, neither can shareholders and depositors. Nor is the record of the credit rating agencies very credible. The notion of capital market discipline is largely a myth. If a regulator who has carefully pored over the banks books and its loan portfolio can say that a bank is in fine health, and a few weeks later, it goes

bankrupt, how can shareholders and depositors hope to appraise what is going on. Non-transparent derivatives have made a difficult matter impossible: without knowing not only the holdings of these securities, but also the counterparties, and the balance sheets of the counterparties, there is no way of really assessing the bank's position. Even apart from this, accounting standards in many countries have made matters difficult: in the US, even non-performing mortgages don't have to be marked down, as the US, in an attempt to avoid bank recapitalization, switched from marking to market to marking to hope—hope that perhaps these mortgages would eventually be repaid. Mark to market accounting has been confused in other ways: a bank that faces a higher risk of bankruptcy receives an uplift to its valuation, because of the decrease in the value of its debt. An accounting system designed to help equity and bond investors appraise the value of these securities has been misused by regulators.

There are some important corollaries of these information and agency problems, which I simply list here:

1. Good corporate governance needs to be part of the regulatory regime—ensuring, for instance, that banks are not run just for the interests of managers, and that shareholders have say-in—pay.
2. But regulators can't rely on good corporate governance. There have to be restrictions particularly on the design of incentive pay systems.
3. There is a need for better accounting systems, and more careful thought about the appropriate use of accounting systems and their interaction with the regulatory system. Mark to market accounting can on its own be pro-cyclical, which is why it has to be accompanied by macro-prudential regulations.

Leverage

A major reform in the aftermath of the crisis is to require banks to have more capital. They have resisted this. I suspect, though, that not even Basle III has gone far enough.

The proclivity of banks to take on excessive leverage has been a subject of extensive discussion. There is one obvious reason: the higher the leverage, the greater the implicit "bail-out subsidy." But this is not, of course, the banks' argument. They seem to believe that it is more efficient for banks to have highly leveraged. The most important insight of modern financial economics is that of Modigliani and Miller (for which they received the Nobel Prize). They observed that when a firm takes on more leverage, the equity becomes riskier, and thus the price of equity should rise, so much so that (ignoring taxes) the value of the firm remains unchanged, even though the cost of debt is seemingly lower than the cost of equity. There is no such thing as a free lunch. They also ignored bankruptcy costs. But with bankruptcy costs, as banks take on more leverage, there is a higher probability to default—a fact that should have been obvious before the crisis.

There is some debate about the rationality of capital markets: do investors really realize this? If they don't, then bank managers can take advantage of investors' ignorance of risk by increasing leverage. But of course, what is going on here is really a hidden redistribution—from uninformed investors, who

don't realize the risk that they've undertaken, to the banks' managers. But overall societal efficiency is reduced, because of the additional expected bankruptcy costs.

Macro-economic stability

The objective of safety and soundness is closely related to that of systemic risk and macro-economic stability. When a small bank fails, we may be concerned about the depositors, but the ripple effects will be limited. But when a large bank fails—or a large number of medium sized banks fail—it has macro-economic effects. The deepest and longest lasting downturns are related to bank failures (though sometimes the causality runs the other way—deep and long downturns will inevitably be reflected in bank failures.) By the same token, if the government has to bail out a small bank, the costs are easily managed. The costs of systemic crises can be huge, amounting to a significant fraction of a country's annual GDP.

That is why it is especially important for the government to prevent systemic risk. Interestingly, before the crisis, few governments paid attention to this issue, though a few academics (Allen and Gale, 2001, Greenwald and Stiglitz, 2003) had done so. I've already discussed one of the policies that is essential for preventing systemic failures: avoiding too-big-to fail, too-correlated-to fail and too intertwined to fail banks.

But *macro-prudential regulation* is designed to ensure that the financial system does not contribute to cyclical fluctuations, and in so doing, reduces the risk of systemic failure. Credit bubbles have been a major source of economic volatility since the beginning of capitalism. An increase in credit fuels a bubble, which increases the value of collateral, which leads to further credit expansion. Banking regulations, strictly enforced, have often contributed to this credit cycle. When the bubble breaks, bank net worth is greatly reduced, and banks are forced to contract their credit greatly. The contraction of credit contributes to the economic downturn. There is an obvious way to try to tame the credit cycle: when the economy is in a boom, increase capital requirements, which dampens the availability of credit. Tightening mortgage standards directly dampens a housing bubble; increasing margin requirements may dampen a stock market bubble.

Market failure

The key market failure is that there is an important extenality from the collapse of the financial system. Just like toxic wastes pollute the environment, America's toxic mortgages polluted the world's financial system. Obviously, individual banks don't take this into account in deciding how much leverage to undertake, or how intertwined to become with other banks. In fact, they want to maximize the externality—because that increases the likelihood of a bail-out.

There are other market failures that are essential to understanding the necessity of government intervention. If equity markets worked well, a bank that lost capital as a result of a bad event (the collapse of the real estate market) could easily recapitalize itself. But, because of information

asymmetries, equity markets do not work well. There is what Greenwald and I call "equity rationing." The cost of raising new equity is so high that banks would rather contract than pay the cost—the dilution of shareholder value—unless they are ordered to do so by the government (and even then, it may not be possible.)

Access to credit and allocation of credit

A major responsibility of the financial sector is to allocate credit. From a social point of view, what matters is social return. From the bank's perspective, the question is what returns *it* can extract, related to the interest rates it can charge and the likelihood of default. Or that would be the case if (a) managers' interests were well-aligned with that of the bank; and (b) the bank bore all the costs of failure. As we noted earlier, there are major failure in both individual and organizational incentives that lead to excessive risk taking and short sighted behavior. But it similarly can lead to more lending for speculative real estate and consumption than for productive investments in, say, manufacturing or employment generation, or to increase productivity in agriculture.

The gap between social and private returns has always been there, but it may be getting worse, and may be worse in developing countries. Development entails large developmental externalities, which banks typically don't take into account. Moreover, development requires long term credit, but banks have traditionally focused on short term lending (which can itself be explained by information imperfections). But changes in corporate governance in recent years have encouraged them to be even more short sighted.

Foreign banks' interests and information exacerbates these problems. Key to job creation to employment and enterprise creation in developing countries is lending to SME's, but that requires highly specific information, in which foreign banks may be at a comparative disadvantage. Recent empirical evidence shows that foreign banks do indeed lend (proportionately) less to SME's (and this in turn helps explain why developing countries where foreign banks play la more important role have grown more slowly.)

The problems are further exacerbated by the greater concern that foreign banks may have that the governments may expropriate or take other actions that will reduce their capacity to "extract rents" from the country. This induces the firm to have an even shorter term horizon.

There are three ways of dealing with this problem. The government may impose constraints on lending—minimums (e.g. to underserved sectors, like agriculture and SME's) or maximum (real estate). It can use such restraints to reduce consumer lending.

It can attempt to lower returns on categories of lending where social returns are less than private returns (as in speculative real estate) by imposing higher capital adequacy requirements or deposit insurance rates.

Thirdly, the government can set up specialized development banks. In the hey-day of the Washington Consensus, countries were told that development banks would inevitably fail. Banking was an activity to

be reserved to the private sector. What has happened since then has forced a rethinking. On the one hand, America's private banks performed dismally—the waste of resources, now in the trillions of dollars, is greater than that of any democratic government. On the other hand, Brazil has had an extraordinary successful development bank, which has played an important role in that country's economic success. It is a bank that is twice the size of the World Bank.

The failures of some development banks provides a note of caution. But appropriately structured, with appropriate oversight, development banks can be an important source of needed long term finance.

Market failure

It is clear, looking at patterns of lending, in both developed and developing countries, that prevalent patterns of lending do not reflect social returns. Too much goes to land speculation, too little to job and enterprise creation. In general, in credit markets, private and social returns are not well aligned. The lender only cares about the returns he is able to appropriate. The dollar returns from speculation may exceed those to real investment, and if so, that's where the money will go. Moreover, banks, like other private sector firms, are short sighted; development, on the other hand, is long term.

It is hard for government to micro-manage lending, and that's why interventions have to be limited to the broad interventions described above. But it is important to note that there may be social as well as narrowly defined economic objectives. Banks, on their own, for instance may engage in discrimination and red-lining (not lending in certain areas). Regulators may ban this kind of discrimination, and impose stiff penalties when they detect it.

Consumer Protection

In almost all countries, governments have taken an important role in protecting both depositors and borrowers.

Protecting Depositors

Depositors have to be protected, because there is no way that the typical depositor can be sure of the financial position of a bank—as we noted earlier, even the regulators haven't been able to do a very good job.

Deposit insurance is motivated by three market failures: First, an information market failure: because of asymmetries of information, banks may take advantage of unwary depositors, putting their money into investments that are risky. Without deposit insurance, there would be a lack of confidence in the banking system, particularly in difficult times. This leads then to the second market failure: this lack of confidence in banks could lead to a run on the banks, with large systemic effects. (There are other contractual designs, e.g. a mutual fund, which would not (likely) give rise to such runs. But there are distinct advantages to the debt contract. Runs are, of course, related to the problem of maturity transformation, that the bank's assets and liabilities differ in maturity. This too in principle could be avoided, but only at a high cost. Long term investments yield higher returns, but short term deposits provide some discipline against the bank's misuse of funds. (Rey-Stiglitz (2012)).

But some critics of deposit insurance argue that deposit insurance actually creates its own moral hazard problem: depositors don't have any incentive to monitor banks, and thus banks have an incentive to undertake risky lending, which allows them to pay higher interest rates. But, as we have noted, there is in fact no way that depositors could effectively monitor banks; but even if they could, monitoring is a public good. It is inefficient to have every individual engaged in monitoring. Monitoring should be done by a public body. Regulators have to be attentive to the incentive effects that insurance gives rise to—just as any insurance company needs to be attentive to moral hazard. In this case, it should look carefully at any firm paying high deposit rates: is it doing so because its transactions costs are lower, i.e. because it is more efficient, or because it is undertaking more risk.

Given the frequency with which banks fail, we now have a much better understanding of some of the factors that contribute, and again, regulators need to be attentive to these: excessive risk taking, excessive leverage, lack of transparency—and perhaps most importantly, excessive expansion (especially in the aftermath of market liberalization initiatives.)

(The failure of the credit agencies has demonstrated the deficiencies in the purported alternative, private sector solution. Elsewhere, I have argued that these failures are not only repeated, but inherent.)

Protecting borrowers

Banks around the world have learned that they can greatly enhance their profits by engaging in predatory lending and abusive credit card practices. This is not the place to provide a catalogue of the ingenuity that the banks have demonstrated. Banks often try to be deceptive about the interest rate and fees charged, including overdraft fees, and there has been an ongoing battle in the United States and other countries to elicit greater transparency, and to ensure that the fees are disclosed in a way that the borrower understands.

A potentially important step forward in the United States was the creation of a financial products safety commission, to ascertain whether the financial products being sold do what is claimed that they do, whether they have “disguised” risks—are they safe for human consumption.

Other countries should follow this example, but developing countries should perhaps go further. Many of the new financial products are simply designed either to circumvent regulations or to fleece borrowers. Making markets simple will also make them work better—in a more competitive way. Thus, it makes a great deal of sense to standardize mortgages, e.g. fixed rate mortgages of 20 or 30 year duration, or at least mortgages with fixed payments and of long duration.

Governments may go further by redesigning parts of the financial system. The Danish mortgage bond system has worked well for that country for more than 200 years—far better than the American system, which has failed massively twice in under two decades, and remains dysfunctional, with the government now underwriting almost all mortgages.

Competition

There is one more important reason for government intervention in the financial sector: to maintain competition. In many countries, the banking sector is highly concentrated, and even when it is not, banks often act in ways which suggest tacit collusion. It is hard to explain otherwise the persistently high returns—far in excess of competitive levels. Occasionally, we see evidence of strongly anti-competitive behavior. The credit card companies Visa and Mastercard (originally owned by the banks) set the interchange fees (the fees they charge merchants) at an extra-ordinarily high level, far in excess of the competitive level. It should take but a fraction of a penny to move money from the consumer’s bank account into that of the merchant; it simply entails the movement of a few electrons. Yet the banks and the credit card companies charged amounts that were ten, a hundred, a thousand times more. One grocery company was, in effect, splitting its profits almost 50-50 with the credit card company on credit card sales: for moving a few electrons, the banks/credit card company got as much the grocery store got for all of its efforts in managing the complex operation of buying and selling fresh food. The credit card companies were, in effect, levying a tax on all of these transactions, a tax which however did not go for public purpose, but simply to enrich the coffers of the banks and the other owners of the credit card companies.

The scandals that marked the beginning of the century involving the bank analysts—touting stocks that they knew were “dogs”—was so universal, and the cooperation they exhibited in a system that took

advantage of uninformed investors to enrich themselves and corporate CEO's so pervasive that it is natural to suspect that there may have been tacit or explicit collusion. So too in the case of the recent LIBOR scandal.

The remedy here is straightforward: stricter enforcement of the anti-trust laws (and stricter enforcement, with more criminal penalties for the fraudulent and manipulative behavior that they have used to enhance their profits.) Breaking up the too big to fail banks too might create more competition.

Financial and capital market liberalization and market failure: A Review

I want to end my lecture with a brief discussion of capital and financial market liberalization—a reassessment based on the analysis of market failures in the financial market. An important part of the advice given to developing countries (e.g. by the Washington Consensus) was that they should liberalize their financial and capital markets, removing a whole variety of restrictions, including on foreign investment, sectoral allocations, etc. Regulation was stripped to minimal instruments, namely capital adequacy requirements. Universal banks were encouraged (with restrictions on securities transactions removed) and development banks discouraged.

The promise was that this approach would deepen financial markets, this would make financial markets more competitive, transactions costs would fall, funds for development would increase, and growth would increase. To put it mildly, this approach has failed in achieving the promised outcomes. Recent research has shown that those countries that took financial market liberalization further did get more foreign banks, but none of the ultimate or even intermediate objectives were achieved. Spreads in banking did not come down. Credit to small and medium sized enterprises went down. More broadly, credit to productive investments went down. More credit went to consumers and housing. One more, somewhat unexpected effect: large flows of money from the banking sector abroad, a repatriation of profits, the rents of the financial sector, larger, in Africa, for instance, than ODA and FDI. Not surprising, the result was that growth was lower in countries that liberalized.

Capital market liberalization too has not brought the benefits that were promised—it didn't bring higher growth, but it did bring more volatility.

The "liberalizers" also advocated moving away from bank financing to "markets." The increased reliance on markets (as opposed to bank finance) too didn't work out as the markets advocated expected. I wrote, more than twenty years ago, that I was worried that the advocates of securitization had overestimated the benefits: they hadn't taken into account how the lack of accountability that would arise from securitization would lead to poorer mortgages (the moral hazard problem) ; they had underestimated the extent to which the returns would be correlated, so they had overestimated the benefits of diversification; and they had underestimated the risk of price declines. All of these problems were evident in the failure leading to the Great Recession.

Of course, for many developing countries, markets didn't develop in the way that its advocates hoped. The reason should have been clear: providing capital to new enterprises is information intensive, and markets are not good at doing this, at least with respect to small and medium sized enterprises. Until very recently, even in the United States, only a small fraction of new investment is financed through "markets." It was foolish to think that thick and efficient markets would develop quickly in most developing countries. Rather, the focus should have been on strengthening the banking system, its ability to assess risks, and to provide credit to sustain growth and employment.

The countries in East Asia that were successful used financial markets to advance their development. They realized that unrestrained financial markets are neither efficient nor stable—and do not advance the country's development agenda. They were aware of the dangers of financial repression, the

problems that arise when there are, for instance, very negative real returns. They engaged in what I call financial restraint. They governed and shaped financial markets, and especially the banks, so that they served the country, and not the other way around. They realized that resources were scarce, and they couldn't be squandered on real estate speculation or fancy cars. The country needed real investments if it was to grow.

The Washington Consensus ideology has inflicted a high cost on developing countries, especially in Africa. In Asia, to a large extent, it was ignored. Latin America was richer. For two decades, it contributed to their slow growth, but they managed to keep poverty from soaring.

The Crisis of 2008 provides a moment for reflection, on the key importance of the financial sector, and of how ideology—flawed ideas about markets—led to a global disaster. In this lecture, I have attempted to review some of the lessons. It is clear that we needed better regulation. But more than better regulation is required. The government must take an active role in providing development finance.

I have attempted to provide some insights into why financial markets so often fail—fail to serve the economy in the way that they are supposed to—and into what kinds of policies can mitigate those failures. America is a rich country, but even it cannot really afford losses of the magnitude that its failed financial sector has inflicted. For developing countries there is no choice: they have to make sure that their financial system serves their development agenda.