



Lessons from the Recent Financial Crisis for Reforming National and International Financial Systems

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The Road Ahead to a Sustainable Global Economic System

By

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Abstract

The recent financial crisis is due to a confluence of well-known causes with some new factors. It has brought to light many weak elements in national financial architectures, particularly in the treatment of systemic banks and other financial institutions; the assessments of risks and vulnerabilities; and the resolution of financial institutions and claims. The global nature of the financial crisis has made clear that financially integrated markets have benefits, but also risks, with large real economic consequences. It has shown that the international financial architecture is still far from institutionally matching the closely-integrated financial systems. The crisis has had major financial and economic repercussions for emerging markets and developing countries. Countries are benefiting from their improved fundamentals to tackle the crisis. Short-term policy responses, involving more accommodative fiscal and monetary policy and better restructuring frameworks, are being put in place. But the crisis also highlights some specific financial sector reform challenges for emerging markets and developing countries.

The paper draws on joint work with other colleagues at the IMF, notably Giovanni Dell’Ariccia, Luc Laeven, and Krishna Srinivasan. The views expressed do not necessarily represent those of the IMF or IMF policy. Contact: sclaessens@imf.org.

1. Introduction

This paper draws lessons from the recent financial crisis for reforming national and international financial systems, with special emphasis on short- and medium term policy implications for emerging markets and developing countries. To properly diagnosis the problem, the paper starts with a review of the causes of the current, global financial crisis, drawing on historical perspectives and discussing especially its international dimensions. It highlights the multiple causes of the crisis, with a mixture of elements common to other financial crises and some new elements. It reviews the many channels and mechanisms through which the financial crisis propagated and spread globally. And it shows how the ongoing global crisis is leaving a considerable legacy of government interventions and macro-economic consequences, especially in advanced countries, which will condition future actions and reforms.

The paper then reviews the lessons for national and international financial reforms. The financial crisis has brought to light many weak elements in national financial architectures, particularly regarding the treatment of systemic banks and other financial institutions; the assessments of risks and vulnerabilities; and the resolution frameworks for financial institutions and claims. The global nature of the financial crisis has furthermore made clear that financially integrated markets have benefits, but also risks, with large real economic consequences. The crisis highlights that the international financial architecture is still far from institutionally matching the closely-integrated financial systems. Surveillance, information sharing, crisis management, and liquidity support are all areas in which much progress is needed. The paper summarizes current thinking on what reforms can best address these issues.

Particular emphasis is next given to the implications and lessons of this crisis for emerging markets and developing countries. In the short-run, policy makers in these countries have to deal with the financial and economic consequences of a crisis often not of their making. But many are better positioned than in the past to deal with these challenges given improved fiscal positions, strengthened financial sectors and improved institutional environments. Still, these countries face a number of medium-term financial sector development challenges highlighted by the financial crisis, especially in relationship to cross-border financial activities, which are relatively often more extensive than in advanced countries; large institutional gaps relative to international paradigms, making approaches adopted elsewhere not easily implemented; and overall approach and sequencing of development strategies, related in part to the need to adapt to local circumstances and to acknowledge political economy constraints. Many of these challenges points towards the need for more legitimacy of financial sector reforms.

The paper concludes with a number of areas of current debate and areas where more research would be useful to help guide policy makers.

2. Causes and Evolution of the Crisis, and Current State of Affairs

This section reviews the causes of the financial crisis. It will highlight that the multiple causes of the crisis, with a mixture of elements common to other financial crises and some new elements. It will then review the channels and mechanisms through the financial crisis propagated and spread. It will show that while the crisis emerged in the US housing markets, it quickly broadened to other financial markets in the US and globally. Finally, it will review how the crisis has left a considerable legacy of government interventions and macro economic consequences, which will condition future actions and reforms.

The 2007-2008 Financial Crisis and Other Crises: Similar, Yet Different?¹

The severe financial crisis that has gripped the global economy reflects a remarkable confluence of factors. Some are very reminiscent of past bouts of financial turmoil, but others are new (and surprising). This section identifies both what is common and what is different between the current crisis and the previous ones. While ranking the relative contributions of the various sources for the crisis is not without controversy, together they help explain the current episode's considerable scale and scope, and the inability of various policy actions to get sufficiently ahead of the crisis.²

Commonalities with Previous Crises

The crisis had four features in common with other crises: asset price increases that turned out not to be sustainable; credit booms that led to excessive debt burdens; buildup of marginal loans and systemic risk; and the failure of regulation and supervision to keep up and get ahead of the crisis when it erupted.

Asset Price Bubbles. House prices sharply increased in the U.S. and other markets prior to the current crisis (Figure 1) the patterns of asset prices in are reminiscent of those in other major financial crises episodes (Figure 2). The overall size of the U.S. housing boom and its dynamics—including rising house prices in excess of 30 percent in the five years preceding the crisis and peaking six quarters prior to the beginning of the crisis—is remarkably similar to house prices developments in the previous (Big 5) banking crises in advanced economies (Finland, 1991; Japan, 1992; Norway, 1987; Sweden, 1991; and Spain 1977).³

¹ This section is based on joint work with Giovanni Dell'Ariccia, Luc Laeven, and Krishna Srinivasan.

² We refer to other papers, such as Calomiris (2009) and Gorton (2009) for more analyses and discussions.

³ Rogoff and Reinhart (2008).

Such sharp increases in house prices were also common to other countries hard-hit by the current crisis and were associated with rapid growth in credit aggregates (Figure 3). House prices rose rapidly in many countries now caught in the financial turmoil, including the U.K. and Iceland. These housing booms were generally fueled by fast rising credit resulting in sharply increased household leverage.

Credit Booms. The prolonged credit expansion in the run-up to the crisis is similar to other episodes (Figure 4). Sustained episodes of rapid credit growth generally coincide with large cyclical fluctuations in economic activity—with real output, consumption, and investment rising above trend during the build up phase of credit booms and falling below trend in the unwinding phase (Mendoza and Terrones, 2008). In the upswing, the current account tends to deteriorate, often accompanied by a surge in private capital inflows. Increases in house prices and the real exchange rate often accompany such credit booms.

While aggregate credit growth in the U.S. was less pronounced than in previous episodes, reflecting slower corporate credit expansion, household debt increased sharply (IMF, 2008). Credit to households rose rapidly after 2000, driven largely by mortgages outstanding, with interest rates below historical averages and financial innovation contributing to an increase in outstanding household debt. And in spite of low interest rates, debt service relative to disposable income reached a historical high. The increased leverage left households vulnerable to decline in house prices, a tightening in credit conditions and a slowdown in economic activity. Similar patterns existed in several current crisis countries.

As in other crises, the fast expansion of credit seems to have played a role in the current crisis. While historically only a minority of credit booms ends up in a financial crisis, the probability of a crisis increases with a boom (Figure 5; Dell’Ariccia, Barajas and Levchenko, 2009). Furthermore, the larger the size and duration of a boom episode, the greater the likelihood it results in a crisis. The mechanisms linking credit booms to crises include increases in leverage of borrowers (and lenders) and a decline in lending standards. In the U.S. episode, both channels were at work (Figure 6; Dell’Ariccia, Igan and Laeven, 2008).

This pattern extended to various extents to other countries caught in the current storm (Figure 7). In the run-up to the crisis, credit aggregates grew very fast in the U.K., Spain, Iceland, and several Eastern European countries. As in the U.S., these credit expansions often fueled real estate booms. Increased international financial integration helped these patterns along. For many countries, a clear relationship existed between credit growth and capital inflows (Figure 8).

Marginal Loans and Systemic Risk. The boom in household credit was associated with the creation of marginal assets whose viability relied on continued favorable macroeconomic conditions. In the U.S. (and to some extent the U.K.) a large portion of the mortgage expansion consisted of loans extended to subprime borrowers with limited credit and employment histories (Figure 9). Debt servicing and repayment were, hence, vulnerable to economic downturns and changes in credit and monetary conditions. This maximized default correlations across loans, generating portfolios highly exposed to declines in house prices— confirmed ex-post through the large non-performing loans when house prices declined.

Elsewhere, a similar pattern led to large portions of domestic credit denominated in foreign currency. Large foreign currency exposures in the corporate and financial sectors had been a common feature in the Asian crisis. In the current crisis, in several eastern European economies large portions of domestic credit (including to households) are denominated in foreign currency (euros, Swiss francs, and yen).⁴ While lower interest rates relative to local currency increased affordability, borrowers' ability to service loans and creditworthiness depended on continued exchange rate stability. As with U.S. subprime loans, this meant high default risk correlations across loans and systemic exposure to macroeconomic shocks.

On the back of buoyant housing and corporate financing markets, derivative markets in many forms expanded greatly. Favorable conditions spurred the emergence of large-scale derivative markets, such as mortgage-backed securities and collateralized debt obligations with payoffs that depended in complex ways on underlying asset prices. The pricing of these instruments was often based on a continuation of increasing house prices that facilitated the refinancing of underlying mortgages. The corporate credit default swap market also expanded dramatically on the back of favorable spreads and low volatility.

Regulation and supervision, and crisis response. Past crises often followed expansions triggered by financial liberalization not accompanied by necessary regulatory reforms. Imbalances often resulted from badly sequenced regulatory reforms. Poorly developed domestic financial systems were often unable to intermediate large capital inflows in the wake of capital account liberalizations. Poorly designed financial reforms and deficient supervision often led to currency and maturity mismatches and to large and concentrated credit risks.

In this crisis, although perhaps in more subtle forms, regulatory approaches to and prudential oversight of financial innovation were insufficient as well. As in the past, but this time in advanced countries, finance companies, merchant banks, investment banks

⁴ Árvai et al. (2009).

and off-balance sheet vehicles of commercial banks operated—to varying degrees—outside banking regulations. But as this “shadow banking system” provided increasingly important avenues for intermediation, it grew without adequate oversight and led to systemic risks. Regulators also underestimated the conflict of interests and information problems associated with the originate-to-distribute model. Not only did this harm consumers of financial services, but it also created the potential for chain reactions leading to systemic risk.

As often before, the focus of authorities remained primarily on the liquidity and insolvency of individual institutions, rather than on the resilience of the whole financial system. This meant an underestimation of the probability and costs of systemic risk. At the international level, insufficient coordination among regulators and supervisors and the absence of clear procedures for the resolution of global financial institutions hindered efforts to prevent and contain the impact and transmission of the crisis.

And, in terms of crisis response, as in past events, it has proven difficult to get ahead of a fast evolving situation to contain the financial turmoil and reduce the impact on the real economy. Ad-hoc and piecemeal interventions created at times further disruptions and loss of confidence among creditors and investors. The chronology of the crisis (Calomiris, 2009, Gorton, 2008) shows how events and market developments did trigger and condition specific subsequent developments and policy responses, that, in retrospect at least, made the crisis more severe.

New Dimensions of the Crisis

New dimensions played important roles in the severity and global scale of the crisis—particularly, with respect to its transmission and amplification—that included surprising disruptions and breakdowns of several markets in the fall of 2008. Four key aspects were new: the widespread use of complex and opaque financial instruments; the increased interconnectedness among financial markets, nationally and internationally, with the U.S. at the core; the high degree of leverage of financial institutions; and the central role of the household sector.

Increased Opaqueness. Securitization and innovative (but complex) financial instruments were a critical element of the funding of the credit expansion in the U.S. Securitization—a long standing technique for prime loans conforming to the underwriting standards of Government Sponsored Agencies (GSEs)—changed in scope in the last decade, with more than 70 percent of non-conforming mortgages in the U.S. being securitized by 2007, up from less than 35 percent in 2000 (Figure 10).⁵ Other assets were increasingly

⁵ Ashcraft and Schuermann (2008), Gorton (2008) and Brunnermeier (2009).

packaged as well and cash-flow streams from securities were further separated and tranching into other securities (CDOs, etc.).

In part by being inadequately regulated, the increased recourse to securitization and the expansion of the originate-and-distribute model exacerbated agency problems. The progressive expansion of more opaque and complex securities and the increasing delinking between borrower and lenders worsened agency problems. Risk assignments became increasingly unclear and incentives for due diligence worsened, leading to insufficient monitoring of loan originators and an emphasis on boosting volumes to generate fees. The distribution model led to widespread reliance on ratings for the pricing of credit risks, with investors often unable or unwilling to themselves fully assess underlying values and risks.

Increased balance-sheet opaqueness and reliance on wholesale funding increased systemic fragility. Once U.S. house prices began to decline and defaults began to rise (affecting the expected value of the assets underlying MBS and CDOs), the complexity of instruments undermined price discovery and led to market illiquidity and a freeze in the securitization activity. The increased opaqueness of balance sheets (including due to the widespread recourse to off-balance sheet instruments) made it difficult to separate healthy from unhealthy institutions. The resulting adverse selection problems contributed to the freezing of the interbank markets and forced further sales of securities to raise funds. The increased centrality and systemic importance in many countries of highly leveraged, under-regulated intermediaries relying on wholesale and short-term funding exacerbated problems.

Financial Integration and Interconnectedness. Financial integration has increased dramatically over the past decade, especially among advanced economies. Capital account openness and financial market reforms have led to massive increases in cross-border gross positions, especially among OECD countries (Figure 11). There has also been an increasing presence of foreign intermediaries in several banking systems (including in many emerging markets). As a result, international risk sharing and competition and efficiency have increased, but so has the risk of transmitting financial shocks across borders.

Increasing interconnectedness of financial institutions and markets (Figure 12), and more highly correlated financial risks, intensified cross-border spillovers early on through many channels—including liquidity pressures, global sell-off in equities (particularly, financial stocks), and depletion of bank capital. Mortgage-backed securities and other U.S. originated instruments were widely held by institutions in the U.S., but also in other advanced economies and the official sector in several emerging markets. Through these direct exposures and associated funding problems, spillovers quickly surfaced among European banks, including Germany (IKB, July 2007) and France (BNP Paribas' money

market fund, August 2007). And as troubled intermediaries hit by losses and scrambling for liquidity were forced to sell other assets and cut lending, the crisis gradually spread to other markets and institutions through “common lender effects.” Emerging markets—especially those who had heavily relied on external financing, and paradoxically those with more liquid markets—were affected through capital account and bank funding pressures.

The sheer size of the U.S. financial market and its central role as investment destination contributed to the spreading of the crisis. Any shock to the U.S. financial markets and economy is bound to have global effects. U.S. financial assets represent about 31% of global financial assets and the U.S. dollar share in reserve currency assets is about 62%. In recent years especially, U.S. financial assets were perceived to offer the combination of safety and liquidity attractive for private and public investors the like. More generally, since the U.S. is a large economy, it affects global development much. And the more diversified structure of international financial markets made coordination more difficult (Figure 13).

The crisis was also the spark that triggered the unwinding of imbalances in other countries. Benign financial and macroeconomic conditions—notably, low interest rates and narrower risk spreads—occurred on a global basis and, alongside this, booms took place in many economies. Housing market vulnerabilities came home to roost in several countries, notably Europe. In the U.K., with a similar housing boom as in the U.S., mortgage lenders came under intense pressure—beginning in fall 2007 with a bank run on Northern Rock, which had been heavily reliant on interbank markets—rather than deposits—for funding. Large pressures hit Iceland, Hungary and the Baltic countries where imbalances were more pronounced. The increased connections and simultaneous buildup of systemic risks across multiple countries made the management of shocks more complex, especially in light of institutional deficiencies in many countries—including the inability to resolve quickly large, cross-border financial institutions, and led to a rapid spreading of turmoil globally.

The Role of Leverage. The buildup of an unusually high degree of leverage of financial institutions and borrowers contributed to the propagation of shocks. Leverage increased sharply in the financial sector, directly at commercial banks in Europe, and through the shadow banking system and the rising share of investment banks and non-deposit-taking institutions in the U.S. (Figure 14). This leverage buildup among households especially differed from previous crises. In the run-up to Japan’s real estate crisis, for example, while the household debt-to-income ratio increased sharply, measures of households’ leverage (the household debt-to-assets ratio) declined, suggesting that Japanese homeowners built equity in their properties as real estate prices soared.

This high leverage limited the system's ability to absorb even small losses and contributed to the rapid decline in confidence and increase in counterparty risk early on in the crisis. Loan-to-income values larger than in the past left households highly exposed to shocks, while at the same time high loan-to-value mortgages allowed even moderate declines in house prices to push many households into negative equity. In the financial sector, high leverage meant that initial liquidity concerns gave quickly way to solvency worries. While initial recapitalizations were relatively large and rapid (including through participation of Sovereign Wealth Funds), they were limited to only a few banks and increasingly fell short of losses.

As financial institutions incurred large losses and wrote-down illiquid securities, solvency concerns across markets fueled a process of rapid deleveraging and forced asset sales. Mark-to-market rules forced further deleveraging and fire sales. Hedge funds—facing financing constraints and redemption pressures—further fuelled this rapid unwinding process. This led to further asset price declines, prompting distressed asset sales, rising recapitalization needs, and resulting in further loss of confidence, coming to a near melt down in October 2009.

The build-up in leverage (including rising household indebtedness) was not restricted to advanced economies. In some emerging economies, vulnerabilities related to rising reliance on external financing flows. Amid global deleveraging, heightened investor risk aversion, and repatriation of funds, many emerging economies suddenly found foreign funding sources increasingly scarce and were confronted with sudden stops or reversals of capital flows. In addition, emerging market corporations faced much higher borrowing costs, limited opportunity to issue equity, and few alternative sources of financing. While official financing filled some of the gaps, emerging markets had to make rapid adjustments, leading to real economic dislocations.

Central Role for Households. Problems in the household sector have played a more prominent role in this crisis than in previous crises. Most previous episodes of financial distress stemmed from problems in the official sector (e.g., Latin America's debt crisis of the 1980s) or the corporate sector (e.g., the Asian crisis). The current crisis, however, largely originates from overextended households, in particular subprime mortgage loans (Figure 15). This has implications for how the crisis is being transmitted from the financial to the real sector and complicates the resolution mechanisms and policy responses.

In the U.S., a vicious cycle of rising foreclosures, falling home values and disappearing securitization markets quickly developed. Vulnerable cohorts of borrowers became increasingly susceptible to rising interest rates and falling home values, and could no longer refinance their mortgages, leading to higher monthly payments, rising delinquencies and default rates. A wave of finance company failures—suddenly no

longer able to securitize subprime mortgages—led to a virtual breakdown in mortgage origination and more abrupt adjustment. Adverse feedback loops—of rising foreclosures placing additional downward pressures on house prices—started. With U.S. house prices declining on a national basis for the first time since the Depression era, many heavily-indebted borrowers confronted with substantial negative home equity faced incentives to “walk away.”

Tightening standards for new mortgages and consumer credit led to a sharp compression in consumer spending that compounded already difficult situations in the real sector. With households’ savings and net assets already at historical low, financial constraints imposed by financial institutions under stress directly translated into reduced consumer spending, leading to initially localized, but gradually spreading cycles of declines in corporate sector profitability, layoffs and increases in unemployment, slowing down economies and more foreclosures.

Household balance-sheet vulnerabilities also built up in other advanced economies and several emerging markets. Besides in the U.S., household debt-to-income ratios also rose sharply in several Western European countries (most notable in the U.K, Spain, and Ireland). In several emerging markets, household credit expanded rapidly as well, leading to sharp increases in leverage and vulnerabilities. As real estate prices decline, this adversely affected the quality of loan portfolios and put financial intermediaries at risk, especially in markets, where values have grown rapidly.

The large number of individuals involved, the limited information available, and the social repercussions associated with household debt restructuring complicated and slowed down the policy response. While corporate debt restructuring is costly and painful, there are well established international best practices for how to confront widespread corporate defaults. In the case of households, moral hazard problems, the sheer number of cases, and equity and distribution issues complicate the picture. In the U.S., notwithstanding political support for a relief package for mortgage holders, policy action on this front was slow and erratic, and no effective solution emerged. In Eastern Europe several countries were confronted with similar problems, but have yet to respond in a systematic manner.

The Channels and Mechanisms in the Turmoil Stage

The crisis was the first global financial crisis since the Great Depression. Through several phase, its spread was unprecedented in scope and ferocity, with many transmission channels. It called for large government interventions, which have left many legacies for the future.

The crisis was unprecedented in its spillovers. As in any financial crisis, there are beside the underlying causes, catalysts, triggers, and amplification mechanisms. The catalyst of the crisis was the overextended US housing and mortgage markets. Trigger was the turnaround in US house prices, in part related to a cycle of monetary policy tightening, with the subprime sector as the main initiator of subsequent turmoil. While the crisis emerged in the US subprime, it quickly broadened to the larger housing markets in the U.S., and spilled over into other US financial markets (e.g., other asset backed). Surprising was the degree and speed of global spillovers, which happened in several phases and through various amplification mechanisms (Figure 16).

The first phase was through direct exposures. This phase was largely limited to banks with direct exposures to the US market and affected a few selected financial markets, sometimes related with liquidity runs (mainly related to excessive funding in wholesale markets). Through direct exposures to subprime related assets, problems quickly surfaced among European banks, including in Germany (IKB, July 2007) and France (BNP Paribas August 2007). The US housing market stress also made housing vulnerabilities in several countries apparent, notably in Western Europe, and triggered funding problems in some markets. In the U.K., with a similar housing boom as in the U.S., mortgage lenders came under intense pressure—beginning in the fall of 2007 with a bank run on Northern Rock, which had been relatively more reliant on interbank markets rather than deposits for funds.

In the meantime in the U.S., prospects of a deeper housing downturn and rising defaults quickly instigated broader financial turmoil. Worse-than-anticipated credit deterioration in US subprime mortgages prompted surprising multiple-notch downgrades by major rating agencies—unable to accurately assess risks of complex mortgage-related securities and often criticized for being too closely aligned with the issuer. Downgrades led to sharply widening spreads on assets backed securities and liquidity disruptions in interbank and commercial paper markets. Disruptions were amplified by fundamental uncertainty and opacity regarding counterparty risks. As commercial banks decided to absorb (legally separate) vehicles, their balance sheets were strained. Interbank rates spiked and issuances of asset-backed commercial paper (ABCP) contracted sharply.

A second phase of international spillovers was transmitted through asset markets. This happened through liquidity shortages, freezing of credit markets, and stock markets declines, affected many more markets (UK Sterling, Euro, and Swiss Franc). Initial policy responses aimed at addressing liquidity disruptions were large and unprecedented. Major central banks quickly made liquidity available to local commercial banks. While increasingly larger and more flexible—in maturity and especially in scope of collateral accepted, liquidity injections' effectiveness in calming interbank markets proved short-lived. Furthermore, approaches varied among countries, requiring modifications and

rounds of international coordination. Currency swaps between major central banks were also needed to mobilize US dollar funding in overseas markets.

These unprecedented and numerous efforts were unable to remedy the underlying problems that led to a breakdown in market trust and confidence. Unknown viability of institutions, especially affecting international active banks, could not be supplanted by central bank liquidity, which increasingly replaced private transactions. The reliability of credit insurance and the integrity of counterparties, particularly in the massive but unregulated market for credit default swaps also came into question, notably through the weakening positions of ultimate insurers.

The third phase occurred through large solvency concerns. In October 2008 large solvency concerns affected systemically important global financial institutions, leading to massive sell-offs, risking a financial meltdown. In this phase, liquidity concerns gave way to solvency worries, against the backdrop of highly-leveraged financial systems. The build-up of leverage, especially for US investment banks and European commercial banks, made the system vulnerable to a rapidly unwinding cycle of forced deleveraging and rising solvency pressures. As financial institutions incurred large losses and wrote-down illiquid securities, solvency concerns across markets fueled a process of rapid deleveraging and forced asset sales. While initial recapitalizations of banks were relatively large and rapid (including through participation of Sovereign Wealth Funds), they were limited to only a few banks and increasingly fell short of losses. Hedge funds—facing financing constraints and redemption pressures—further fuelled a rapid unwinding process. This led to further asset price declines, prompting distressed asset sales, rising recapitalization needs, and resulting in further loss of confidence.

Compounding the problem, recognition of insolvency problems was delayed and resolution frameworks proved haphazard in practice. Deficiencies in resolution frameworks in advanced economies, including lack of scope (e.g., investment banks and insurance corporations not covered), limited coordination (e.g., between deposit insurance and lender of last resort facilities), and slow speed (e.g., due to lack of specific frameworks for bank resolution), allowed problems to intensify. Disappearing market confidence and eroded trust required authorities to intervene in a number of cases, with unprecedented means.

In this phase, global transmission channels were multiple, including through banks and non-bank financial institutions rapidly deleveraging. Despite a coordinated cut in policy rates by major central banks and the extension of guarantees in some countries, market confidence continued to deteriorate, leading to major failures or near-failures. The collapse of Lehman Brothers, with its major interconnections and exposures, shocked market confidence globally. Uncertainties led to deepening turmoil and runs—including on US money market funds, requiring new interventions. Through its substantial

exposures in the CDS market, insurance giant AIG nearly collapsed, before receiving substantial public rescue funds.

The Crisis Prompted Large Government Interventions

Crisis has necessitated the government to intervene in many ways. As asset prices plunged across markets, the risks of cascading institutional failures and financial meltdown prompted actions by authorities across a wide range of advanced countries in mid-October, marking an overdue transition from concerns about liquidity to solvency (not unlike previous crisis episodes) and the need for more rapid and substantial recapitalization. The principal forms of intervention were: (i) liquidity provision through collateralized lending and other schemes; (ii) support for short-term wholesale funding markets; (iii) (more extensive) guarantees of retail deposits and other liabilities; (iv) purchases or exchanges of non-performing or illiquid assets; and (v) capital injections to banks. Furthermore, monetary and fiscal policy responses became even more accommodative in many countries, but did not stop the decline. Large external financial support from various sources has been necessary for several emerging markets hit by deleveraging.

The amounts involved with these interventions have been very large. On the basis of spent money and already announced commitments, advanced countries were most affected, while most emerging market countries have had less need for capital or other forms of financial sector support (Table 1).⁶ Especially liquidity provided and guarantees extended were large, amounting to double digit fractions of GDP on average for the group of advanced countries. Capital support has been about 2 percentage points. Asset purchases to date have been about the same, 2.5 percentage points of corresponding GDPs. Besides the large direct fiscal costs, captured by the figures, there are many contingent costs, hard to quantify, such as the insurance schemes for assets or increased deposit insurance limits. Indeed, past experiences suggest that amounts will increase further.

These interventions were necessary, but, by nature, distort. The interventions have generally had the aimed effects, namely stabilizing financial systems and regaining some measure of confidence. By nature, however these measures distort, directly—as they support financial institutions in non-market ways, or indirectly—as they can skew and distort resource allocation. A clear example of the (purposely) distortive nature in financial intermediation is the intervention by central banks, notably the US Federal Reserve, in a number of (short-term) markets, either directly (e.g., through the purchases of government bonds), or indirectly (e.g., through the various liquidity facilities which aim to support specific financial markets, such as the commercial paper market). Another

⁶ See further IMF (2009c) and Claessens (2009a).

example is the provision of a guarantee scheme for money market funds in the US following the large outflows after one fund “broke the buck” (its net asset value fell below one dollar). The guarantee in turn led to deposit outflows at commercial banks, which prompted an increase in deposit insurance coverage.

An example of distortions between financial institutions and the fiscal is the extension of guarantees in the case of Ireland to the largest size banks. Prior to the extension of guarantees, the CDS-spreads for the large Irish commercial banks were very high. Post guarantees, bank CDS-spreads declined sharply, while the sovereign spread increased. Measures like these, now numerous in many advanced countries today, distort asset prices and financial flows.

Distortions are not just direct, but also indirect and medium-term. The indirect distortions affecting the real sector are more difficult to document, but there are many suggestive examples (Table 2). In many countries, programs have been put in place to support more lending to SMEs. But also large firms have been targeted for public support. In Japan, for example, in April 2009, parliament passed a law to allow for the recapitalization of (larger) non-financial firms using public funds through preferred share purchase by the (state-owned) Development Bank of Japan. In US, France, and Italy car companies are being (indirectly) supported. In several countries, there were (largely informal) requirements for local lending as part of financial sector support. All of this has, directly and indirectly, affected international competition in various markets, financial and real (i.e., inefficient zombie firms may be created, driving out efficient firms).

Furthermore, the increased direct state-ownership and the large indirect role of the state in the financial sector risk distorting financial intermediation in a deeper and potentially longer-lasting way. The perverse (long-term) consequences of state-owned banks are well-documented and, while in most countries the institutional environment should prevent the worst effects, distorted outcomes may still arise. In addition, there are many other (sometimes unintended) consequences of the interventions. In the US, for example, the caps on remuneration is affecting incentives of those financial institutions now supported through public funds but also of others. These types of rules and more generally, the larger role of the state can affect the quality of financial intermediation.

Distortions extended to the international level. Interventions have affected international capital flows and financial intermediation. Liquidity support provided the first manifestation. Actions in the US initially focused on providing domestic support, even though interbank market prices suggested significant dollar funding pressures for European banks and emerging markets. For mature markets, it took several weeks to act on these stresses. And, even after ad-hoc bilateral swap lines between central banks were set up and their scope gradually increased, market prices continued to suggest problems remained. The response was slower and amounts provided more limited in the case of

emerging markets. Liquidity shortages were keenly felt by many emerging markets. Large external financial support from various sources has been necessary as emerging markets were hit by deleveraging process, but the real consequences had already been incurred.

Guarantees on deposits and other liabilities issued by individual countries have led to beggar thy neighbor effects as, starting with Ireland, they forced other countries to follow with similar measures. Some advanced countries, especially those closely integrated (such as the EU/EMU) quickly coordinated policies, e.g., adopted uniform deposit guarantee coverage. The rapid spread of guarantees led to further financial turmoil in other markets. Many emerging markets not able to match guarantees suffered from capital outflows as depositors and other creditors sought the safe havens. Distribution of risks sharply changed over time and across circumstances. Furthermore, policy measures aiming to encourage lending often had a bias toward local lending, putting international operations at a disadvantage.

Countries were also quick to “ring-fence” assets in their jurisdictions when cross-border entities showed signs of failing, reflecting the absence of clear burden sharing mechanisms for banks with international operations. Examples of defensive “asset grabs” were: the decision by UK supervisors, fearing an imminent collapse of Icelandic bank branches (under the authority of Icelandic supervisors, who did not provide a commitment to fulfill UK bank liabilities), to resort to the Anti-terrorism, Crime and Security Act to ring-fence Icelandic bank assets within the UK; and the German initiative to freeze Lehman’s assets to assure the availability of cash to satisfy depositors before they could be attached to the parent under US bankruptcy proceedings. Such actions in part also constituted anti-competitive behavior in that they tended to favor local interests.

Few actions were internationally coordinated. Most government interventions to date have been at national levels. Although there were some coordinated actions (e.g., those among Belgium, Netherlands and Luxembourg, and with some involvement of France, to resolve Dexia and Fortis), these largely remained driven by pure national interests (as suggested by the fact that the intervened entities were often broken up along national markets, and in line with support). The main exception was the coordinated (although only after some serious disruptions) provision of liquidity support. And, in the Euro-area, central bank actions are, by design, (nearly) fully coordinated among Eurosystem members.

The Current State of Affairs and the Need to Plan for Exit

Crisis is still evolving. The financial turmoil and the rapid economic slowdowns in advanced countries continue to affect global markets. This has happened through both financial (cross-border banking, hedge funds) and real economic channels. Starting in late

2008 and intensifying in 2009, the drop in demand in major advanced countries affected many markets, with sharp drops in exports in many emerging markets. With recessions and economic slowdown affecting all countries, the scope for export-led growth sharply diminished, depriving especially those countries with large foreign exchange exposures from a potential recover channel. These recessions in turn had adverse effects on financial sectors around the world, raising non-performing loans and further weakening capital adequacy positions. Cross-border exposures were (and are) large factors behind the weakening of banks in many markets.

Continued turmoil means extraordinary government interventions will continue and the (international) rules of the game will remain in flux. The coverage and scope of interventions and other policy measures will evolve depending on effectiveness and conditions and support amounts will likely increase further. As circumstances evolve, governments will (need to) adjust the rules, such as how to treat shareholders and creditors when restructuring large financial institutions, creating further uncertainty. If political support diminishes, support may become (even) more nationally-oriented and distortions increase further.

Governments need to plan for exit. While serious risks remain calling for more interventions, it is also generally agreed that distortions should be removed as quickly as possible to return to a sustainable system in line with a new financial architecture. As interventions continue to distort domestic financial intermediation and international capital flows, as the crisis abates, governments need to plan for exit from guarantees, large deposit insurance, ownership, asset acquisitions, etc. They have to do this within their fiscal constraints. These are difficult processes, many unprecedented, especially so in the context of highly integrated financial systems, and requiring all some coordination. It is clear, however, that lack of coordination can create (new) distortions. If the unwinding of interventions is not coordinated internationally, it can aggravate still weak confidence, create new distortions, and potentially be anti-competitive. Especially for the removal of guarantees, governments would do well to coordinate to avoid large capital movements. Yet, while desirable, more coordination will in practice be difficult.

3. Lessons for Macroeconomic Policy, National and International Financial Reforms

The crisis has reopened the debate on whether economic policy should be concerned with asset price booms and increases in leverage. It has highlighted, in abundantly clear ways, the deficiencies in national financial regulation and supervision in many advanced and some emerging markets and developing countries. And it has highlighted how the international financial architecture has fallen behind a rapidly integrating international

financial integration. These are broad reform agendas for the future, which deserve more than the summary of thinking provided here.

Macroeconomic Policy Lessons⁷

The crisis has reopened the debate on what to do regarding asset price booms and increases in leverage. Should economic policy be concerned with financial markets developments? Should policy be used to dampen booms? And, if so, does this fall under the responsibility of monetary policy? What, if any, should be the role of fiscal policy? This debate has been going on for some time and will continue to occupy economists and policy makers for a while. On the basis of previous research, however, and with the current financial crisis as another input, a few preliminary conclusions can be reached.

For one, it has to be considered that not all booms are alike. What may matter is not so much the asset price boom in itself, but who holds the assets and the risk, how the boom is financed, and how an eventual bust may affect financial institutions. The degree of leverage associated with the funding of a boom and the degree of involvement of banks and other financial intermediaries will determine the magnitude of balance sheet effects and the dangers to the supply of credit in a bust.

It is also likely that the case for policy intervention depends on how a boom is financed and how risk is held. Asset price booms supported through leveraged financing and involving financial intermediaries should be dealt with, since they entail risks for the supply of credit to the economy; other booms could more likely be left to themselves. This latest boom, financed by banks and through the shadow banking systems, has consequently been much more costly than the internet bubble of the late 1990s which was largely financed by equity markets.

One lesson given the risks of leveraged boom is that the mandate of monetary policy should include macro-financial stability, not just price stability. To the extent that the build up of systemic risk can portend a sharp economic downturn, and to the extent that regulation cannot fully prevent such a buildup, it is now clear that policy makers cannot neglect asset-price and credit booms. That said, the crisis also confirms that prudential measures provide a more targeted and less costly policy solution than interest rate changes and should be a central element of an integrated policy response.

The crisis also highlights two important lessons for fiscal policy. The first is that, in many countries, budget deficits were not reduced sufficiently during the boom years when revenues were high, which limits now the fiscal space needed to fight the crisis. The

⁷ For a more detailed review see IMF (2009a).

second has to do with the structure of taxation. In most countries, the tax system is biased toward debt financing through deductibility of interest payments. This bias to higher leverage increases the vulnerability of the private sector to shocks, and should be eliminated.

National financial architecture⁸

Overall direction of financial reforms. Regulatory shortcomings have clearly been a key contributor to the financial crisis. The recognition of these failures is driving the current redesigns of national regulation and supervision systems across a large range of countries. Coordinated by the Financial Stability Board, FSB (previously named the Financial Stability Forum (FSF)), national authorities and standard setters are working to address deficiencies revealed in existing arrangements. This is a broad agenda which will continue for some time. A summary of overall objectives and current thinking will nevertheless be useful.

Actions are generally recognized as required in the five general areas. *Regulatory perimeter:* The regulatory, supervisory, and information perimeter needs to be broadened to ensure that all financial activities that pose systemic risks are adequately captured. *Micro-prudential regulation:* Capital regulation, liquidity management, and risk management need not only to reflect individual institutions' risks but also their potential to form systemic risk. *Macro-prudential regulation:* Regulatory approaches that better dampen the procyclicality of financial markets need to be designed. *Information and market discipline:* Information disclosure and corporate governance practices need to improve to enhance market discipline. *Organization of regulation and supervision:* There is a need for greater coordination within and across countries in both the design of regulation and the monitoring of systemic risk.

The following key principles are recognized as essential guides to these redesigns: *The perimeter of regulatory and supervisory arrangements should be drawn to address concerns over systemic risk and be compatible across jurisdictions, institutions, and activities.* This means that supervisory authorities need to proactively identify and address gaps in oversight and information since markets and institutions will otherwise seek to exploit them. In that context, supervisory resources should be increased and allocated to the areas posing greatest systemic risk. Supervisory actions should result in prompt intervention whenever excessive risks arise. *Regulations need to be incentive compatible while balancing possible adverse impacts on innovation and efficiency.* This means that regulation should provide incentives to any institution whose distress would

⁸ For a more detailed review of needed international financial architecture reforms see IMF (2009b).

have systemic externalities to internalize such costs in its business planning and risk management.

Another principle is that *market discipline and supervision should complement each other*. This means an enhanced disciplinary role of markets requires allowing for the failure of individual institutions. This should occur within the context of a credible resolution framework for banks and non-banks that limits the wider impact of failure and reduces the moral hazard of a too large public safety net. It also requires improved corporate governance and information disclosure.

Finally, *the redesign of financial regulation needs to be aware of and seek to overcome its inherent limitations*. Many questions remain about on how to best reform the architecture to mitigate systemic risks effectively without imposing too much and inefficient regulation. And many recent rules are still in the process of being implemented. The redesign needs to keep regulatory burdens in mind. At the same time, regulation tends to lag behind financial innovation, and is vulnerable to industry capture and political influence. Supervisors may lack the mandate, sufficient resources, or necessary independence to effectively contain systemic risk and enforcement may be poor. These limits on regulation and supervision are especially so binding in emerging markets and developing countries. Implementing the new rules will thus remain more difficult in those countries especially.

International financial architecture⁹

Many international financial architecture changes are needed, including regarding surveillance. The crisis has made clear the enormous costs of not identifying risks early enough. Private market discipline failed in many respects, while public surveillance identified risks at a broad level but did not drill down deep enough to expose the full extent of vulnerabilities or draw specific policy conclusions. Many changes are needed to reduce systemic risks globally. A more effective approach to detect impending dangers to the world economy will require close cooperation among international agencies to bring together the scatter of macro-financial information and expertise, and identify key risks and vulnerabilities. Only by working across organizations—supported by significant information sharing and drilling down—can one hope to “connect the dots” (across financial institutions, markets, and countries), clearly articulate risks, and propose practical remedies.

Obtaining better information will in turn be another essential step. More, and better organized, information is required for markets and policymakers to improve systemic risk

⁹ For a more detailed review of needed financial reforms see IMF (2009c).

assessments. The crisis has underlined the importance of going beyond traditional statistical approaches to obtain timely and higher-frequency real and financial indicators, at least for systemically important countries and financial institutions. This requires enhancing the accessibility and timeliness of existing data, developing new sources, and promoting transparency and disclosure more generally. Data need to cover non-bank financial institutions, such as insurance companies and hedge funds, and housing-related statistics, and allow a better understanding of credit risk transfers. Better information is needed on the financial operations of large non-financial corporations that have significant links in national economies and potentially across borders as well.

Better risk assessment. This will also mean strengthening macro-financial analysis and work on early warning systems. More analysis is needed on the linkages between financial sector and macroeconomic performance (for instance, on the relationship between monetary policy and financial risk taking). And new and better operational tools need to be developed for macro-financial surveillance. Perhaps most critical is recognizing that early warning exercises are less about “calling” crises—whose exact timing and occurrence is nearly impossible to foretell—than about identifying risks and underlying vulnerabilities that may trigger loss in confidence and propagate a crisis, and taking remedial policy actions. But even then, new channels through which identified risks can spread and novel risk manifestations may be missed, especially as financial innovation and integration continue and the complex web of interlinkages grows.

Better early warning and surveillance work. Early warning and surveillance work by multilateral agencies will need to balance voluntary engagement in assessments with mandatory compliance. Multilateral and bilateral assessments could be used more systematically to examine macro-prudential risks and progress in the implementation of multilaterally agreed principles, standards, and actions. It will, however, mean stronger requirements on member regulators and authorities to participate, more streamlined processes, and improved means of dissemination, while recognizing the tension inherent in the function of whistle blower and crisis preventer. More broadly, an overarching challenge in improving early warning will be to convince country authorities to take actions to deal with vulnerabilities, particularly during good times. Change in international financial governance and representations (in both rule making and decision making bodies (Financial Stability Board, Basle Committee on Banking Supervision, IMF, G7/9, G20, etc.) will be needed to make this effective.

*Better cross-border crisis management arrangements.*¹⁰ As clearly demonstrated by the failures of Lehman Brothers and some Icelandic banks, countries cannot deal with large, complex, globally active financial institutions on their own, as these institutions affect many markets and countries. A more universal approach is needed. Closer cooperation

¹⁰ See further Claessens (2009b).

and greater coordination among regulators and supervisors can help to adequately address market disruptions as they arise and forestall policy measures that have adverse spillovers. An enhanced role for “colleges of supervisors” with specific mandates and accountability will be an important component to achieve the goal of better monitoring and early interventions. At the same time, this will not be sufficient to cover all sources of systemic risks, as risks can come from other sources, including from non-bank financial institutions.

Improved cross-border banking resolution. Clear and binding rules on burden sharing for weak or failed cross-border financial institutions are needed; otherwise it will be hard to develop a fail-proof system. The first best—a global financial regulator, matching the current, financial closely integrated world and well-resourced in terms of staff, powers, budget and financial resources—is unlikely to materialize soon. Other options, each of which could achieve to varying degrees greater global financial stability, are a new charter for internationally active banks, greater harmonization of rules and practices, and enhanced coordination. Each of these second best reforms have their own benefits and costs, which are difficult to rank, especially as they depend on actual implementation and enforcement.

Better liquidity provision. Importantly, improved crisis management will require better international liquidity provision, to both financial institutions and countries, to prevent spillovers from becoming solvency issues. While one can take off from the designs and institutional frameworks for national lender of last facilities, much work is still needed to obtain better facilities for cross-border banks.¹¹ Many of the obstacles are similar or relate to the same underlying factors hindering ex-post crisis resolution. For liquidity provision at the country level, the approaches are conceptually also well-known and can involve, besides private market solutions (including contingent credit lines and insurance contracts), bilateral or regional swaps among countries, other forms of reserve pooling, and an expanded IMF, including a larger SDR allocation (as agreed in principle at the G20 meeting of April 2, 2009). But between principles and actual practices can be many barriers.

4. Short-Term Issues and Lessons for Emerging Markets and Developing Countries

The crisis has affected emerging markets and developing countries in many ways, through financial and real economic channels. Countries have had to respond, often in new and unorthodox ways, and many still face various challenges on multiple fronts today. Policy choices are greater today than in the past, however, since many countries

¹¹ See, among others, Schinasi and Teixeira, 2007, for a discussion of the complications of establishing lender of last resort in the EU.

have entered the crisis with better fiscal positions, strengthened financial sectors and improved institutional frameworks. The crisis also provides some lessons on the medium-term financial sector development strategies for emerging markets and developing countries and how to adapt policies and reforms to their specific circumstances.

Short-Term Issues and Policy Options¹²

The current financial turmoil is confronting emerging market economies and developing countries with two shocks: a “sudden stop” of capital inflows driven by global deleveraging (Figure 17), and a collapse in export demand associated with the global slump (Figure 18). Although some countries were already ripe for a homegrown crisis following unsustainable credit booms or fiscal policies, and face large debt overhangs, the majority were just innocent bystanders (Figure 19). Policies to help address the current situation and bring about recovery in both groups of countries involve greater external financing, adjusting monetary and fiscal policies, and being prepared to address the many debt restructurings, all while considering the exit strategy from what are often unorthodox policies.

A key ingredient to address these two shocks will be greater official financing. Faced with massive lower private capital inflows, and sometimes outflows (Figure 20), countries need official external financing to expand their “policy space”. Funds made available to emerging markets and developing countries can allow them to pursue supportive macroeconomic policies—including, in countries with large debt overhangs, by helping to meet the fiscal outlays (such as bank recapitalization costs) associated with the resolution of that overhang. Another key ingredient will be policies to protect the poor and other vulnerable groups.

For their short-term external financing needs, some countries can seek recourse to swap facilities from major advanced economy central banks. International financial institutions, including the IMF through its new and existing instruments, can provide some such support as well as required, both through direct balance-of-payments support and in a contingent fashion through credit lines. Some countries will be able to use lines for trade credit made available by bilateral and multilateral financial institutions, although the evidence that there are large market failures in the provision of trade finance is unclear (see Chauffour and Farole, 2009).

Monetary policy can be eased and for many countries the exchange rate can adjust. Except where the loss of confidence in the currency precludes it, the basic thrust of monetary policy should be toward easing. The clearly evident global deflationary pressures and widening interest differentials with respect to advanced countries allow

¹² This is the summary of Ghosh et al. (2009).

much room for lower interest rates. Quantitative measures may also be appropriate in some cases. However, central banks need to remain mindful of the trade-off between the growth-enhancing effects of looser policy versus the negative impact of exchange rate depreciation on unhedged balance sheets.

Countries with flexible exchange rate regimes should allow their exchange rate to absorb much of the pressures (Figure 21). Since many emerging markets have large stock of foreign exchange reserves, they can use some of these for intervention to avoid disorderly market conditions. Using reserves can prevent excessive depreciation and smooth the impact of interruptions or reversals in capital flows, recognizing of course that some changes in capital flows may be permanent. In some cases, foreign exchange reserves can also be used to substitute for foreign credit lines to banks, allowing the latter to maintain domestic lending operations. For some exchange rate peggers, there may be scope to increase the flexibility of the exchange rate regime, while ensuring the maintenance of a credible anchor for monetary policy.

Depending on available fiscal space, expansionary fiscal policy could also be deployed to support economic activity. With better fiscal position, many countries can allow not only automatic stabilizers to operate, but also to increase discretionary spending (Figure 22). Although the empirical evidence is not conclusive, conventional fiscal multipliers may be relatively small in emerging markets and developing countries, and the impact of fiscal stimulus on activity is more uncertain. This calls for a variety of fiscal measures that could include some less conventional steps such as providing credit guarantees. For countries in crisis, options are more limited, also given potential adverse feedbacks between debt sustainability and (real) domestic interest rates (Figure 23). For these countries especially, fiscal support should be geared towards maintaining financial sector confidence and solvency.

An important policy step is to prepare for financial turmoil and insolvencies. Governments need to be prepared with contingency plans for limiting risks of bank runs, and adopt comprehensive mechanisms to reduce the risks of systemic solvency problems. Many countries need to ensure an adequate framework to facilitate rapid debt workouts. Debt restructuring mechanisms can provide greater scope for monetary easing by reducing the negative repercussions of exchange rate depreciation on unhedged balance sheets. Depending on circumstances, restructuring can be done ex post (recapitalizing banks after they suffer losses), or more proactively. However, the large outlays required to restore banks' solvency may limit room for conventional fiscal expansion.

It is critical that countries have a credible exit strategy. Monetary policy should not be loosened too quickly, as a rapid reversal would damage credibility. The same holds for fiscal policy interventions, where the stimulus should not be withdrawn too soon. At the same time, stimulus may require a credible exit strategy that places government finances

on a long-term sustainable footing. This would help contain the costs of financing the short-term stimulus, and have an additional benefit of strengthening investor confidence and facilitating the resumption of capital inflows in the recovery phase.

Medium-Term Policy Challenges

Financial systems in many emerging markets and developing countries have been greatly strengthened over the past decade. Much of this has come about from better regulation and supervision and enhanced institutional capacity. This has allowed many countries to withstand, at least to date, the impact of the global financial and economic crises on their financial systems. But there remain challenges, some old and some new, and many brought out fresh by the financial crisis. These concern the need to: adapt rules to the extensive internationalization of many emerging markets; to adapt international standards to country circumstances; to allow for a variety of financial sector development strategies; to assure legitimacy in financial reforms; and to consider political economy factors explicitly.

One: the need to adjust to large, but volatile international financial integration. The crisis has made clear that emerging markets and developing countries face some specific challenges in terms of adapting to the rapid financial integration they experience. Gross capital flows—not necessarily net flows, cross-border entry and other forms of internationalization of financial services has been extensive in many emerging markets. Entry in banking systems has been extensive in the last decade, with market shares of foreign banks in many emerging markets currently exceeding 50%. Other forms of cross-border financial services provision, such as equity listing and trading on international stock markets, have also increased sharply in recent decades.

This financial integration has happened very rapidly—many now developed countries took more than 50 years after World War II to completely open up their financial sectors and capital accounts. And, many advanced countries today do not experience the degree of internationalization in terms of foreign bank presence and offshore equity trading as some emerging markets do. This rapid and large financial integration is forcing many adjustments in a short period of time. At the same time, developing countries face handicaps. While they need to build up rapidly institutional capacity, they often lack financial and human resources. This combination calls for special policy approaches to addressing cross-border banking activities.

On many issues regarding cross-border financial services provision, however, there is not yet a clear consensus as to the best approach. And even when it exists, implementing it has proven to be complex. The lack of a clear framework make countries respond in ways that create not only costs and distortions, but also risks. This is the clearest in cross-border banking (see further Caprio, Evanoff, and Kaufman, 2006). The large foreign

presence in banking and capital markets—both foreigners operating in the local market, cross-border financial services provision, and local institutions using off-shore markets—make all these issues more important for developing countries.

The financial crisis has highlighted, for example, the lack of clarity on the responsibility and liability—of the local deposit insurance agency or other entity—for deposits of foreign banks' subsidiaries and branches. The lack of certainty among supervisors on how to deal with branches, lead to the common practice to establish subsidiaries instead of branches reflects. The desire for subsidiaries creates costs, however, as international banks tie up capital inefficiently and can create risks, as shown in the ongoing financial crisis—e.g., the Baltics and Central and Eastern Europe. There is also no solid international framework on the best modalities for information sharing, leading to poor risk monitoring and coordination issues in a financial crisis. Combined with limited capacity and greater risk of a single banking failure or a systemic banking crisis in emerging markets and developing countries, the incomplete international framework has been be of particular disadvantage for these countries.

Second, the broader financial sector development strategy and the role of government.

The approach has to consider as well the broader financial sector, including capital markets, development strategy, since there can be negative impacts of large financial integration. Large foreign bank presence can hinder local information generation and information availability, which in turn can adversely affect the quality of oversight. Large foreign bank presence can mean that local supervisors know less on the state of the local economy as they lack information on the local bank market. Market discipline may work more poorly as well. When the local operation represents only a small part of the foreign financial institution's overall balance sheet and income, local market discipline may be more limited.¹³

Development effects can also occur in capital markets. Large foreign ownership in the local market and much trading and capital raising at off-shore centers, such as New York and London, has led to many gains, in the form of lower costs of capital, increased liquidity, better price discovery and improved diversification of risk. At the same time, it can mean that responsibilities for oversight of capital markets' activities become unclear. It can also make development strategies more difficult. Some, still nascent capital markets have suffered from internationalization through declines in local liquidity. In particularly in Latin America the pull from New York in terms of cross-listing and trading has been very strong. This can affect local capital market development

¹³ There may also be negative effects on local capital markets development when foreign banks are no longer listed. This may reduce not only local capital markets liquidity directly, but can also mean a lack of market signals (e.g. financial performance, price and ratings) regarding the performance of local banks and related of the local economy more generally.

(prospects). This can be in a narrow sense—as declines in local liquidity make it more difficult to trade and raise new capital for remaining other, smaller firms—and in a broad sense—as there is too limited support for local investment banking activity, accounting services, trading systems and the like. Again, these effects can be of particular importance for emerging markets and developing countries.

The best policy and regulatory responses are not clear. Answers to these stability and development issues may require some adaptation to current approaches. In banking, some countries have proposed and implemented specific corporate governance requirements for subsidiaries, to avoid problems in home markets affecting local markets and more generally to address possible conflict of interests between headquarter and local bank operations. Some have suggested that subsidiaries of foreign banks be listed in the local markets to assure some price discovery. These and other proposals can have some benefits, but presumably also costs passed on to consumers.

In capital markets, answers can be complex as well, in part as once has to take into account size, location and other aspects of the market. It may be, for example, that smaller markets with close geographic or time-zone proximity to large markets may be best off fully integrating, whereas larger markets further removed from financial centers may be able to pursue a more differentiated strategy.¹⁴

This also concerns the role of the government. While international financial integration and foreign financial institutions combined with the use of international standards can bring much value added, they do restrict the degrees of freedom when pursuing local development policies. To a large extent, the reduced degree of sovereign freedom is part of globalization and has many benefits, not least as a disciplining factor, since the role of the state in the financial sector has not always been beneficial in most developing countries. Nevertheless, there may be elements in which national development strategies need to be adjusted to account for internationalization. Also, many now developed

¹⁴ On one hand, harmonizing rules and regulations with those in international markets may reduce the incentives to divert trading and capital raising from emerging to international markets. Full harmonization—including enforcement—could, for example, preclude firms from listing in international financial centers to bind themselves to higher corporate governance or disclosure standards. On the other hand, as liquidity attracts liquidity, more common standards may just facilitate the agglomeration of trading in one place, as has been found in say the derivatives markets where most trading in (near) identical contracts is typically concentrated in one place. Rather, the presence of some differentiation in say listing rules, and other “frictions”, combined with home bias and the tendency for markets to be most active near the center of information production, may lead to more active local markets. This would suggest that local regulations in emerging markets ought to aim at (some) differentiation from international markets to maintain activity.

economies have had a large role of the state in the past in financial intermediation, suggesting some state involvement can be useful along the path of financial sector development.

It may well be that an intermediate stage of financial integration, with large internationalization, but not yet a fully integrated institutional environment, represents the most risky state. As observed in the recent financial crisis, for example, a small emerging market with largely foreign banks can easily be subject to large spillovers. With a large foreign presence, there can be coordination issues as foreign financial institutions will not internalize as much the effects they have on the local financial markets and economy. The limited ability to coordinate among foreign players using moral suasion and other tools can call then for greater host government intervention. But this can be hard to do in a transparent manner given still weak institutions.

Third, the application and adaptation of international standards. The need to adapt international standards to country circumstances always exist, but arises especially for developing countries. Standards have a bias towards the circumstances of (current) developed countries, including a more liberal institutional environment, and those countries' regulation and supervision structures. Developing countries are further from the paradigm reflected in the standards and have greater implementation challenges. Standards are often too sophisticated and can assume too much in terms of the supporting institutional infrastructure. Over time, developing countries will overcome these problems—through better laws and regulations and institutional capacity building, supported by technical assistance, etc. In the meantime, inefficiencies from using the wrong “standards” and (new) risks may arise. What to do to overcome these inefficiencies and avoid the risks will vary by country.

Trying to adopt all standards in their entirety is surely inefficient for almost all (developing) countries. Some parts of the financial system may not yet be developed (e.g., stock markets or insurance) and as such some standards (e.g., IOSCO, IAIS) may be meaningless to adopt. And, depending on the country, some elements of the standards will be more important than others. Better prioritization which (elements of the) standards are more relevant for the circumstances of (specific) developing countries—and which would need to be implemented first—would be useful. Probably the elements common to many of the standards—regulatory governance, governance, transparency—would be key to adopt and implement first. Little formal analysis exists, however, on what is most important given circumstances, with countries on their own having to judge or to rely on, what can at times be ad-hoc advice.

Fourth, and more general, the relevance and legitimacy of standards. A broader issue is how to adapt (some of) the standards over time and to countries' circumstances. Here the issue of representation in the standard setting bodies becomes important. While it is

recognized that adaptation of the (application of) standards and the reform model to country circumstances can be necessary, to date developing countries have had a small stake in the global standard setting bodies. Emerging markets and developing countries' participation in global forums like the Financial Stability Forum (the FSF, now FSB), Basel Committee and other such groups, has been small (albeit the FSB has recently expanded its membership to the G-20 countries). The influence of developing countries in the formulation of standards is consequently still limited.¹⁵

It not just the relevance of standards to developing countries' circumstances, but also their legitimacy that matters. Governments and politicians in all countries struggle making the case for adopting better standards and conforming to international practices. In case of developing countries, the large gap between local and international rules can make it even more difficult for policy makers to convince the general public and special interests of the need to adopt international rules. In this sense, some overrepresentation in standard setting bodies and tilting the bargaining positions towards developing countries can be helpful.

Of course, legitimacy is as often used appropriately as it is misused and many countries hide behind "lack of legitimacy" when they do not implement reforms that are in their general interest, but not favored by special interests. In general, the process of standards setting, the adaptation of standards to different and changing circumstances, the manner in which compliance with standards is being verified, the growing importance of regional and global trade agreements, and the legitimacy of the global financial system are deep and complex issues on which further analysis is necessary to assure that the needs of all countries are appropriately met (see further Claessens and Underhill, 2005).

Fifth, the overall political economy. Financial reform, maybe more so than other forms of reform, needs to consider the political economy of the country in question. One clear aspect involving political economy factors is enforcement, a key issue in many developing countries. Weak enforcement has been a symptom of development—some say development is all about enforcement. The constraints on enforcement run much deeper than just lack of capacity or low pay of supervisors, but relate to the lack of political will, lack of accountability, and plain corruption. Without considering the political economy, legal, regulatory and other reforms may falter for missing the real

¹⁵ Similar issues can arise in the context of financial services negotiations—as in GATS and regional Free Trade Agreements (FTAs). Limited means (technical, financial and people) can put countries at a disadvantage in North-South type of FTAs. Not being able to influence the terms forces developing countries in the position of essentially facing take-it-or-leave-it offers that are largely based on the rules in developed countries.

constraints, or even aggravate the problems. For example, granting too much power to banking supervisors in an environment with limited accountability risks only misuse.

The answer may be two-fold: first, give more reliance to market-based approaches in regulation and supervision, especially in developing countries; and second, impose some constraints and adopt a less than fully liberalized environment. For the first, there is a long tradition of legal thinking and some specific recent empirical evidence in case of finance on the importance of private approaches. The general legal literature stresses that private enforcement mechanisms are likely the main mechanisms in most markets, particularly in countries with severe weaknesses in public law and public enforcement.¹⁶ Furthermore, public enforcement will take some time to achieve. Balancing in the meantime public enforcement with other means—such as relying on private enforcement mechanisms—will be efficient.

For banking regulation and supervision specifically, Barth, Caprio and Levine (2006) show empirically that giving more powers to bank supervisors does not work well, especially not in less developed countries, while private mechanisms work better. For securities regulation (La Porta et al., 2006) show that mechanisms relying on private law enforcement are more effective for capital market development, while public enforcement mechanisms are less effective. This evidence suggests that the impact in developing countries of standards relying much on government enforcement is at best limited.

In terms of the second part of the answer, a fully liberalized approach may not be the best. Specifically, Claessens and Perotti (2007) argue that in some cases financial sector development requires quantity constraints on private sector actions. This may mean limiting, at least initially, the type of activities financial institutions can engage in to restrain risk (e.g., banks may not be allowed to invest in real estate or undertake sophisticated financial transactions). It can mean limiting the degree of competition in some segments, both across institutions and markets (or geographically), while to relaxing it over time to prevent rent-seeking behavior. Such an approach can insulate at early stages financial markets from the potential for opportunistic abuse by insiders. This form of “quantity regulation” offers greater resistance to manipulation than more sophisticated regulatory approaches (based on prices, financial reporting, etc.),

¹⁶ Furthermore, in one view, public law emerges out of private ordering, at least it has so in common law systems; courts “find” well-functioning contractual arrangements among parties and elevate them to law. Furthermore, in most markets, private “enforcement” mechanisms have always been at work. Industrial standards, for example, are very commonly “enforced” in industries through a mixture of reputation and private sector organizations, witness the ISO-standards and the private enforcement thereof (Berglof and Claessens, 2006 review).

particularly in institutional environments where quality of information is poor and political economy factors strong.

Yet, neither private sector monitoring or quantity restraint approaches are fully compatible with international standards and their implied financial sector development approaches. Relying more on private sector monitoring approach could, for example, imply that countries do not comply fully with some international standards. While, as long as more emphasis is put on market forces, this may be the best approach, the signal from a standards evaluation nevertheless would be negative as the country would show lack of compliance, say with public enforcement.

Similarly, the quantity restraint approach could imply that the country maintains some barriers on capital account movements or between financial services providers, restricts competition geographically or across products, regulates banks' portfolio allocations, or controls the type of products financial institutions can offer. While these actions do not necessarily violate standards in a narrow sense, they nevertheless imply deviations from a general reform model. As such, there can be a negative signal to the international markets, which, without an adaptation of the standards, could hurt development prospects.

5. Conclusions

The financial crisis has brought a number of weaknesses in economic policy and national and international financial architectures in the open. The reforms agenda is large, much remains to be done, and new questions have come up for the design of national and international financial systems. Much has been achieved in strengthening financial sectors in emerging markets and developing countries, but they still face some specific challenges and need more voice in international financial reforms, policy decisions and actions.

While there are these lessons, there remain many areas of unknowns where further policy research would be useful. These include the areas of competition policy, what approaches to use for consumer protection, how to further harmonize rules—across products, within markets and globally, and how to assure adaptation of the international standards and codes.

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Table 1. Headline Support for the Financial Sector and Upfront Financing Need

(As of April 15, 2009; in percent of 2008 GDP)

	Capital Injection	Purchase of Assets and Lending by Treasury	Central Bank Support Provided with Treasury Backing	Liquidity Provision and Other Support by Central Bank 1/	Guarantees 2/	Total	Upfront Government Financing 3/
	(A)	(B)	(C)	(D)	(E)	(A+B+C+D+E)	
Advanced North America							
Canada	0.0	8.8	0.0	1.6	13.4	23.7	8.8
United States	3.9	1.3	1.1	42.1	31.3	79.6	6.3 4/
Advanced Europe							
Austria	5.3	0.0	0.0	0.0	30.0	35.3	5.3
Belgium	4.7	0.0	0.0	0.0	26.2	30.9	4.7
France	1.2	1.3	0.0	0.0	16.4	19.0	1.5 5/
Germany	3.8	0.4	0.0	0.0	18.0	22.2	3.7
Greece	2.1	3.3	0.0	0.0	6.2	11.6	5.4
Ireland	5.3	0.0	0.0	0.0	257	263	5.3
Italy	1.3	0.0	0.0	2.5	0.0	3.8	1.3 6/
Netherlands	3.4	2.8	0.0	0.0	33.7	39.8	6.2
Norway	2.0	15.8	0.0	0.0	0.0	17.8	15.8
Portugal	2.4	0.0	0.0	0.0	12.0	14.4	2.4
Spain	0.0	4.6	0.0	0.0	18.3	22.8	4.6
Sweden	2.1	5.3	0.0	15.3	47.3	70.0	5.8 7/
Switzerland	1.1	0.0	0.0	10.9	0.0	12.1	1.1
United Kingdom	3.9	13.8	12.9	0.0	51.2	81.8	20.2 8/
Advanced Asia and Pacific							
Australia	0.0	0.7	0.0	0.0	N/A	0.7	0.7
Japan	2.4	11.3	0.0	1.2	7.3	22.1	0.8 9/
Korea	2.7	5.4	0.0	0.3	13.8	22.2	0.4 10/
Emerging Economies							
Argentina	0.0	0.9	0.0	0.0	0.0	0.9	0.0 11/
Brazil	0.0	0.0	0.0	1.5	0.0	1.5	0.0
China	0.5	0.0	0.0	0.0	0.0	0.5	0.0 12/
India	0.0	0.0	0.0	5.6	0.0	5.6	0.0
Indonesia 13/	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hungary	1.1	0.0	0.0	4.7	1.1	6.9	1.1
Poland	0.4	0.0	0.0	0.0	3.2	3.6	0.4
Russia	0.3	0.5	3.2	3.2	0.5	7.7	0.8 14/
Saudi Arabia	0.6	0.6	0.0	8.2	N/A	9.4	1.2
Turkey	0.0	0.0	0.0	0.2	0.0	0.2	0.0
Average (PPP GDP Weights)							
G-20	1.9	2.5	1.0	12.4	14.3	32.1	3.4
G-20 EU	2.7	3.8	3.2	0.5	22.1	32.3	6.7
Advanced Economies	2.9	4.0	1.3	18.8	22.8	49.8	5.3
Emerging Economies	0.2	0.1	0.4	1.6	0.1	2.4	0.1

Source: IMF, 2009d; FAD-MCM database on public interventions. See the IMF Paper: "The State of Public Finances", Chapter II. for details.

1/ This table includes operations of new special facilities designed to address the current crisis and does not include the operations of the regular liquidity facilities provided by central banks. Outstanding amounts under the latter have increased substantially, and their maturity has been lengthened in recent months in many cases.

2/ Excludes deposit insurance provided by deposit insurance agencies.

3/ This includes only those components of A, B and C that require upfront government outlays.

4/ Upfront financing is USD 900 bn (6.3 percent of GDP), consisting of TARP (700 bn) and GSE support (200 bn).

Guarantees on housing GSEs are excluded. For details, see the IMF Companion Paper: "The State of Public Finances", Chapter II.

5/ Support to the country's strategic companies is recorded under (B); of which E14 bn euro will be financed by a state-owned bank, Caisse des Depots and Consignations, not requiring upfront Treasury financing.

6/ The amount in Column D corresponds to the temporary swap of government securities held by the Bank of Italy for assets held by Italian banks. This operation is unrelated to the conduct of monetary policy which is the responsibility of the ECB.

7/ A part of the capital injection (SEK50 bn) will be undertaken by the Stabilization Fund.

8/ Costs to nationalize Northern Rock and Bradford & Bingley recorded under (B), entail no upfront government financing.

9/ Budget provides JPY 3,900 bn to support capital injection by a special corporation and lending and purchase of commercial paper by policy-based financing institutions of the BoJ.

10/ KRW 76.7 trillion support for recapitalization and purchase of assets needs upfront financing of KRW 3.5 trillion.

11/ Direct lending to the agricultural and manufacturing sectors and consumer loans are likely to be financed through Anses, and would not require upfront government financing.

12/ Capital injection is mostly financed by Central Huijin Fund, and would not require upfront government financing.

13/ Extensive intervention plans that are difficult to quantify have also been introduced recently.

14/ Asset purchase will be financed from National Wealth Fund; and the government will inject 200 bn rubles to deposit insurance fund financed from the budget.

Table 2: Selected Industrial Sector Support Measures for G-20 countries

Country	Date Announced	\$ Billion	% of GDP (2008)	Forms of Support
Argentina	12/5/2008	3.8	1.14	Low-cost loan to farmers, automakers and other exporters
Australia	1/26/2009	35.2	3.48	Cash payments to low and middle income earners
Brazil	12/23/2008	5	0.31	Tax cuts and rebates
Canada	2/4/2009	33	2.17	Infrastructure, tax relief
China	11/10/2008	586	13.48	Low income housing, infrastructure
France	11/5/2008	33	1.15	Support for public investment projects, car manufacturing
Germany	2/20/2009 01/13/2009	110	3.00	Support for a new lending programme of up to 15 billion euros for state development bank KfW, infrastructure, tax cuts
India	12/8/2008	4	0.33	Support for SMEs, infrastructure spending
Indonesia	2/24/2009	6.3	1.23	Support for domestic demand/jobs
Italy	11/16/2008 2/6/2009	52 2.56	2.35	Loans to companies Support for car manufacturing
Japan	4/9/2009 12/13/2008	154 250	8.16	Support for companies and unemployed people Support for troubled banks
Korea	11/3/2008 2/9/2009	14.64 37.87	6.00	Support for SMEs, infrastructure Support for eco-friendly projects
Mexico	1/7/2009	54	4.95	Increase government purchases from SMEs, construction of low income housing
Russia	11/20/2008	20	1.18	Cut in corporate profit tax rate
Saudi Arabia	N/A	N/A	N/A	N/A
South Africa	2/1/2009	84	30.26	Infrastructure and World Cup
Turkey	3/13/2009	10.28	1.39	Support manufacturing sector
UK	11/24/2008	29.6	1.10	Government guarantees to SMEs
US	2/17/2009	787	5.51	Infrastructure technology, tax cuts, transfers to states

Source: Claessens (2009b).

Figure 1

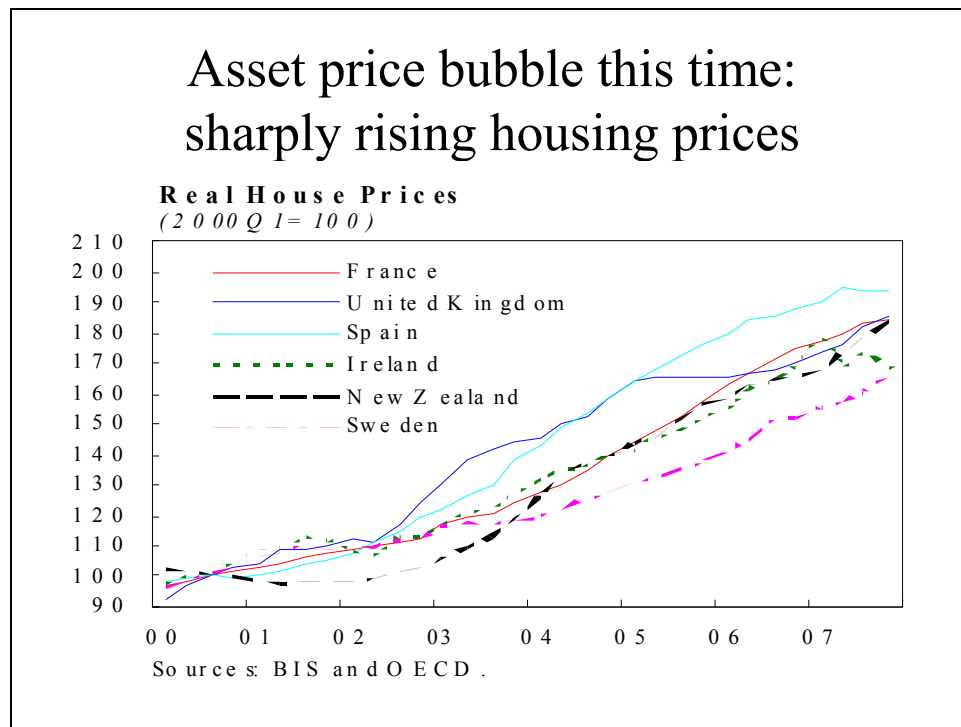


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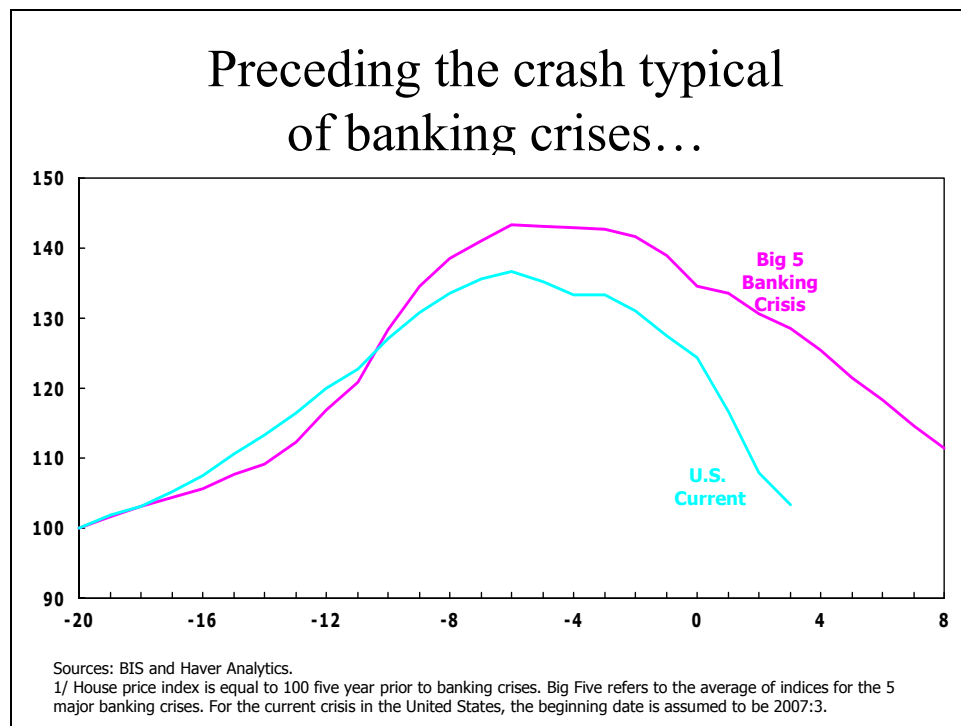


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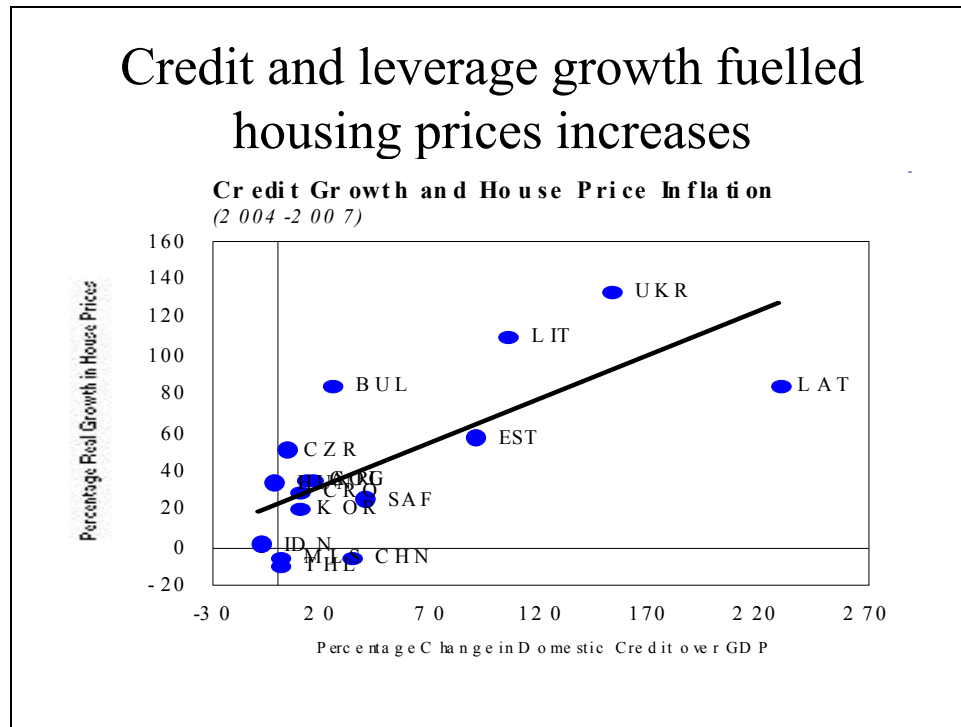


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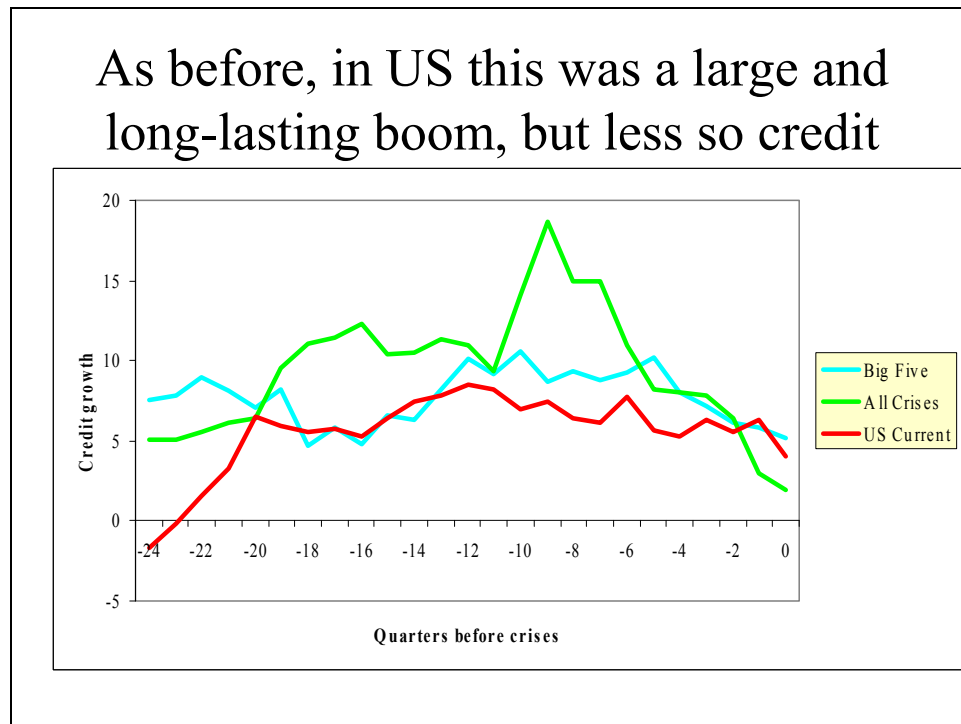


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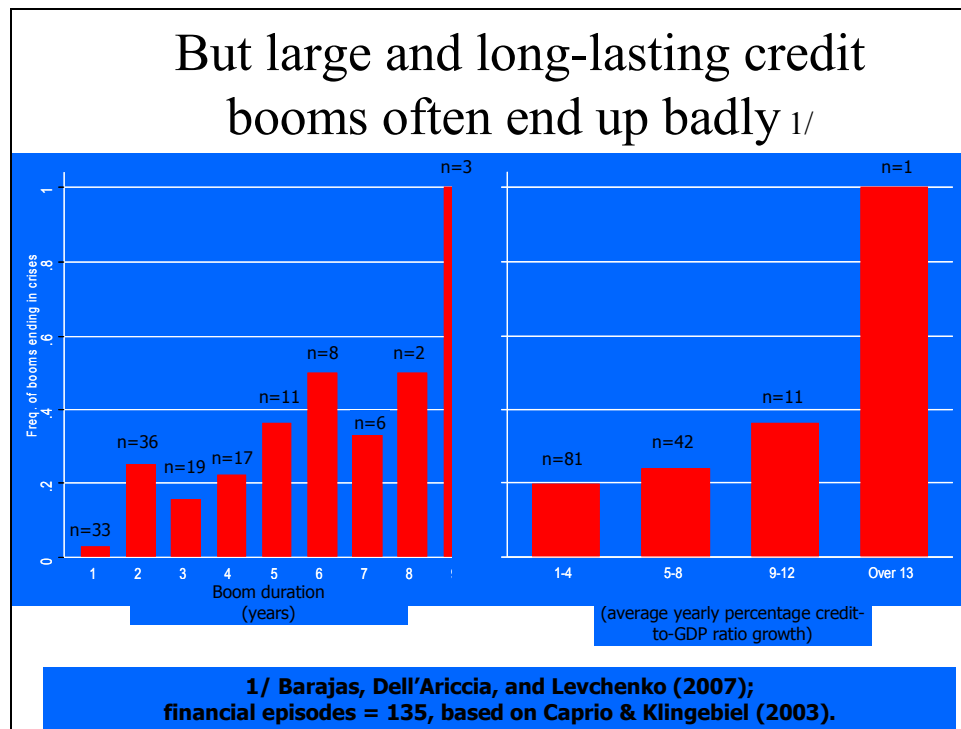


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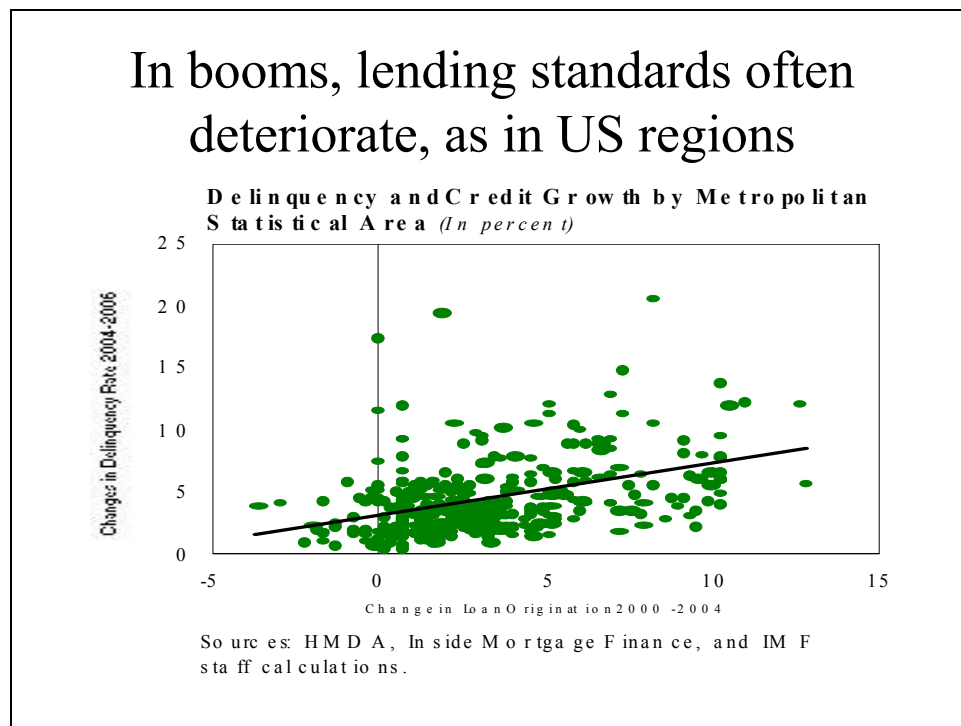


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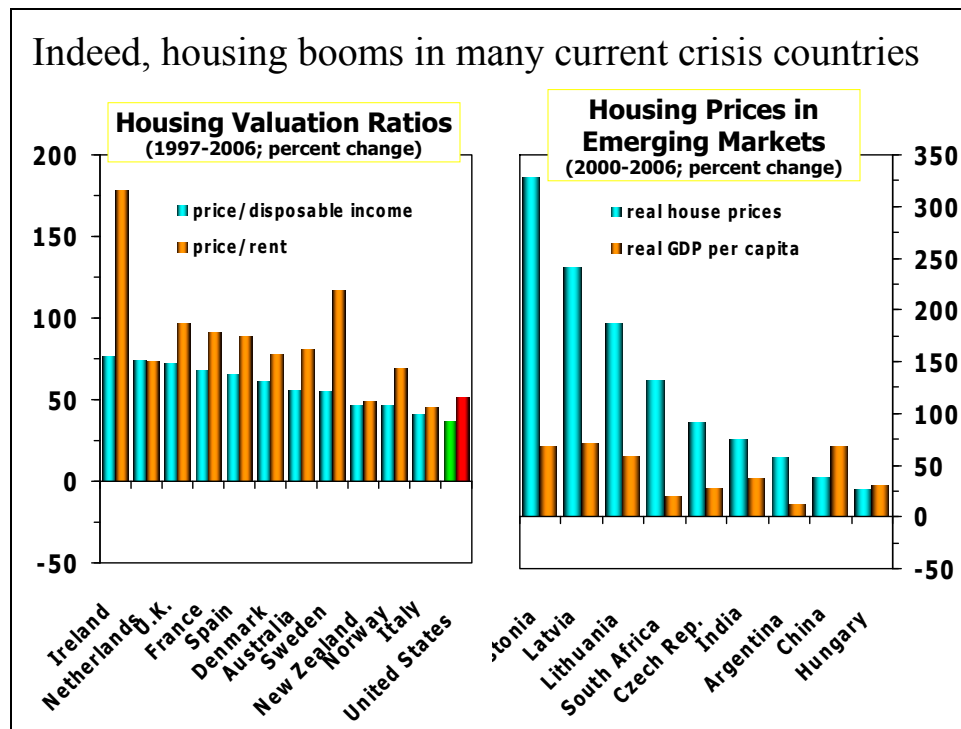


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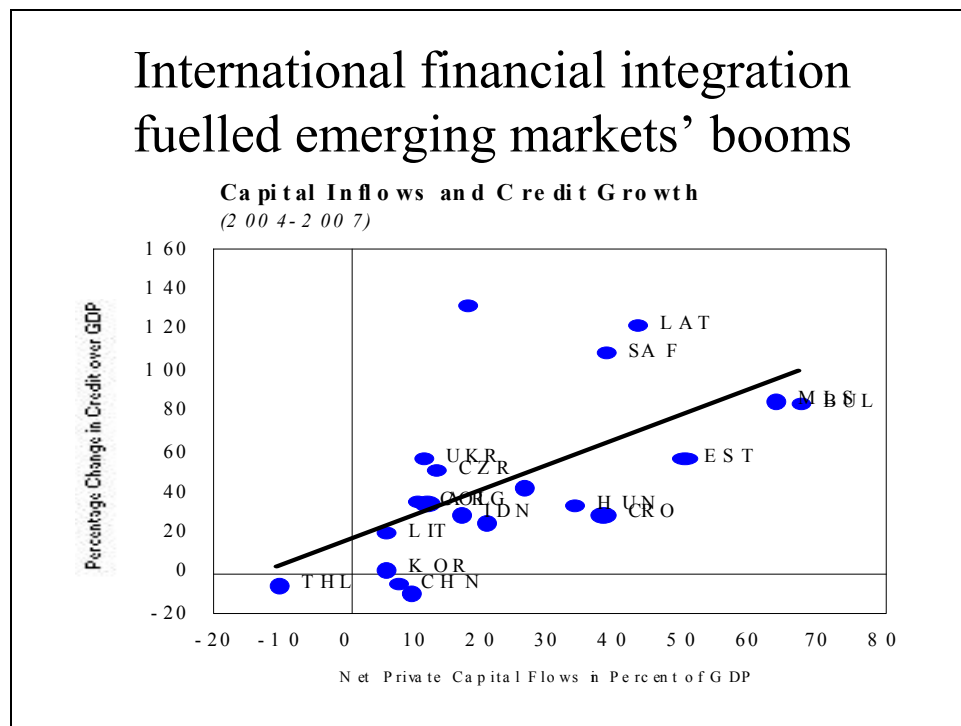


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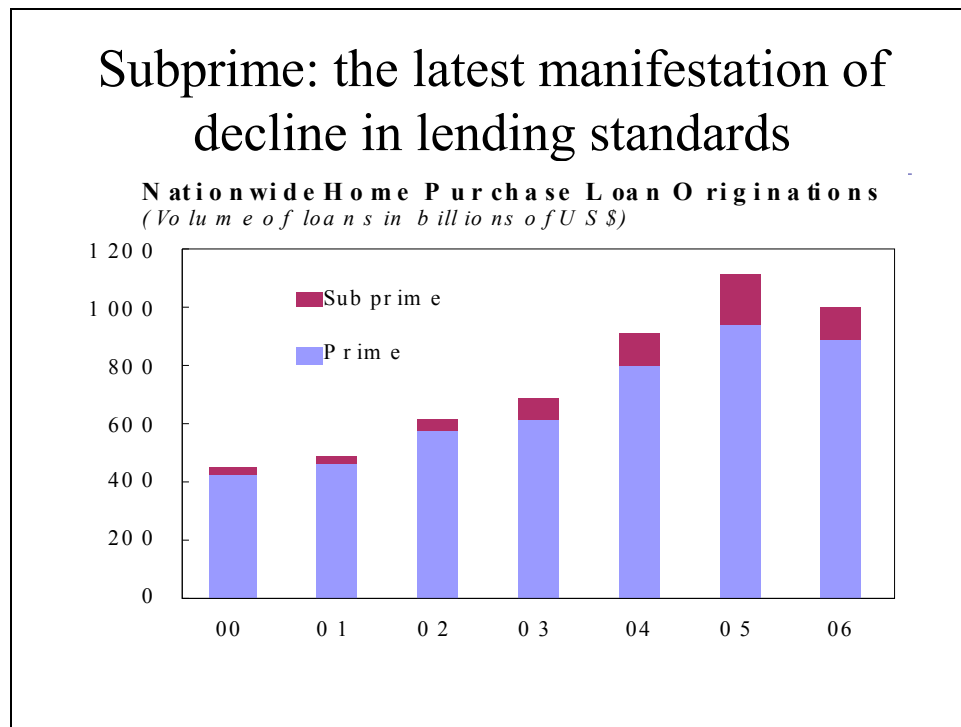


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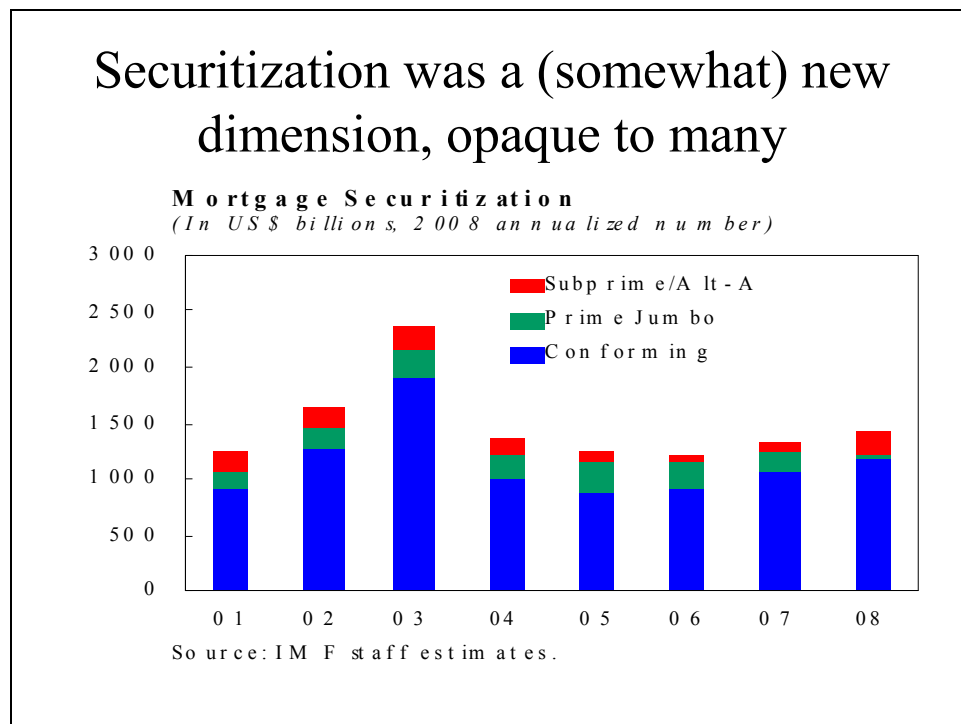


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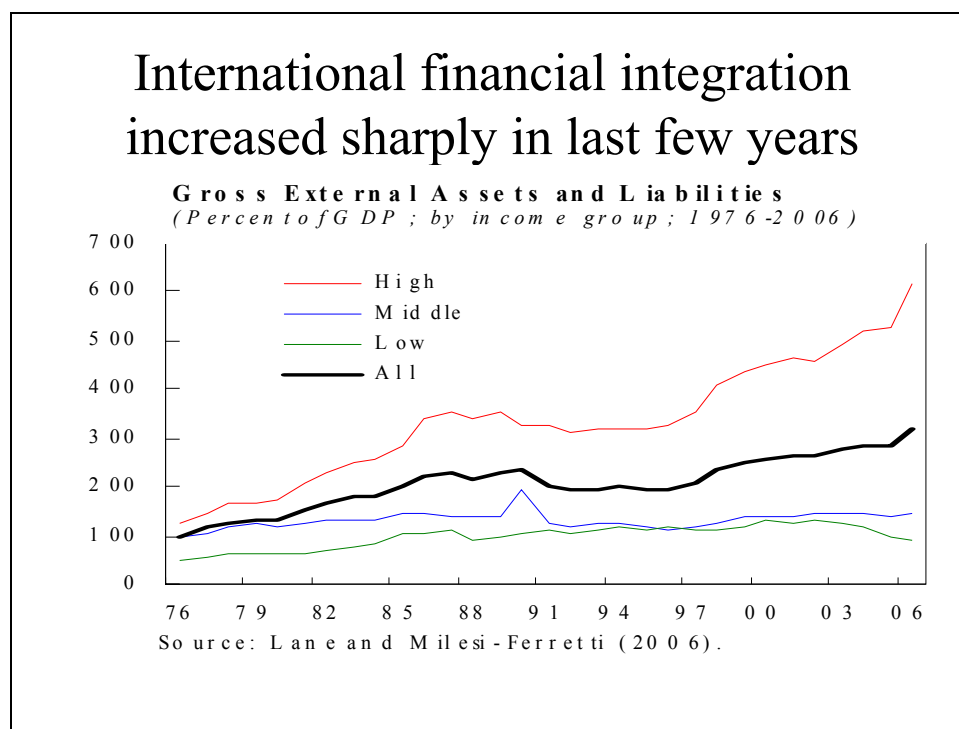


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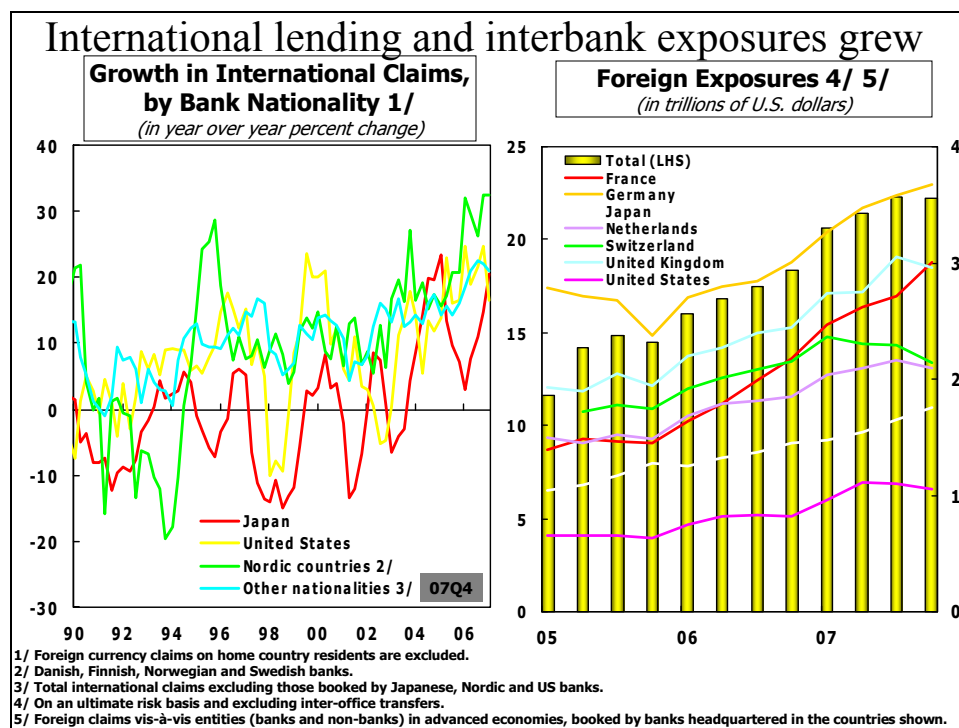


Figure 13

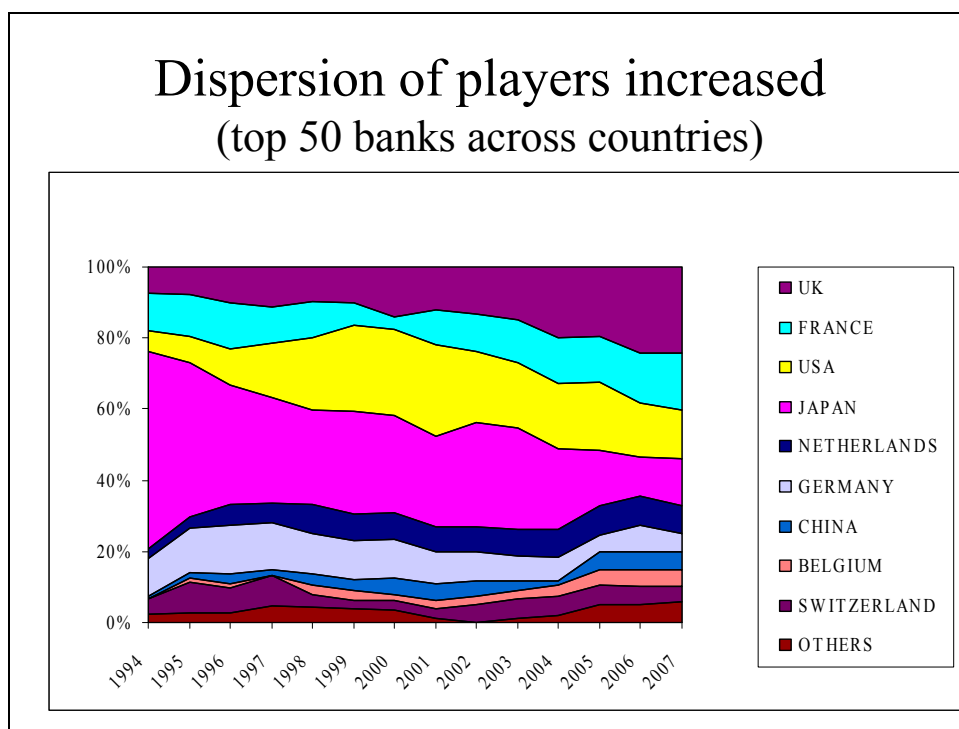


Figure 14

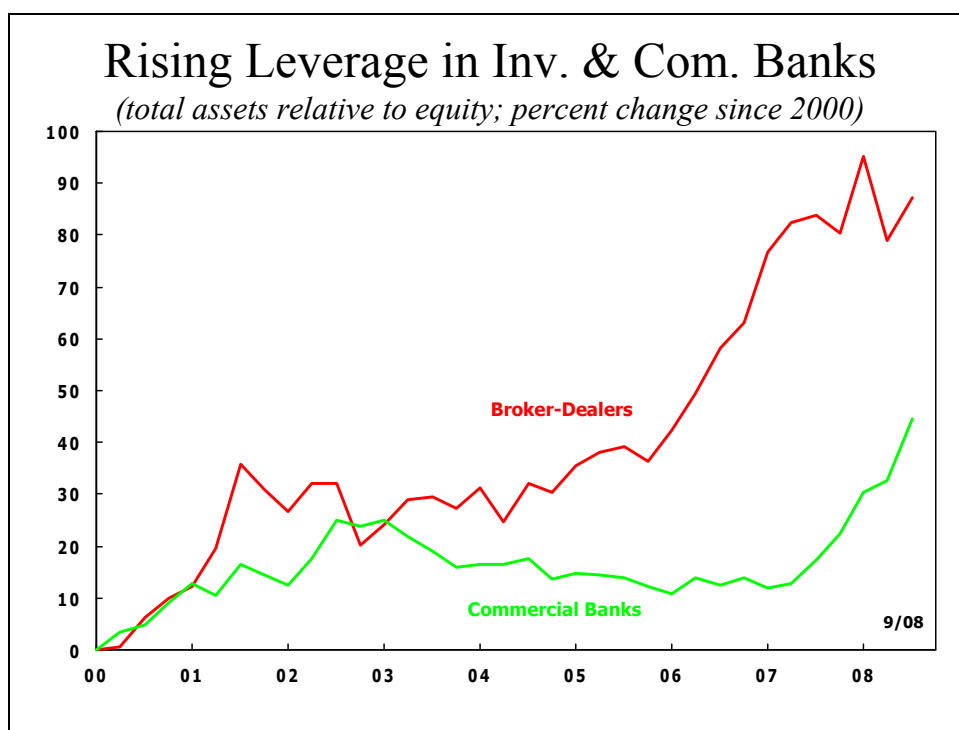


Figure 15

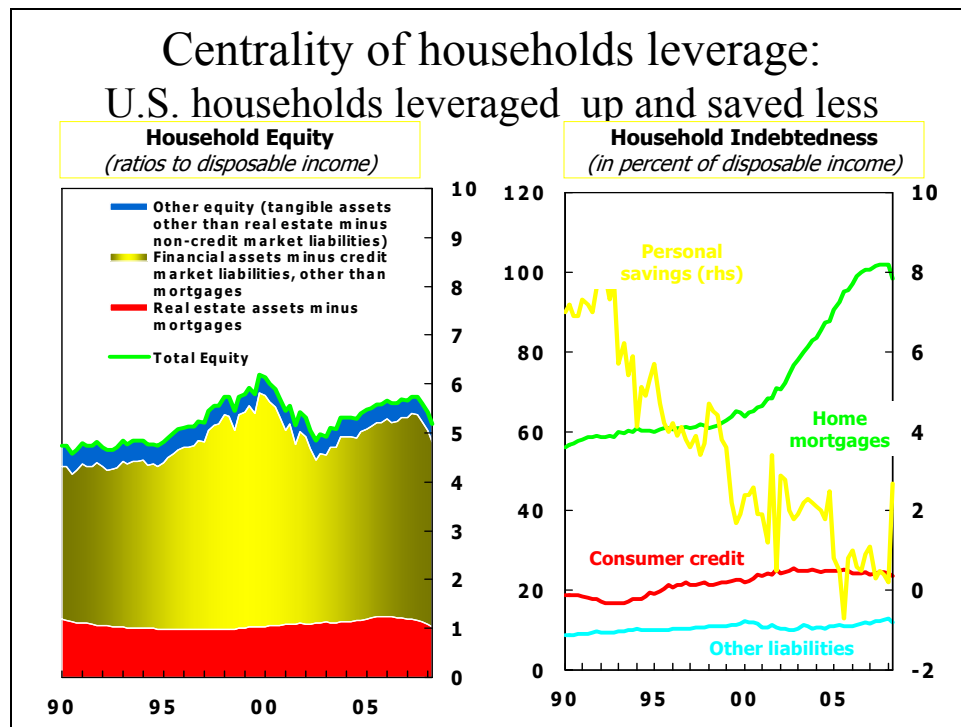


Figure 16

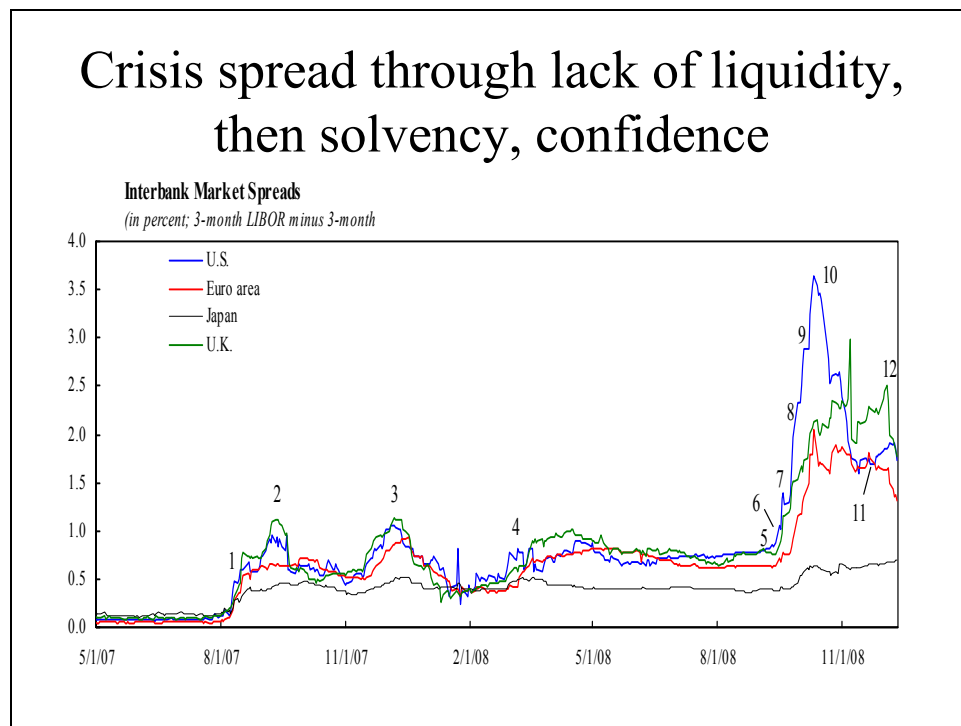


Figure 17

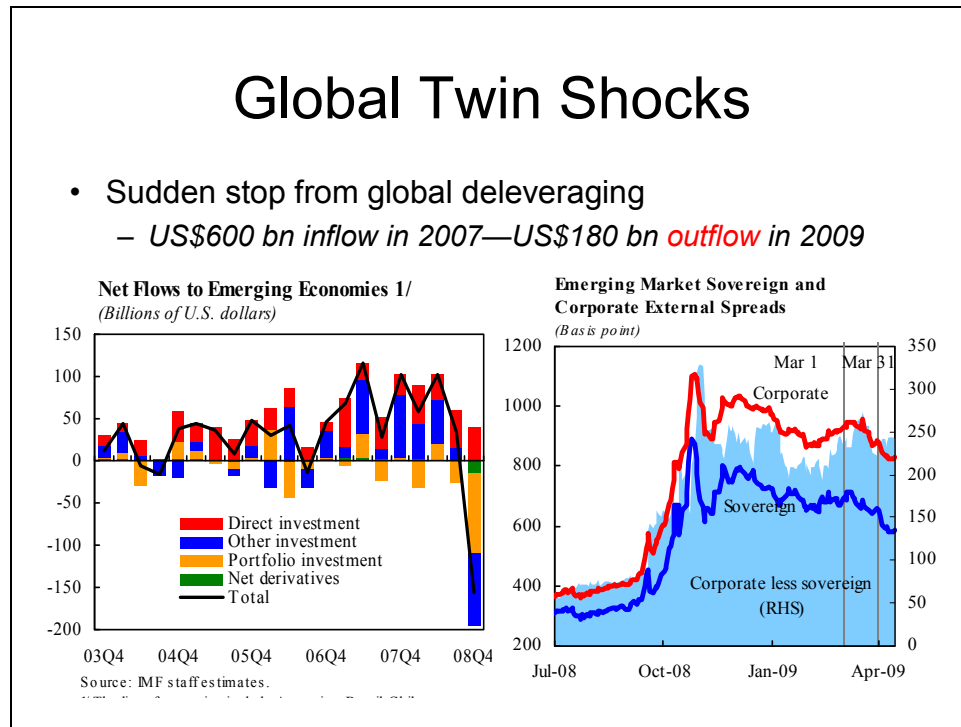


Figure 18

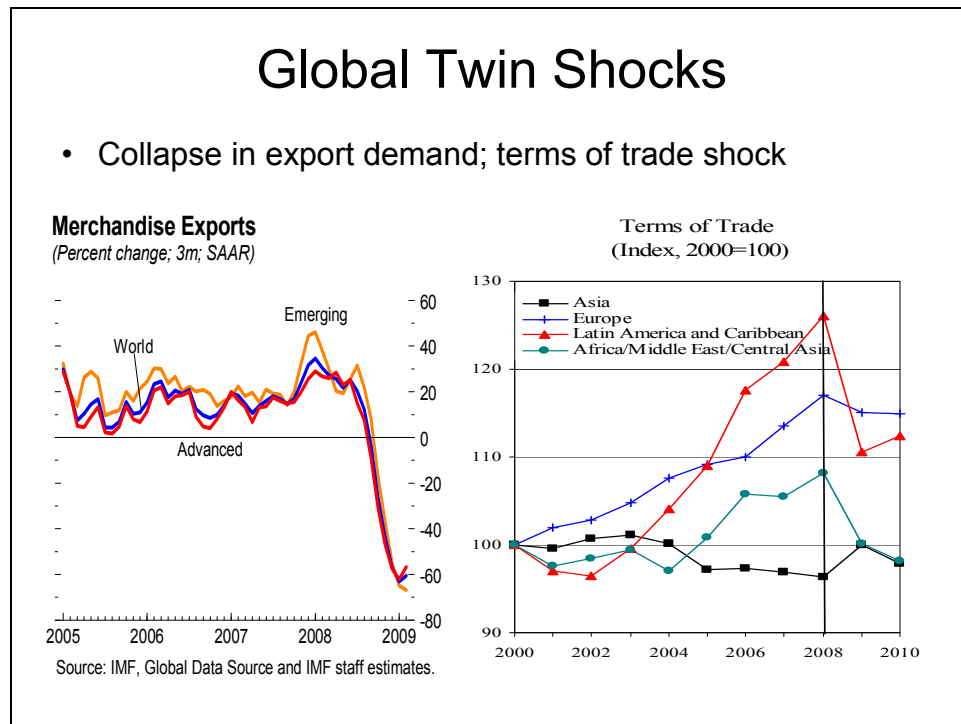


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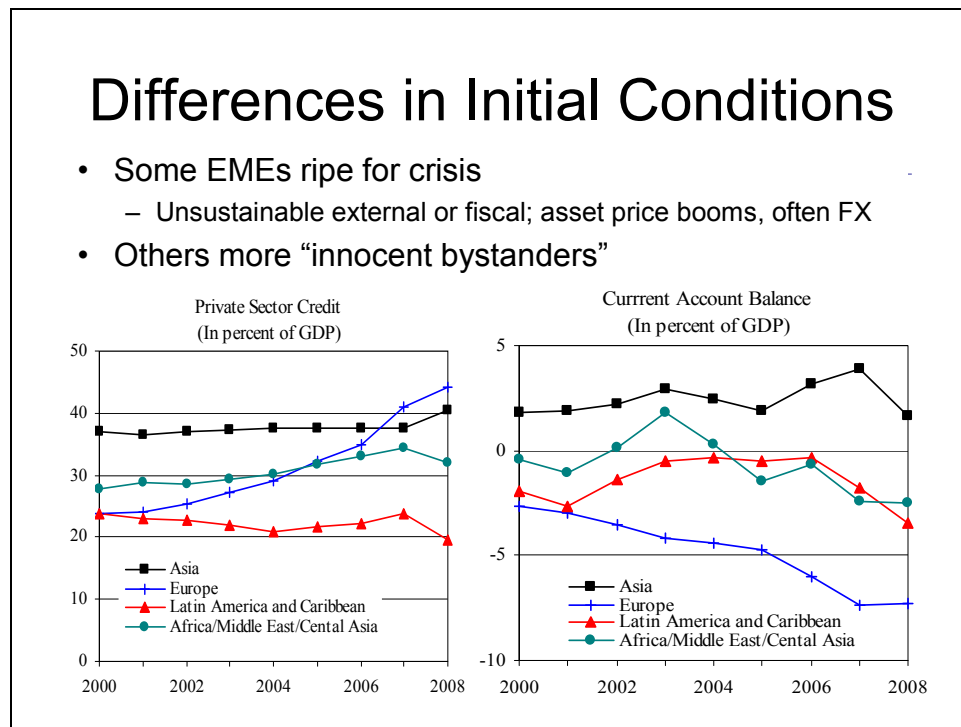


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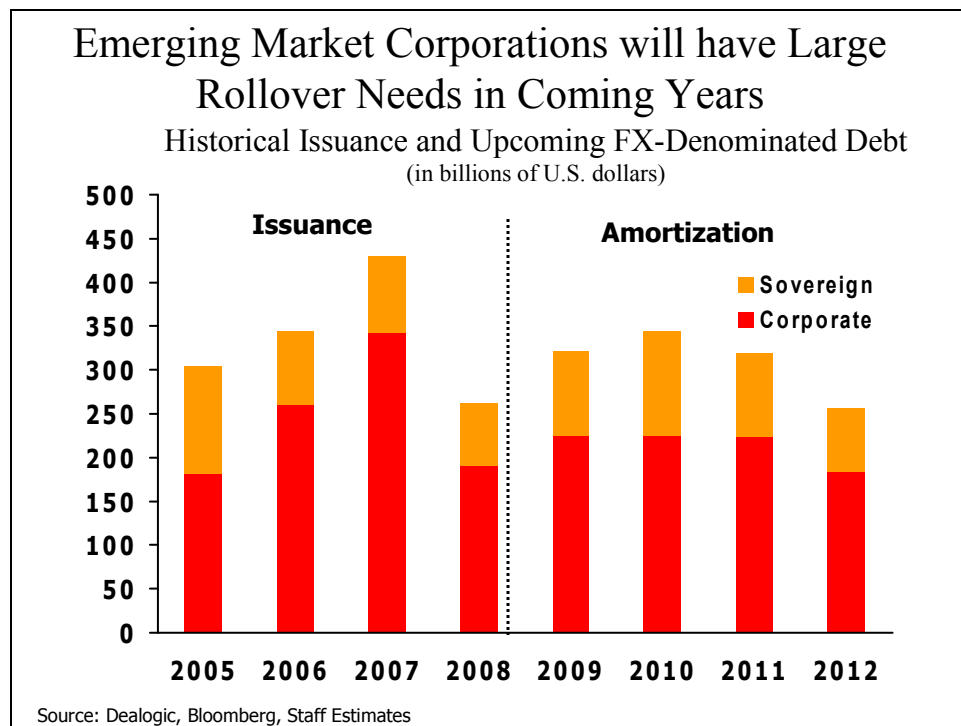


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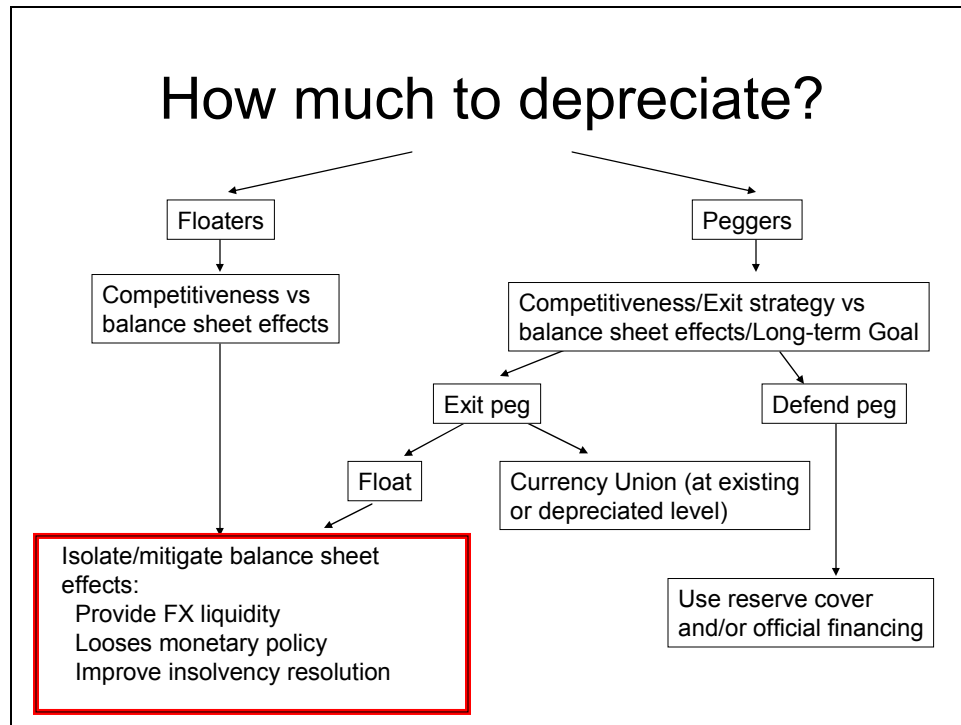


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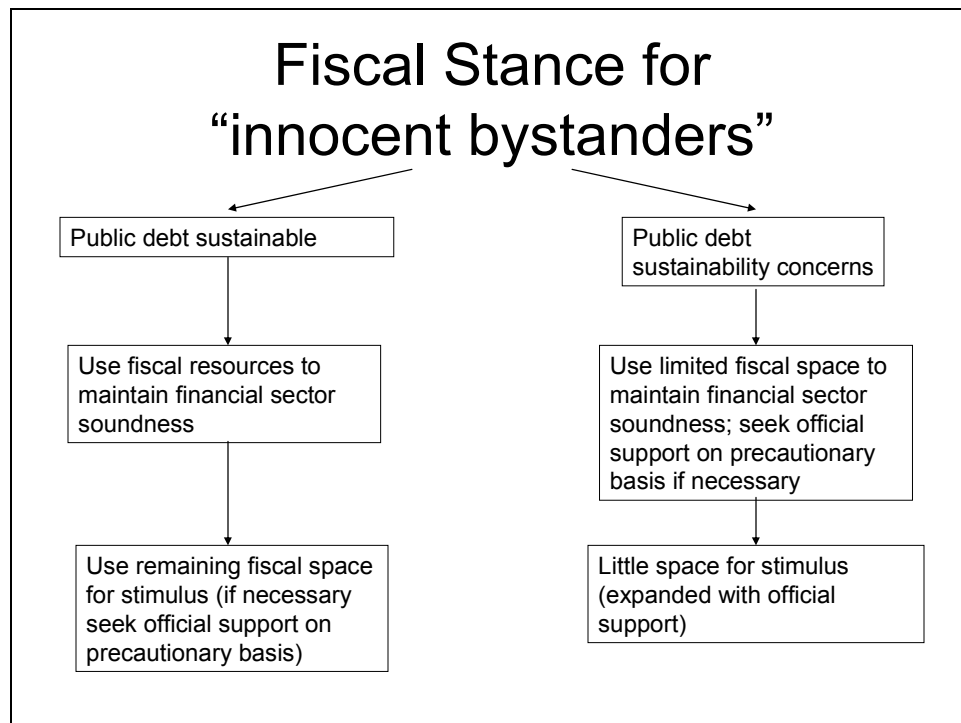


Figure 23

