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Abstract

The current global financial crisis is the most serious both in terms of magnitude and scope since the Great Depression. No country has been immune to the economic slowdown. In advanced economies, the financial crisis and the global recession that followed the burst of the global financial bubble have brought severe consequences in terms of employment and output. In developing countries, output contraction, growth slowdown, and rising unemployment came hand in hand with higher borrowing costs, sluggish export growth, and a significant reduction in international capital flows. As a result, poverty has increased. The global financial crisis has left lasting effects on the structure of financial markets, international capital flows, and the cost of capital for developing countries. The efforts of governments and international financial institutions to buffer the impact of the crisis have been quick and aimed in the right direction. However, many risks remain for the road to recovery. This paper provides a brief explanation of how the current global financial crisis originated, and the underlying factors that turned a relatively small collapse in the U.S. subprime mortgage market into a global crisis. Next it explores similarities and differences between the current crisis and past experiences. This comparison can provide us with a better understanding of the main determinants and transmission mechanisms involved, which can help us design a better response to the current situation on the one hand, and prevent future crises or minimize their impact on the other. Finally, lessons that can be learned for developing countries are discussed, focusing on policies governments can implement to mitigate the effects of crises and factors that are important for reducing the risks of experiencing a crisis.

ملخص

إن الأزمة الاقتصادية العالمية الحالية هي الأخطر سواء من ناحية الحجم أو مدى التأثير منذ الركود العظيم. لم تكن هناك دولة محصنة ضد هذا التباطؤ الاقتصادي. إن الأزمة الاقتصادية والركود العالمي الذي تبع انفجار مؤشرات الأزمة الاقتصادية العالمية قد جلبت تواع خطيرة على الاقتصاديات المتقدمة سواء من ناحية العمالة والمخرجات. أما في الدول النامية، فقد حدث انكماش في المخرجات وتباطؤ في النمو وازدياد في حجم البطالة جنباً إلى جنب مع ازدياد تكلفة الاقتراض وتباطؤ نمو الصادرات وانخفاض كبير في تدفق رأس المال العالمي. ونتيجة لذلك فقد زاد معدل الفقر. لقد تركت الأزمة الاقتصادية العالمية تأثيرات دائمة على هيكل الأسواق المالية وتدفقات رؤوس الأموال العالمية وتكلفة رأس المال في الدول النامية. ومع انه كانت هناك مجهودات سريعة وموجهة في الاتجاه الصحيح من جانب الحكومات والمؤسسات المالية العالمية لاحتواء تأثيرات الأزمة، إلا أنه مازالت هناك العديد من الأخطار التي تعترض طريق الخروج من الأزمة. وتمدنا هذه الورقة بشرح مقتضب عن كيفية نشأة الأزمة الاقتصادية العالمية الحالية والعوامل الأساسية التي حولت انهيار بسيط نسبياً في سوق الرهن العقاري الأمريكي إلى أزمة عالمية. تم تبحث الورقة في أوجه التشابه والاختلاف بين الأزمة الحالية والتجارب السابقة. من الممكن أن تمدنا هذه المقارنة بفهم أفضل عن المحددات الرئيسية واليات الانتقال المستخدمة والتي يمكن أن تساعدنا في إعداد استجابة أفضل للموقف الحالي من ناحية، وان نمنع أو نقلل من تأثير الأزمات المستقبلية من الناحية الأخرى. وأخيراً، تناقش الورقة الدروس المستفادة للدول النامية مركزة على السياسات التي من الممكن أن تتبناها الحكومات لتقليل اثر الأزمات والعوامل المهمة في تقليل أخطار الأزمات.

1. Introduction

The current global financial crisis is the most serious both in terms of magnitude and scope since the Great Depression. No country has been immune to the economic slowdown. According to recent World Bank estimates, world GDP contracted by 2.2 percent in 2009. The decline was more pronounced in high-income countries (3.3 percent contraction), whereas for developing countries GDP grew at 1.2 percent in 2009, with output declining in Europe and Central Asia and Latin America and the Caribbean by 6.2 percent and 2.6 percent, respectively. Trade volumes fell in 2009 by 14.4 percent. This contrasts sharply with the situation in 2007, when trade volumes increased by 7.2 percent globally and world GDP grew at an annual 3.9 percent. High-income and developing countries' GDP increased by 2.6 and 8.1 percent, respectively, that year.

In advanced economies, the financial crisis and the global recession that followed the burst of the global financial bubble have brought severe consequences in terms of employment and output. In developing countries, output contraction, growth slowdown, and rising unemployment came hand in hand with higher borrowing costs, sluggish export growth, and a significant reduction in international capital flows.

As a result, poverty has increased. According to recent World Bank estimates, around 64 million additional people are expected to be living on less than \$1.25 per day by 2010 due to the economic slowdown. The poor and the underprivileged are the ones that suffer the most the effects of the crisis. In advanced countries, the economic slowdown could impact long-term productivity due to workers' loss of skills during the unemployment spell. Whereas the recession in most countries is thought of as temporary (the unemployment rate will eventually fall as the economy recovers), in many developing economies, especially in Africa, the consequences may be permanent. Child malnutrition can have permanent consequences in future development and can even lead to death. Friedman and Schady (2009) estimate that 30 to 50 thousand children may have died of malnutrition in 2009 in Sub-Saharan Africa alone as a result of the crisis.

While the world economy is still facing the consequences of the unprecedented recession provoked by the bursting of the global financial bubble, signs of recovery are encouraging. Trends in both the financial markets and the real global economy indicate that the most critical phase of the crisis is over. Credit and interest rate premia have been returning to normal levels. Emerging and high-income countries' stock markets have gained ground since March 2009. Trade and manufacturing production are on the rise. Interest rate premia in sovereign debt markets for developing countries have fallen from a peak of more than 800 to around 330 basis points.

The recovery process began to take shape earlier this year in Asia, particularly in China. Most of these countries had little direct exposure to the financial roots of the crisis, and they had the fiscal space necessary to apply strong policy stimulus programs. In advanced countries, growth remains modest with an important share still being attributed to the fiscal stimulus components. As households, financial and non-financial institutions, and governments make progress cleaning their balance sheets and firms begin replenishing inventories, economic activity is expected to pick up. However, with significant excess capacity in both developed and developing countries, recovery is expected to remain fragile and unemployment is still projected to increase.

The global financial crisis has left lasting effects on the structure of financial markets, international capital flows, and the cost of capital for developing countries. The efforts of governments and international financial institutions to buffer the impact of the crisis have been quick and aimed in the right direction. Bank recapitalization and counter-cyclical fiscal

policy, accompanied by accommodative monetary policy, have helped reduce the stress on the battered financial sectors and boost aggregate demand. The overall change in fiscal balance for advanced G-20 economies for 2009 (relative to the pre-crisis year 2007) is expected to be around -6.3 percent of GDP, of which crisis-related discretionary measures account for -1.9 percent of GDP, whereas for emerging G-20 economies, the corresponding numbers are -5.4 and -2.2 percent of GDP, respectively. Fiscal stimulus packages contributed one-third of the total increase in fiscal deficit in G-20 countries.

Many risks remain for the road to recovery. For instance, financial institutions have yet to clean their balance sheets. Exit strategies should be contingent on the health of the financial and real sectors and should be consistent with a balanced growth path. The dangers of failing to retract the monetary and fiscal stimulus packages in a timely manner are still present, and may generate future inflationary pressures. For advanced G-20 economies, gross general government debt is expected to rise from 78 percent of GDP in 2007 to over 118 percent of GDP in 2014, while for emerging G-20 economies general government debt to GDP is expected to remain around pre-crisis levels. Fiscal deficits and the increasing general government debt may have an impact on interest rates, increasing the costs of servicing debt. Therefore, it is very important to focus the fiscal stimulus spending on projects that provide the largest social and private rates of return (those investments that release binding constraints to growth). It is important to embed fiscal stimulus measures within a framework of medium to long-term fiscal and debt sustainability. Only by doing that, will it be possible to achieve a sustainable and balanced long-run growth path.

This paper is organized as follows. First, I will provide a brief explanation of how the current global financial crisis originated, and the underlying factors that turned a relatively small collapse in the U.S. subprime mortgage market into a global crisis. Second, I will explore similarities and differences between the current crisis and past experiences. This comparison can provide us with a better understanding of the main determinants and transmission mechanisms involved, which can help us design a better response to the current situation on the one hand, and prevent future crises or minimize their impact on the other. I will then discuss the lessons that can be learned for developing countries, focusing on policies governments can implement to mitigate the effects of crises and factors that are important for reducing the risks of experiencing a crisis.

2. The Global Financial Crisis

A. Causes

One of the salient features of the current financial crisis is the fact that it originated in advanced economies. The origins of the current crisis can be attributed to a remote cause and an immediate cause. The remote cause can be traced back to the financial deregulation that took place in the 1980s, which, on the one hand, allowed for enhanced dynamism in financial markets but, on the other hand, led to excessive leverage and risk-taking behavior. Non-banking financial institutions that were not regulated carried out financial innovations that promised higher yields and spread risk efficiently. These new financial instruments were either not well-understood or too complex to be effectively regulated, and turned out to be very illiquid and difficult to price as the sub-prime crisis started to unfold.

The immediate cause dates from the Dot-com burst in 2001. In order to minimize the impact of the collapse of the internet bubble, the U.S. Federal Reserve engaged in aggressive monetary policy, which showed in the drop of the Fed funds rate from 6.5 percent in January 2001 to 1 percent in June 2003. The excess liquidity in money markets – due to low interest rates derived from loose monetary policy and financial innovations that at the time were believed to be effective risk-reducing tools – soon translated into a boom in the housing

market. Table 1 and Figure 1 show the evolution of the housing market in the United States. Real estate and equity investment increased rapidly, and the housing boom turned into a bubble, with housing prices well beyond what they should have been based on economic fundamentals. Consumption expenditures rose, fueled by the wealth effects derived from these price increases in equity and real estate, and growth in the United States was strong. Hence, the combination of low interest rates and financial innovations translated into increased housing demand, continued real estate price increases, and high levels of consumption as households capitalized on the gains from the housing boom. This, in turn, provided incentives for further investments in housing and also led to a construction boom. The recession from the Dot-com bubble burst was soon forgotten, lasting only one quarter.

At the same time, the rest of the world also experienced rapid growth during 2003-2007. The world economy grew at an unprecedented 3.6 percent during this period, with developing economies growing on average at 7.2 percent. Several factors were behind this period of bonanza. First, capital flows soared to developing countries in search of higher rates of return. In 2001, capital flows to developing countries were US\$223 billion. By 2007, capital flows reached US\$1.2 trillion. In several developing countries, these inflows contributed to the development of real estate and housing bubbles. FDI flows to developing countries also reached unprecedented levels (US\$522 billion), growing at an average annual rate of 28.9 percent during 2003-2007. Second, export demand from developed countries increased as a result of the increase in consumption due to wealth effects derived from the real estate and equity markets bubble. The annual average export growth in goods and services for developing countries during 2003-2007 was 23.06 percent. The exporting boom was not only limited to developing countries, but also reached advanced economies, which benefited from the increased demand for capital goods. Third, resource-rich developing countries also benefited from the boom in oil and commodity prices. Commodity prices skyrocketed during 2003-2007 (see Figure 2). Fourth, remittances to developing countries grew on average 20 percent per year during 2003-2007, reaching US\$285 billion in 2007. As a result, these led to an investment boom. Investment growth rose from 1.7 percent per year in the 1980s and 3.3 percent in the 1990s to 11.7 percent in 2003-2007 in developing countries. The investment boom in developing countries, in turn, further fueled the demand for capital goods produced in developed countries and ongoing growth in developed economies.

B. Burst of the bubble

However, lax prudential and regulatory oversight of the financial system was not free of consequences, as defaults started to mount within subprime mortgages in mid-2007. Despite the fact that the subprime market was relatively small (around US\$700 billion), financial innovations allowed excessive risk-taking behavior, later ballooning to systemic proportions. Losses associated with mortgage-backed securities left financial institutions on the verge of insolvency. With the fall of Lehman Brothers in September 2008, the subprime crisis soon developed into a full-fledged banking crisis, and ultimately turned into a global financial crisis. With the burst of the equity and housing bubble, risk shot up and borrowing costs increased. All of a sudden, a large share of wealth vanished. Consumption and investment demand fell, and unemployment increased. The decline in aggregate demand resulted in excess capacity, further layoffs, and mounting non-performing loans, further eroding financial institutions' balance sheets and increasing financial fragility.

C. Transmission mechanisms to the real sector and the rest of the world

The main role of financial institutions, as it is well known, is to channel funds from households and businesses to their most productive uses. When these institutions are struggling, this main role cannot be fulfilled, with adverse consequences for the real sector. In the midst of the financial crisis, losses related to the subprime mortgage market and other

risky investments led to a credit crunch. Financial intermediaries, worried about their capital base or due to difficulties raising fresh funds, cut back on commercial and consumption lending, and tightened their lending standards, which drastically reduced the credit available for consumption and investment in the real sector. As a consequence, both businesses and consumers had to cut back on spending, in some cases affecting the working capital of firms, while leading to mounting non-performing loans, further credit tightening, and aggregate demand reductions. The credit channel was one of the main mechanisms, along with the wealth effects derived from the collapse of the housing and equity markets, through which the financial crisis impacted the real sector. Wealth effects derived from drops in housing and equity prices badly hit the balance sheet of households, which responded with further cuts on expenditures. Finally, overall uncertainty about the magnitude and the duration of the crisis undermined consumer confidence and business investment decisions on the one hand, and led banks to hoard liquidity and reduce lending on the other.

This credit boom in the years preceding the crisis was not only limited to the United States, but also to other advanced and developing countries. Many of the conditions preexisted worldwide, i.e., credit risk and spreads were low, and asset and housing prices in other advanced countries were too high. When the housing bubble in the United States burst, other advanced countries were not able to escape the financial turmoil due to the linkages in the financial sectors. Many non-U.S. financial institutions invested heavily in subprime backed securities and other complex derivatives. Moreover, uncertainty over the exposure of other financial intermediaries further exacerbated the credit crunch in other advanced countries, with many banks and corporations hoarding excess liquidity.

As mentioned above, the financial crisis in the United States and other advanced countries spilled very quickly across borders initially through the increasingly integrated financial system. The banking crisis that started with the fall of several non-banking financial institutions (Bear Sterns, Lehman Brothers, AIG) spread globally with lasting consequences due to the difficulty in pricing the complex financial instruments involved. The crisis not only had an impact on the financial sector and the inter-linkages across banks, it also triggered a severe global recession.

Several transmission mechanisms contributed to the contraction in the real economic activity of developing countries. First, the credit crunch in advanced economies reduced capital flows to the developing world and increased spreads and borrowing costs, lowering investment and consumption demand. Increased risk aversion and mounting uncertainty around the crisis led financial institutions to pull out credit from risky assets in emerging economies, although macroeconomic conditions in many of these economies did not show any signs of instability and their financial systems were relatively healthy (flight to safety). Moreover, liquidity needs of many of these financial institutions due to the credit crunch in advanced economies also contributed to reducing capital flows (and hence the availability of private financial flows), and to raising the cost of capital (financial integration channel).

Second, international trade was severely hit by the crisis. Global trade volumes fell by 14.4 percent in 2009. As consumption demand declined in advanced economies due to the collapse in equity and real estate markets, developing economies' exports fell. Advanced economies were not immune to this situation, since the demand for investment goods also dropped as a result of the crisis. The decline in investment was the result of excess capacity, due to the investment boom that preceded the crisis, and the overall fall in aggregate demand after the crisis. Asian economies were severely hit by the drop in their exports. The international trade channel seems to have been a critical transmission mechanism, especially for more open economies. On the one hand, there was a rundown of inventory in anticipation of a drop in consumption as a result of wealth effects due to the bubble burst in the United States and

other advanced economies. On the other hand, the drop in household wealth, combined with increasing uncertainty about the future (job security), led to the postponing of purchase decisions on consumer durables. All these factors contributed to the fall in international trade flows.

Third, developing countries were also affected by the drop in remittances and tourism revenues, which represent in some cases an important source of income for households in the developing world. Remittances to developing countries still grew at 16.7 percent per annum in 2008. However, recent estimates by the World Bank indicate that remittances to developing countries declined in 2009 by 6.1 percent. Europe and Central Asia and Latin America and the Caribbean were the regions that experienced the largest declines (14.7 and 9.6 percent, respectively). Countries in Sub-Saharan Africa were hit by a 2.9 percent drop in remittances.

Finally, the drop in consumption and investment globally was accompanied by declines in commodity prices, hurting the revenues of resource-exporting countries. Non-energy commodity prices fell by 21.6 percent, whereas oil prices declined by 36.3 percent in 2009.

3. Learning from Past Experiences: Differences and Similarities with the Asian Crisis

A. Similarities

The current crisis presents several similarities with prior crisis episodes. For instance, as in the Asian crisis in 1997, the current crisis was associated with real estate and equity bubbles and boom-bust cycles. Real estate bubbles were prevalent in South East Asian countries prior to the crisis. And they also preceded the current financial crisis in the United States, many other advanced economies, as well as several Eastern European countries. Both the current crisis and the Asian crisis originated from the burst of a bubble.

A bubble is generally caused by speculative activity that makes the actual price higher than the price determined by economic fundamentals. The process reinforces itself, with higher prices attracting more speculative funds invested either in equity or real-estate markets. The overall size of the bubble is determined by the total amount of funds available for speculation (sum of investment funds and speculative funds), market expectations for future price increases, and the opportunity cost of speculation, which can be mainly calculated using a reference interest rate or the return from investment projects. As real estate and stock prices continue to rise, investors may feel compelled to take out loans for further speculation, using real estate and stocks as collateral. With the price of collateral rising continuously, in the absence of adequate prudential and regulatory supervision, banks may provide more loans to invest in real estate and stock markets. The higher consumption due to higher perceived wealth also provides real sectors additional incentives to invest and build up productive capacity.

The bubble bursts whenever funds for speculation diminish, a slowdown in the growth of the economy occurs, or expectations for price increases in stock or real-estate markets disappear. With the bubble burst, real estate and stock prices collapse, provoking a sharp fall in the value of the collateral. As non-performing loans begin to mount, depending on the exposure of the financial sector, the burst of the bubble can develop into a banking crisis. In cases where large shares of the funds were from abroad, a currency crisis might arise as short-term capital flies out of the country.

To sum up, the mechanism of a bubble cycle is as follows: First, price increases and expectations of further price increases fuel the incipient boom. Price increases translate into wealth increases, household consumption increases as a result of these wealth effects, and firms increase production and expand capacity in order to meet the demand surge. The

process continues until the resulting price increase in the real estate or equity market is less than the interest rate, turning into a downward spiraling effect. The burst of the bubble leads to a reduction in wealth, a consequential drop in consumption and excess capacity in the economy from earlier investments. Investment drops, as well as consumption, reinforcing the overall excess capacity.

Another common factor is that both financial and commercial integration played important roles spreading the crises across borders. During the Asian crisis, the economic dynamism shown by Thailand attracted foreign investors that overlooked serious problems in both the financial and corporate sectors. On the one hand, capital inflows provided fuel for an incipient bubble in the real-estate and stock markets. Strong growth in the region prior to the Asian crisis built up confidence in Asian economies. These inflows led to an appreciation of the Thai currency, eroding the competitiveness of the economy and the current account. Investors ultimately lost confidence, capital flew out of the country, and a devaluation vis-à-vis the U.S. currency was inevitable. However, the devaluation of the Baht generated shifts in expectations of foreign investors and a sudden contagion with massive reversals of capital flows. The high exposure to maturity mismatches (high level of short-term debt relative to reserves), and the extensive use of leverage were in part responsible for triggering the subsequent currency collapses in the region (see, for example, Chang and Velasco (1998, 1999), Furman and Stiglitz (1998), Radelet and Sachs (1998)).

A similar experience arose with countries in Eastern Europe during the current crisis. The surge in capital inflows prior to the global financial crisis overexposed these economies to currency mismatches and extensive leverage. As a result of the crisis, capital flew out of these countries, and reversals were accompanied by sharp adjustments in the current accounts, financial system collapses, and currency crises.

A third common factor is the role played by the (lack of) prudential supervision and regulation in both the current crisis and the Asian crisis. During the current crisis, off-balance sheet activities of financial institutions as well as lack of regulation and understanding of complex derivatives played an important role in triggering the crisis and transmitting its effects across borders. During the Asian crisis, the lack of transparency and inadequate capital and reserves were to blame. Hence, in the absence of an adequate prudential and regulatory framework, securitization and increased use of derivatives, as well as reliance on international financial markets, have proven such instruments can increase vulnerabilities and lead to speculative activities.

B. Differences

One factor that sets the current crisis apart from recent ones is its scope and magnitude in terms of output losses. For instance, the collapse of the Thai currency at the beginning of the Asian crisis triggered capital flow reversals and sharp adjustments in the current accounts of other countries, but it primarily remained within the region. Furthermore, it was short-lasting as exports to advanced economies helped in the recovery process.

The global scope and magnitude of the current crisis can be explained by the fact that the shock originated in advanced economies and later spread to other parts of the globe through financial and commercial inter-linkages. Contrary to the Asian crisis, many countries in the developing world were unable to rely on their exports to sail through the storm, as advanced economies were facing problems of their own. When the crisis is only limited to a region, and excess capacity is a problem, governments can resort to exchange rate depreciation, expenditure switching, and greater reliance on export markets. However, in the face of a global crisis, exchange rate depreciation is less likely to provide a boost to the economy as trade also was affected. Indeed, according to recent estimates by the World Bank, global

trade volumes declined by 14.4 percent in 2009. In this situation, the ability to conduct fiscal policy remains a key option to increase aggregate demand.

During the Asian crisis, international financial institutions were criticized for forcing governments to implement painful and controversial structural reforms in exchange for rescue packages. Austerity in government finances and increases in interest rates were implemented to put a stop to capital outflows and to defend the currency against speculative attacks. By contrast, government and international institutions acted quickly in response to the current global financial crisis. The IMF and the World Bank, in joint efforts with other multilateral institutions, put together packages to respond to the crisis. And both developing and advanced economies enacted counter-cyclical fiscal and monetary measures to find a path to global recovery.

The current crisis called for fast counter-cyclical responses by governments and international financial institutions. The investment boom in developed and developing countries during 2003-2007 turned into excess capacity with the fall in consumption and aggregate demand in advanced countries. Firms' profits fell, forcing them to further cut jobs. This, in turn, reinforced the drop in consumption and aggregate demand, and hence the drop in production and the widening in excess capacity. In the presence of excess capacity, conventional monetary policy is unlikely to be effective to stimulate investment and consumption demands. Moreover, as financial institutions struggled to unload toxic assets from their balance sheets, the Federal Reserve and other central banks in advanced economies adopted unconventional approaches, such as capital injections to troubled financial institutions.

Fiscal policy can be effective in boosting aggregate demand in the presence of excess capacity. But the effectiveness of the fiscal stimulus packages relies on several factors. First, it depends on the size of the fiscal multiplier on public spending and tax cuts. And second, it depends on how the fiscal stimulus will be financed and how it will be paid off.

As households are liquidity constrained and in the process of deleveraging (Figure 3), government spending is likely to have higher multiplier effects over tax cuts. Tax cuts will not reflect fully in aggregate demand increases, as a fraction of the tax cuts will be saved by households in order to clean their balance sheets.

The other issue concerns the magnitude of the multiplier effect on public spending. According to Ricardian Equivalence, households and firms will incorporate their expectations about the future in their savings and consumption decisions. As spending increases or tax cuts take place, economic agents will understand up to certain extent that the extra spending will have to be repaid in the future. Thus, households and firms will raise current savings in anticipation of future tax hikes to finance current increases in government spending, offsetting its effects on aggregate demand. As long as the Ricardian Equivalence holds, increased public spending may not be reflected in increased aggregate demand.

Ricardian Equivalence might represent a problem in developed countries, where the fiscal multiplier might be less than unity, and profitable public investment projects are scarce and bottlenecks in infrastructure or other binding constraints to growth are hard to find. That is not the case for developing countries. In the short run, investments in infrastructure using fiscal stimulus packages can be used to boost aggregate demand. Increased demand can help offset excess capacity while targeting fiscal stimulus programs toward binding constraints to economic development can enhance long-term growth. Releasing these binding constraints might have the highest social returns. Since many developing countries face bottlenecks in infrastructure, by using counter-cyclical measures to release these bottlenecks, developing countries can turn this crisis into a great opportunity. Engaging in infrastructure projects to complement private investment can represent an opportunity to foster economic growth and sustain dynamic future private growth.

However, the efficacy of a stimulus package requires precisely that funds flow to infrastructure bottlenecks, and not to other uses. The evidence shows that in weak governance settings, this may not be the case. On the contrary, non-economic criteria frequently govern the allocation of public infrastructure spending in settings where governance issues are serious. At the same time, the growth effects of even well-targeted infrastructure spending are attenuated in settings where weak governance reduces private investors' incentives to take advantage of new infrastructure. Periods of crisis should lead us to embrace not only aggressive and novel policy responses, but also renewed attention to policy implementation.

4. Lessons for Developing Countries: What Makes a Country More Resilient to Shocks? Comparative Advantage Following Strategies and Dynamic Growth

The economic impact of the current crisis has been quite diverse across developing economies. Countries such as China and Korea, with a strong fiscal position and external account, were able to implement counter-cyclical measures to ease the consequences of the crisis. Other countries, such as several economies in Eastern Europe and Central Asia, were fiscally constrained or lacked sufficient international reserves to be able to implement counter-cyclical policies. This section explores which factors contributed to make a country more resilient to external shocks. Since the current crisis originated in advanced economies, one concern for policy-makers in developing countries is how to insulate their economies from these external-born crises. Of equal relevance is the question of how to reduce the incidence of home-grown crises.

I will argue that countries that follow their comparative advantages will be better able to cope against external crises and, at the same time, they will be able to reduce the possibility of home-grown crises. One caveat is of crucial importance. Careful management of the capital account liberalization in developing countries is required to minimize the occurrence of external crises.

If a country follows its comparative advantage, firms in industries in which the country has a comparative advantage will be competitive both in domestic and world markets. Since the industrial and technological structures are determined endogenously by the endowment structure of the economy (Lin 2009a), changes in relative prices should be a reflection of changes in the relative abundance of factor endowments in the economy. Governments in developing countries should promote an institutional environment that facilitates firms in the economy to follow its comparative advantage at each stage of development (facilitating state), adopting an industrial policy consistent with a country's comparative advantage.

Lin (2009a) defines a comparative advantage following (CAF) strategy as a set of policies that facilitates the development of industries and the adoption of technology in a developing country to follow the comparative advantage determined by its endowment structure at every stage of the development process. An immediate consequence of adopting a CAF is that the economy will not have sectors that are inefficient and lack competitiveness. Moreover, governments will not need to provide subsidies or subsidized rates to firms in specific industries because they are not economically viable.

In the case of primary commodity exporters such as several developing countries, a comparative advantage-following strategy involves developing some light manufacturing industries to benefit from their relative abundance in labor endowments, together with their overwhelming comparative advantage in natural resources such as oil or other natural endowments. Relying only on oil or other commodity exports and revenues alone is not the answer, as the lack of diversification poses enormous risks, especially considering the volatility of commodity prices. Moreover, favoring capital intensive enterprises goes against

the comparative advantages of developing economies. If a resource-rich country uses the revenues from exploitation of resources to improve the hard and soft infrastructures that are required for the diversification to and upgrading of manufacturing sectors, diversification and economic growth in the country are likely to be faster than they would be in a resource-poor country at a similar level of development. The country may turn the richness in resource from a “curse” to a “blessing.”

One indication of poor industrial policy is an excessive proportion of non-performing loans. A government that opts to support non-viable industries through depressed interest rates faces the risk of increasing the probability of a banking crisis. These industries will face high production costs relative to industries in countries that have a comparative advantage in that sector. Hence, they will not be competitive and will experience losses. Loans provided to firms in these sectors will become difficult to collect, therefore increasing the amount of non-performing loans and the risk of bank collapses. Deterioration of the balance sheets of financial institutions may turn into a banking crisis, with the need for a bailout and obvious consequences for government finances.

Even if a bailout of the financial sector is not required, deviations from the facilitating role can lead to large fiscal deficits and countries may face serious limitations in their ability to respond to crises. Countries that followed a comparative advantage defying (CAD) strategy and supported industries outside those in which the country had a comparative advantage determined by their endowment structures – such as the import substitution policies of Latin America in the 1960s – were fiscally constrained by the constant drain of resources toward non-viable firms in non-competitive industries. Subsidies and trade barriers to develop capital intensive industries in developing countries can lead to fiscal problems, since firms in these industries are not competitive and will not be able to survive without the government’s assistance. Developing countries that have adopted a CAD strategy, after an initial investment-led growth, have shown signs of stagnation. Moreover, if external loans were acquired to make investments in CAD industries, the slowdown in growth can make it difficult to repay international obligations, increasing the chances of a debt crisis. The country may also encounter a crisis when the inflow of foreign capital has a sudden stop or reversal due to various external reasons.

In general, countries that follow a CAF strategy will be more outward-oriented than countries that follow a CAD strategy. Under a CAF strategy, a country will export the goods for which it has a comparative advantage, and will import the goods for which it has a comparative disadvantage. In contrast, under a CAD strategy, a country will try to protect firms in industries in which it does not have a comparative advantage, resulting in reduced imports in these industries. Moreover, the reallocation of resources from industries consistent with the country’s comparative advantages to industries against its comparative advantages will also result in reduced exports.

Therefore, following the country’s comparative advantage is beneficial because it enhances growth, trade performance, and fiscal sustainability. Firms will be profitable, and capital accumulation will make the country less dependent on foreign loans. Price signals will reflect economic incentives, external accounts will be in good shape, and the government will have a strong fiscal position, altogether reducing the chances of internal policy-driven crises. Hence, if a country adopts a CAF strategy, it will allow for dynamic growth and it will reduce the chances of a home-country grown crisis.

Moreover, following a CAF strategy provides a buffer to mitigate the impact of external crises due to two factors. First, a strong fiscal standing will help enact counter-cyclical policies to boost aggregate demand in the short run in case of a negative external shock. The cushion accumulated by following a CAF strategy can be very helpful for turbulent times,

and it can be used in fiscal stimulus packages to invest in infrastructure and social projects, with high social returns, that enhance a country's growth potential. Second, a CAF strategy generally leads to external accounts in good standing and foreign reserves that can help mitigate the impact of any crisis. Having a strong external sector will allow the country to rely less on capital inflows for investment. Even in the event of an external crisis and a sudden reversal of capital flows, firms in these sectors are more likely to survive had the country followed a CAF strategy, and they are also less likely to require government assistance.

Overall, a CAF strategy lowers the probability of home-grown financial crises, and it also helps governments to mitigate the effects of external shocks. Therefore, developing countries, by following a CAF strategy, will be able to achieve a better macroeconomic management, reduce the probability of home-grown crisis, and have more resilience to external shocks.

One caveat is important here. Even if a country were to adopt a CAF strategy, it may also encounter crises due to the following two possible reasons. First, bubbles still could develop and burst, as in the case of Japan in the 1990s. Second, inappropriate management of the capital account liberalization process can lead to financial crisis and currency collapses, as in the case of the East Asian financial crisis and the currency collapses in Eastern Europe.

Therefore, it is crucial for a country to carefully manage its capital account liberalization. Foreign direct investments will go to industries consistent with a country's comparative advantages and have also proven to be less prone to sudden stops (or sudden reversals of capital flows) than portfolio flows. Therefore, foreign direct investment should be encouraged.

Portfolio capital flows sometimes target speculative activities (mostly in stock or real-estate markets), which in some cases can lead to bubbles, real exchange appreciation (Dutch disease), and currency and balance-of-payments crises. It should be noted that due to market imperfections in the financial sector, financial intermediaries in developing countries sometimes find it difficult to allocate large inflows to productive investments, and hence these inflows end up in speculative activities. This is one of the reasons why it is necessary to proceed with a careful liberalization of the capital account in order to avoid large inflows, real appreciation, and loss of competitiveness, which can turn later into large outflows. The Asian crisis – in particular the Thai experience – and the recent experience of countries in Eastern Europe call for a gradual and careful management of the capital account liberalization process.

It is important to note that during the current financial crisis, countries that were initially hit the hardest by the global downturn were those that were more open to international trade and capital flows. It would be a mistake to neglect the benefits of trade openness and globalization. The majority of the empirical evidence indicates that trade integration is linked to stronger growth in the long run. Adopting protectionist measures will reduce global economic welfare. Those countries that followed their comparative advantages and integrated in the world economy were also the ones with the fiscal space to run stimulus packages to withstand the worst effects of the global recession.

5. Concluding Remarks

The current financial crisis and the global downturn that followed has been the most serious in terms of output losses, geographic outreach, and job losses in the post-war era. The poor and the underprivileged are the ones that have been hit the hardest. Poverty has risen, and we are further away from our goal of eliminating poverty in the world. Sound regulation and proper macroeconomic management are required to reduce the probability of similar crises. Moreover, we can convert this crisis into an opportunity. In most developing countries,

infrastructure represents a bottleneck to growth. By directing fiscal stimulus spending to sound projects that help remove these binding constraints to growth, governments can increase aggregate demand in the short run, while enhancing growth in the long run. Countries that lack the fiscal space to undertake stimulus spending will need financial support in these efforts from their development partners. It is important to embed fiscal stimulus measures within a framework of medium to long-term fiscal and debt sustainability.

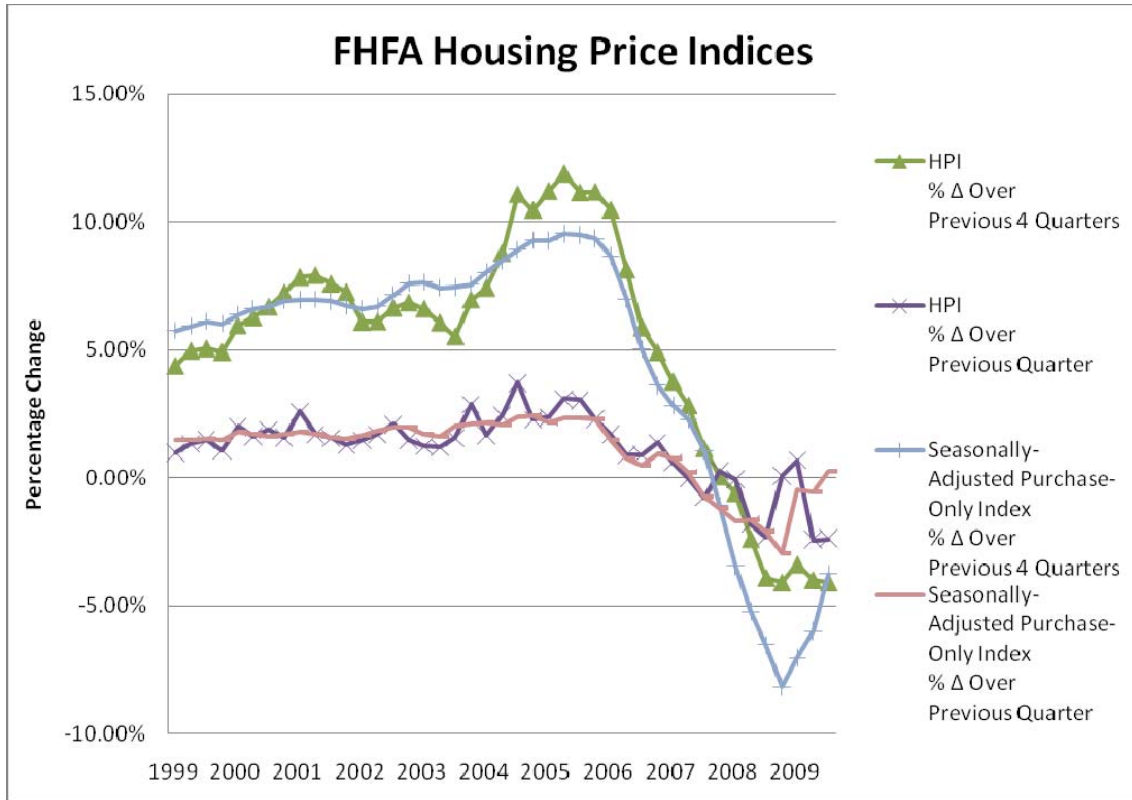
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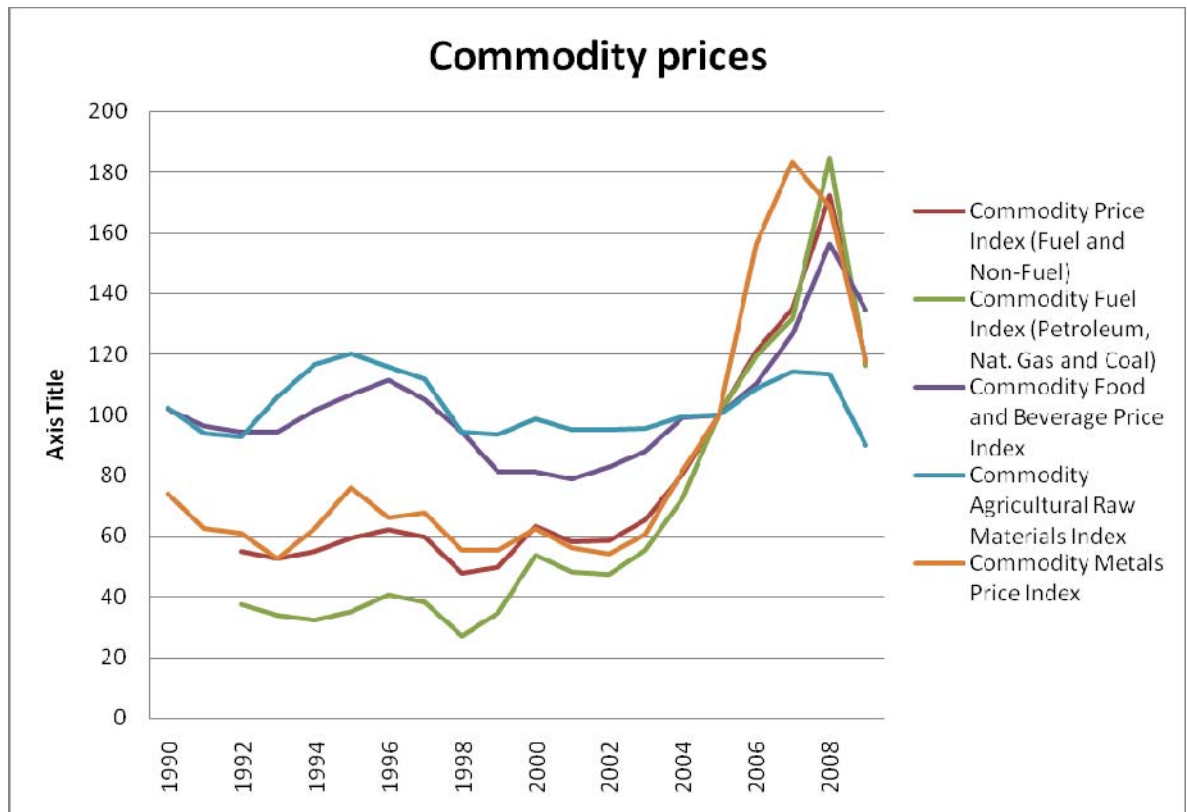
Appendix: Table and Figures

Figure 1: Housing Price Indices



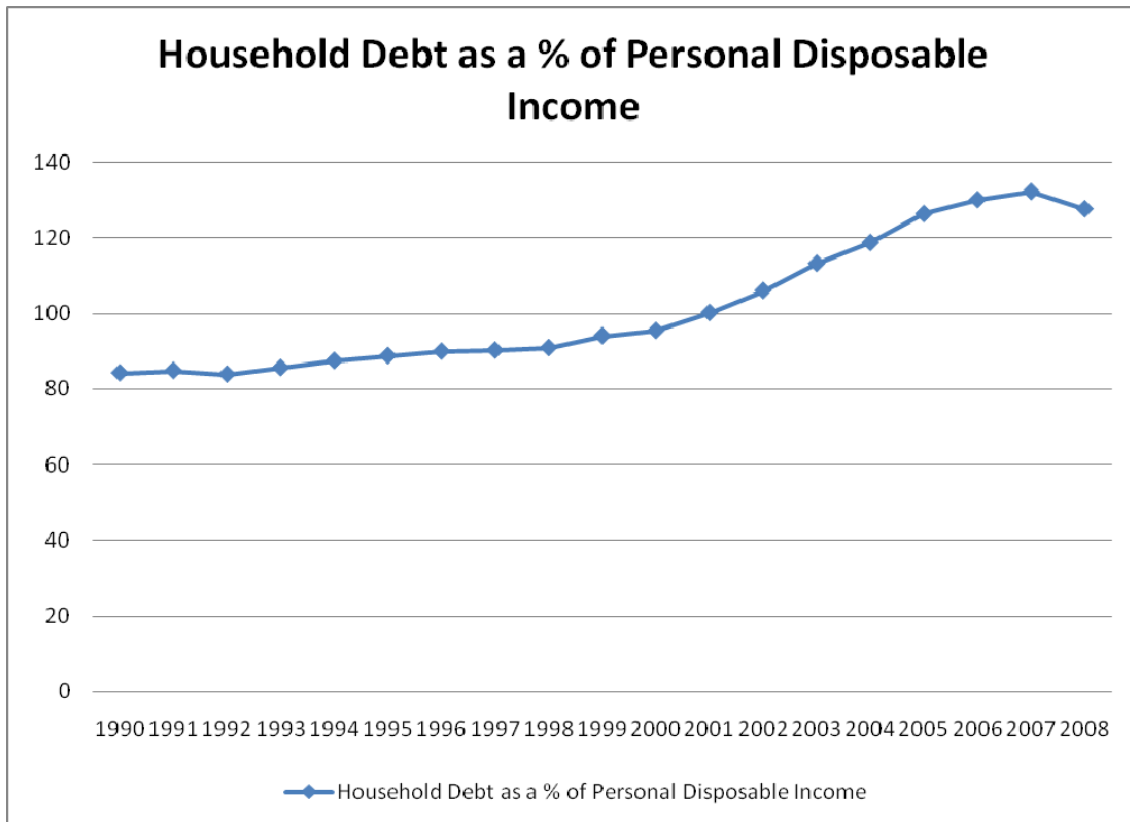
Source: Federal Housing Finance Agency, 2009

Figure 2: Commodity Prices



Source: World Economic Outlook Database (October 2009), International Monetary Fund.

Figure 3: Household Debt and Disposable Income



Source: 1. Flow of Funds Account, Board of Governors of the Federal Reserve System, 2009.
2. Bureau of Economic Analysis Data, 2009

Table 1: FHFA USA Housing Price Indexes (Purchase-Only and All-Transactions)

Region	Year	Quarter	HPI % Δ Over Previous 4 Quarters	HPI % Δ Over Previous Quarter	Purchase- Only Index % Δ Over Previous 4 Quarters	Purchase- Only Index % Δ Over Previous Quarter	Seasonally- Adjusted Purchase- Only Index % Δ Over Previous 4 Quarters	Seasonally- Adjusted Purchase- Only Index % Δ Over Previous Quarter
USA	1999	1	4.39%	0.97%	5.76%	1.22%	5.75%	1.45%
USA	1999	2	4.98%	1.33%	5.93%	2.30%	5.93%	1.47%
USA	1999	3	5.07%	1.47%	6.12%	1.58%	6.12%	1.51%
USA	1999	4	4.93%	1.07%	6.03%	0.80%	6.03%	1.47%
USA	2000	1	5.98%	1.99%	6.38%	1.56%	6.38%	1.78%
USA	2000	2	6.28%	1.61%	6.59%	2.50%	6.60%	1.68%
USA	2000	3	6.70%	1.87%	6.69%	1.68%	6.69%	1.60%
USA	2000	4	7.24%	1.58%	6.94%	1.03%	6.93%	1.70%
USA	2001	1	7.86%	2.58%	6.96%	1.58%	6.96%	1.80%
USA	2001	2	7.93%	1.68%	6.95%	2.50%	6.97%	1.69%
USA	2001	3	7.60%	1.56%	6.92%	1.65%	6.91%	1.55%
USA	2001	4	7.27%	1.28%	6.75%	0.86%	6.73%	1.52%
USA	2002	1	6.10%	1.46%	6.57%	1.41%	6.58%	1.66%
USA	2002	2	6.12%	1.69%	6.71%	2.63%	6.71%	1.82%
USA	2002	3	6.66%	2.08%	7.16%	2.08%	7.15%	1.96%
USA	2002	4	6.86%	1.47%	7.61%	1.29%	7.61%	1.96%
USA	2003	1	6.62%	1.23%	7.63%	1.43%	7.65%	1.70%
USA	2003	2	6.08%	1.18%	7.44%	2.45%	7.43%	1.61%
USA	2003	3	5.54%	1.56%	7.46%	2.09%	7.45%	1.99%
USA	2003	4	6.98%	2.86%	7.56%	1.39%	7.57%	2.08%
USA	2004	1	7.44%	1.67%	8.00%	1.84%	8.03%	2.13%
USA	2004	2	8.79%	2.44%	8.55%	2.98%	8.50%	2.05%
USA	2004	3	11.10%	3.72%	8.95%	2.46%	8.92%	2.38%
USA	2004	4	10.48%	2.28%	9.23%	1.65%	9.28%	2.41%
USA	2005	1	11.23%	2.36%	9.24%	1.85%	9.27%	2.12%
USA	2005	2	11.91%	3.07%	9.61%	3.33%	9.54%	2.30%
USA	2005	3	11.17%	3.03%	9.52%	2.37%	9.49%	2.34%
USA	2005	4	11.19%	2.29%	9.27%	1.42%	9.34%	2.28%
USA	2006	1	10.49%	1.71%	8.62%	1.25%	8.66%	1.48%
USA	2006	2	8.15%	0.89%	7.07%	1.86%	6.99%	0.72%
USA	2006	3	5.89%	0.88%	5.07%	0.46%	5.03%	0.46%
USA	2006	4	4.92%	1.36%	3.54%	-0.05%	3.61%	0.90%
USA	2007	1	3.77%	0.59%	2.80%	0.52%	2.83%	0.72%
USA	2007	2	2.84%	-0.01%	2.35%	1.42%	2.28%	0.18%
USA	2007	3	1.16%	-0.78%	1.09%	-0.78%	1.06%	-0.74%
USA	2007	4	0.06%	0.25%	-1.13%	-2.25%	-1.07%	-1.22%
USA	2008	1	-0.59%	-0.06%	-3.47%	-1.86%	-3.44%	-1.70%
USA	2008	2	-2.39%	-1.82%	-5.17%	-0.37%	-5.22%	-1.66%
USA	2008	3	-3.90%	-2.31%	-6.48%	-2.15%	-6.51%	-2.09%
USA	2008	4	-4.09%	0.06%	-8.20%	-4.05%	-8.16%	-2.96%
USA	2009	1	-3.38%	0.68%	-7.05%	-0.64%	-7.03%	-0.50%
USA	2009	2	-3.99%	-2.44%	-5.96%	0.80%	-5.99%	-0.56%
USA	2009	3	-4.08%	-2.39%	-3.74%	0.16%	-3.76%	0.23%

Notes: Seasonal adjustment is done at the Census Division level and uses the Census Bureau's X-12 ARIMA procedure. The automated ARIMA model-selection algorithm in X-12 is employed, which searches through a series of seasonality structures and selects the first that satisfies the Ljung-Box test for serial correlation.

Source: Federal Housing Finance Agency, 2009