Background Paper

Financial Crises, Social Impact, and Risk Management: Lessons and Challenges

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Abstract. This paper is a compendium of selected literature on the economic and social impact of financial crisis. The paper uses as organizing principle or conceptual framework the channels of transmissions of economic booms and busts in crisis vulnerable economies. In this context, the paper highlights the central role of external factors, credit and the mitigating role of the public sector. In addition to lessons learned the paper presents results from selected field experiments on credit allocation among poor communities, insurance and other types of risk management tools.

Financial Crises, Social Impact and Risk Management: Lessons and Challenges

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Introduction

Financial crises and their resolution have proven to be significant sources of income drops, increased unemployment, and lower quality of public services. Hence they have been associated with deterioration of the poor’s well-being and lack of progress in achieving the Millennium Development Goals (MDGs). Given this, the need to protect social achievements and to catalyze further progress calls for sustained efforts to address the social impact of crisis. This is particularly relevant in view of the emergence of a large segment of households that recently came out of poverty -- the so called “crisis vulnerable”—who see the quality of their well-being threatened by today’s unstable global economy. This augurs political economic uncertainties that may prove a hindrance to badly needed faster growth.

Our aim here is to review the lessons learned from financial crises describing where possible the channels of transmission and highlighting selected research and policy challenges. The focus is on low-income households that have fewer choices to protect themselves, for example, they hold a greater proportion of their wealth in cash than the non-poor and thus, tend to be more strongly affected by the increased rates of inflation to which financial crises almost ultimately lead. In this paper, these are households largely from the regions that the economic literature has covered the most, for example, Latin America, East Asia and more recently Europe and Central Asia. Hence risk management lessons could be extracted.

In this review we use the term “financial crisis” generically, that is, embodying a variety of financial events involving credit scarcity, real exchange depreciations, price increases and ultimately output collapses. In other words, we will not be discussing the individual characteristics of inflation crises, currency crashes, banking crises, or debt crises but rather the common aspects of these crises.2

1. The impact of financial crises. What have we learned?

Financial crises increase poverty, may increase income inequality and may deteriorate human development indicators. Household heterogeneity and country specific characteristics (including the quality of social programs) contribute to explain the ambiguity of outcomes in the aggregate.

Financial crises increase poverty. Globally, the poverty rate (headcount index) “has been falling a robust 1 percentage point per year over 1982-2010, and this was maintained after 2005, that is, even during the early years of the global financial crisis (GFC) 2008-2010.3 Yet, at country level financial crises until the late 1990s increased

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2 Reinhart and Rogoff (2009) discuss episodes of external defaults, inflation crises, currency crises, and banking crises in developed and developing countries since the 1800s.

3 Ravallion (2013).
poverty (Figure 1). Preliminary data suggest that may be the case today too. But it is too soon to generalize in the face of country specific characteristics. For example, in Latin America and East Asia the GFC was accompanied by a boom in commodity prices and/or capital inflows, hence the impact of the GFC on poverty may not be as bad. This contrast with the crises of the 1980s and late 1990s that were not accompanied by a favorable external environment nor had in place mitigating risk policies such as fiscal stabilization funds and proven-effective social policies such as conditional cash transfers (CCT from now on) which point to better outcomes this time.

Figure 1. Financial Crises Lead to Poverty Increase: Selected Episodes


Also, not all households have suffered income drops as a result of GFC. In Latin America for example, “[m]en’s labor income was the most important [factor] in pushing households out of poverty in 2010, similar to the pre-crisis years…However, it was also the most vulnerable to the crisis, as falling income from men causes poverty to jump (as well as its depth to increase).” Female labor income compensated to certain extent for the fall in male labor income during the 2009 crisis.5

Financial crises may or may not increase income inequality. A recent study covering 16 developed and developing countries since 1880 finds that financial crises increase income inequality, and suggests that this outcome may reflect the fact that the

4 For example. Giorgia and Kyrgyz Republic (World Bank 2012).
5 World Bank (2011a).
less well-off have limited options to protect their income and that they may be more vulnerable to losing labor sources of income.\textsuperscript{6} The study also reports that “[w]ages seem to drop more quickly for workers …while business incomes are maintained. …and that [financial crises] tend to worsen inequality despite usually being accompanied by recessions which typically level income inequality.”

The evidence from the financial crises in the Nordic countries in the late 1990s also suggests that financial crises lead to a deterioration of income inequality. “This may reflect the fact that [the study is] considering countries with similar welfare states and fiscal policies that serve to moderate the initial distributional impact of the crisis.”\textsuperscript{7} But, even though the study identifies the same relationship for a larger group of countries, its conclusions suggest that may not be the case if the impact of discretionary policy responses such as cuts in social expenditures dominates over the impact of automatic policy responses such as compensatory transfers or progressive taxation that are likely to moderate any rise in inequality in gross incomes.

Indeed, there are several studies that point to drops in income inequality as a consequence of financial crisis.\textsuperscript{8} Other advanced possible explanations are that the well-off was taken by surprise by the crisis, hence did not have time to protect his or her income and wealth from changes in relative prices; and that the drop in income inequality associated with the bonanzas that typically precedes financial crises outweighed the increase brought by the latter. This points to the transition dynamics of income inequality identified in the case of Thailand’s fast liberalization of the financial sector in the late 1980s.\textsuperscript{9}

In developing countries in previous decades, the financial channel has proven key in the differentiated impact of several crises according to the income scale in Latin America (Chile 1981-83, Mexico 1994-95, Ecuador 1998-2000, Argentina 2001-02, and Uruguay 2002).\textsuperscript{10} In all these cases it was costlier to smooth out the shock for small depositors than for larger depositors that for example had better loan terms. In East Asia in the 1990s, the costs of bailing out the financial sector are estimated at 16 percent of GDP for Malaysia, 28 percent of GDP for Korea, and 35 percent for Thailand, and 55 percent for Indonesia.\textsuperscript{11} Those in the lower income scale felt a stronger impact of the financing of the associated bailouts through higher taxes (including inflation tax). More

\begin{itemize}
\item[8] for example, Honahan (2005) covering Indonesia, Mexico, Russia and several countries in Africa and. Baldacci et al. (2002) covering Mexico.
\item[9] Townsend (2011) highlights models in which a financial liberalization that “extends access in the population to formal financial institutions can explain growth with increasing and then decreasing inequality.”
\end{itemize}
generally, lower disposable income as a consequence of one or more of higher taxes and lower income and wealth erosion had an impact on low-income households that, as already indicated, have fewer ways to protect their income status.

Financial crises affect human development indicators but outcomes have not been uniform across countries. In advanced economies no deterioration has been identified in health and education indicators as a consequence of financial crises. Well-functioning credit markets, well-established social protection programs, and a low opportunity-cost of attending school could explain this outcome. In developing countries studies identified ambiguous outcomes for both health and education.

Contributing to ambiguous outcomes are household heterogeneity and country-specific characteristics. Also, poor families typically face different types of idiosyncratic shocks simultaneously at both individual (for example, illness) and regional levels (for example, flood), making it difficult to identify the impact of financial crises only. For example, droughts increase mortality among girls in India. Girls facing droughts are more likely to be poorer and obtain less education, which could be associated with the long-term impact of financial crisis.

In addition, incomplete data and data collection lags make the task of researching the impact of recent crises such as the GFC difficult. For example, household attempts to smooth out consumption are not reflected in per capita expenditures and hence are not captured in household surveys—the leading instrument used in human development research. Also, expenditure measures of well-being (used to calculate poverty) do not integrate the value of public services.

Country-specific characteristics that may also lead to ambiguous results include non-uniform economy-wide factors-- such as price stickiness, inflexible real wages and poor estimation of inflation—which tend to be volatile in the aftermath of a crisis and which may lead to a poor identification of the determinants of human development outcomes. Also, a subsequent commodity price boom will mask the long-term impact of the crisis. Latin America provides a good example of this: During the 1990s and the early 2000s decreases in GDP had a substantial impact on poverty rates. Yet, since 2003 the region has enjoyed a commodity and capital inflow surge leading to faster growth and

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12 For instance, Dehejia and Lleras-Muney (2004) find in the US a positive association between recession and reduced infant mortality—partly due to timing chosen by mothers to become pregnant.
13 For example, World Bank (2000); Ferreira and Schady (2008).
15 Deaton (2010).
16 Rose (1999).
17 Maccini and Yang (2009).
20 Kanbur (2010).
21 Behrman (2009).
reduced unemployment, thus masking the long-term impact of the slowdown of those years.22

Studies on impact on health and education suggest ambiguous outcomes. In health, Table 1 shows that in developing countries from different regions malnutrition and infant mortality indicators increased. This is consistent with the pro-cyclicality of health outcomes from past crises found in Africa, low-income Asia, and middle-income Latin America.23 There is consensus that drops in household income largely explain these outcomes and that the impact appears asymmetric, that is, the deterioration during downturns is larger than the improvement during the good times.24 Yet, other studies found no deterioration in infant mortality.25

Although too early to conclude, the most recent financial crisis, the GFC, appears to have been less severe than forecasted. According to recent FAO statistics, the number of undernourished people in the world changed according to the following (in millions): 898 in 2004-2006; 867 in 2007-2009; and 868 in 2010-2012.26 Two complementary factors seem to have played a role in this outcome: effective safety nets in place before the GFC hit, and the bonanza due to higher commodity prices and capital inflows that several developing countries enjoyed since the mid-2000s (with the exception of 2010). However, it must be recognized that this statistics do not capture diet changes nor other dimensions of food security that might have been affected by the GFC. Nevertheless, for non-commodity a recent study documents the costly coping strategies deployed by households from the Europe and Central Asia region to cope with the income shock associated with the GFC (including cuts in basic consumption, health care, and education).27

In education there is ambiguity on the impact on school enrollment indicators (Table 2). But in low-income countries it always deteriorates. There seems to be a variety of explanations for this ambiguity. This may include the availability of free meals in schools; the low opportunity-cost of sending their children to school, which will lead to higher enrollment or a rise in the importance of children’s income as an addition to the household’s income, which will lead to lower school enrollment.28

As for the long-run impact, Indonesia’s 1997 crisis and Argentina’s 2001 crisis show evidence of negative impact (Table 3). The World Health Organization has recently highlighted the negative psychological effects of financial crises as well as the

22 Gasparini, Gutiérrez and Tornarolli (2007)
23 Ferreira and Shady (2008).
24 Conceição, Pedro and Namsuk Kim (2009) and Ferreira and Shady (2008).
26 FAO (2012).
28 Ferreira and Schady (2008).
increase in crime that these typically bring. The well-known case of the increased suicide rate among microcredit debtors in India illustrates this point.

Table 1. Deterioration of Health Outcomes

<table>
<thead>
<tr>
<th>Crisis Episode</th>
<th>Impact on Infant Mortality (IMR), Malnutrition and Weight Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru, 1988-92</td>
<td>IMR increased 2.5 percentage points for children born during the crisis.</td>
</tr>
<tr>
<td>Cameroon, 1990s</td>
<td>Malnutrition for children under three years increased from 16 in 1991 to 23 percent in 1998.</td>
</tr>
<tr>
<td>Mexico, 1994-95*</td>
<td>Mortality from anemia increased from 6.3 to 7.9 /100000 in 1993 and 1995, respectively for children under age 1. Mortality rates in 1996 among the population aged 60 and over were 5-6 percentage points worse than expected based on pre-crisis trends.</td>
</tr>
<tr>
<td>Indonesia, 1997-98</td>
<td>IMR increased 3.5 percentage points in rural and urban areas.</td>
</tr>
<tr>
<td>Indonesia Thailand Malaysia** 1998</td>
<td>Childhood anemia and maternal malnutrition Underweight children Lower percentage of infant immunization</td>
</tr>
<tr>
<td>Argentina 2001-02</td>
<td>Loss of 30 grams of average birth weight, with greater losses for children born to mothers from lower socioeconomic strata.***</td>
</tr>
</tbody>
</table>


Table 2. Ambiguous Impact on School Enrollment

<table>
<thead>
<tr>
<th>Crisis Episode</th>
<th>Impact on School Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru in the 1990s</td>
<td>Increased school enrollment*</td>
</tr>
<tr>
<td>Mexico 1994</td>
<td>Primary school enrollment fell from 0.44 in 1994 to 0.09 in 1995* Increased school attendance for youth 15 to 18.**</td>
</tr>
<tr>
<td>Argentina 2001</td>
<td>Higher primary and secondary enrollment ***</td>
</tr>
</tbody>
</table>


Table 3. Long-term Social Impact: Indonesia 1997 and Argentina 2001

<table>
<thead>
<tr>
<th>Crisis Episode</th>
<th>Long-term Impact on Well Being</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia 1997</td>
<td>Despite economic recovery, The 1997 crisis accounts for about half of 2002 poverty count.* the psychological impact of the crisis persisted**</td>
</tr>
<tr>
<td>Argentina 2001***</td>
<td>Substantial effects on maternal and infant mortality and low birth weight; Low birth -weight for youths 13-17 negatively correlated with public expenditures.</td>
</tr>
</tbody>
</table>


Credit booms followed by sudden credit cuts have been at the heart financial crises in developed and developing economies. Households, firms and the public sector have not been immune to these effects, notwithstanding the coping strategies adopted.

Significant amount of theoretical and empirical literature on the macro-financial lessons learned from past and more recent crises have emerged on the impact of the GFC. The outcomes at national and firm and household levels have been largely similar. As real wages increase and credit becomes available and affordable, indebtedness associated with higher consumption and investment in both physical assets and human capital increases. Poverty comes down.\(^{30}\) As credit becomes suddenly costlier or scarce, indebted firms and households go bankrupt, incomes drop, and poverty and income distribution—although this point is still debated, as highlighted here—increase. The Appendix elaborates further on the macro-financial channels of transmission of financial crises. Box 1 highlights the lessons learned.

Box 1. Macro-financial lessons from past crises

- **Booms typically precede financial crises: The role of external factors and credit.**
  
  Boom and bust cycles in developing countries since the 1990s largely have been the result of external factors in an environment of increased globalization and domestic reforms, leading to systemic effects, for example, commodity price increases and high interest rates in advanced countries.\(^{31}\) The poorest the country the larger is the dominance of domestic factors in the behavior of the economy.\(^{32}\)

  Credit booms typically precede financial crises; sudden credit (flow) cuts lead to output deceleration or collapse. The impact is stronger in episodes affecting several economies within a region and, of course, far greater in global crises.\(^{33}\)

- **Economic adjustment leads to the depreciation of real variables.**

  Economic adjustment leads to income depreciation and higher import bills as a result of domestic price increases and currency depreciation. Firm credit becomes scarcer and costlier, particularly for small and medium enterprises (SMEs)—which are considered risky borrowers. Public and private debts go up as implicit liabilities, particularly foreign denominated liabilities, become explicit and public expenditures drop—although in some economies, for example, Chile during the GFC, making use of public sector savings from the concurrent commodity price boom protected public expenditures.

\(^{30}\) Bordo and Meissner (2011) do not find any association between credit booms and inequality. This contrast with the hypothesis that argued that rising income inequality led to policies that promoted increased indebtedness, for example, Rajan (2010).

\(^{31}\) Reinhart and Rogoff (2010) and the literature cited there.

\(^{32}\) World Bank (2010a).

\(^{33}\) For example, Schularick and Taylor (2010), Dell’Arriccia et al (2012).
• The public sector as lender of last resort proved effective in recent economic crises.

Public sector credit and international reserves have proven effective in preventing a fully-fledged financial crisis. So has concurrent external support. But these mitigating actions have not being effective in preventing a drop in GDP even in economies perceived to be well managed such as Chile in 1999-2000 and 2009.

The lessons learned from past crises point to the interaction of the channels discussed below and illustrated in Chart 1. To deal with a drop in output and incomes, firms and households implement a variety of coping strategies, in some cases, with community actions to support troubled households and cash and in kind support from the public sector.

Chart 1. Firms, Households and Government Links

Aizenman et al (2012); Calvo et al. (2012a).
2a. Firms: impact and coping strategies.

Financial crises lead to lower aggregated demand for outputs, scarcer and costlier credit, and costlier imported inputs under depreciated currencies. Firms with foreign currency denominated debt and interest rate-indexed debt—for example, Brazil--also suffer from depreciated currencies and higher interest rates, respectively.

*The credit crunch associated with a financial crisis could be particularly critical for workers in micro- and SMEs in both advanced and developing countries.* As indicated, in developing countries SMEs account for an average of 50 percent of total industrial employment. SME sector plays a key role in generating income for the poor.\(^{35}\)

During the East Asian crisis of the late 1990s the impact of the associated credit crunch was felt stronger among SMEs.\(^{36}\) A similar situation took place in Latin America through contagion of that crisis. In Chile, for example, absence of credit, inflexible wages, and high firing costs led many SMEs to reduce the number of employees and hence to become microenterprises or to file for bankruptcy. In the late 1990s unemployment increased from 6 percent to 11 percent and getting back to pre-crisis unemployment rates took time.\(^{37}\) To survive, SMEs switched to non-bank financing, for example, retained earnings, and thus to sacrifice investment, as large firms—unable to access external financing and perceived more creditworthy—crowded out domestic bank financing for SMEs (e.g., Argentina’s SMEs during the Tequila crisis)\(^{38}\) Still, unemployment suffered.

Several other arguments have been put forward to explain the stronger impact of a credit crunch on SMEs. These include weak relationship with banking institutions that in a shock situation prefer to deal with firms they know; and SMEs larger vulnerability to collateral depreciation, for example, due to drops in the price of real estate. The former argument points to the importance of having a strong relationship with banking institutions when a credit crunch situation develops. Indeed, small and young firms that at the onset of the East Asian crisis were closely associated with a banking institution were less likely to be refused a loan. These firms did not stress lack of bank finance as a cause of declining output.\(^{39}\)

SMEs were also hard hit during the GFC. For example in Chile the government mobilized a significant amount of liquid resources accumulated during the bonanza of recent years. In the episode of the 1990s as well as during the GFC the government provided support in the form of credit during the former and also in the form of loan guarantees during the latter, but the large size of the loans suggests that these went to the

\(^{35}\) Beck et al. (2008).

\(^{36}\) Ding, Domec, and Ferri (1998).


\(^{38}\) Calvo (1997).

\(^{39}\) Vickery (2004) for a review of the literature on risk management and SMEs.
larger companies instead. In these instances SMEs faced costlier credit globally. See Box 2 for the role of public banks and international organizations during the GFC.

Box 2. Public Banks and International Organizations as Providers of Buffer Credit.

Public banks participated actively as providers of credit and loan guarantees during the GFC, for example, PKO Bank Polski (Poland), BNDES (Brazil) and China Development Bank. Banco Estado (Chile) as highlighted provided loan guarantees. In most cases, credit was directed to large companies facing external credit cuts. International organizations, for example, The World Bank’s IFC and the Inter-American Development Bank were also quite active in the provision of credit, particularly for the trade sector in developing countries that were also facing credit constraints, as discussed. While public institutions proved handy to provide and channel badly-needed credit, critics argue that the loans were targeted to firms such as those in the commodity sector that were not as credit constrained as others, for example, firms in the non-tradable sector.

Despite their timely intervention during the GFC, the role of public banks in developing countries remains questioned. The recent Global Finance Report 2013 concludes that while public banks provide an additional tool for crisis management in the short run, credit misallocation and efficiency losses due to politically motivated lending are still widespread.

The impact on microenterprises appears to be mixed. In Indonesia in 1997 availability of microcredit sustained activities in microenterprises. In Bolivia, microfirms receiving microcredit were affected by the economic shocks of 2001/02. Further research is needed in this regard.

Firm coping strategies

How have firms coped with a sudden increase in labor and capital costs in the context of a drop in output demand? Chart 2 illustrates the channels involved in a developing economy. Reducing nominal compensation has not proven easy in places where the economic situation of the firm involved was not well understood—a typical situation among unskilled workers. The impact of this on firms has serious consequences for female and youth employees who are typically the first to lose their jobs. Despite these strategies and in combination with economic adjustment measures higher unemployment is a common outcome of financial crises.

40 Lagos and Tapia (2012).
41 Liu (2009); Pasadilla (2010).
42 World Bank (2012a).
43 World Bank (2009a).
44 Gonzalez-Vega and Rodriguez-Mesa (2002).
During the GFC firms worldwide where hit in both fronts: lower demand for output and credit scarcity. A recent study surveyed firms in countries from Europe and Central Asia found that the impact of lower demand for output dominated.\textsuperscript{45} “Firms increased the use of internal funds to finance working capital, delayed payments to tax authorities or suppliers, and attempted to restructure their debt. State aid was more often used than the insolvency (bankruptcy) regime, but less often than debt restructuring.” The impact on sales was mixed; sales dropped more in young firms in all surveyed countries, and increased in a “non-negligible number of firms” in Bulgaria and Turkey. In these countries skill-intensive firms suffered a significant drop in employment, but not in Hungary.

The GFC also had an impact on trade finance globally, regardless of the size of firms (Table 4). Clearly, firms in the trade sector faced both lower demand for export and scarce credit. It is also worth highlighting that, because of the intermediating role of domestic banks in trade finance provided by foreign banks, the source of trade credit scarcity could also be the result of domestic economic and political uncertainties. A case in point is Brazil 2002 when the threat of a populist Lula government in Brazil led to a credibility problem and foreign banks refused to provide trade financing. In this situation as well, international reserves were used to buffer the impact of such a shock.\textsuperscript{46}

\textsuperscript{45} Bulgaria, Hungary, Latvia, Lituania, Romania, and Turkey. Correa and Iooty (2010)

\textsuperscript{46} Arminio Fraga, 2000 Governor of the Central Bank of Brazil. Personnal communication.
### Table 4. The GFC: Trade Firms Faced Lower Output Demand and Credit Scarcity

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All banks</td>
</tr>
<tr>
<td>Fall in the demand for trade activities</td>
<td></td>
</tr>
<tr>
<td>Fall in the price of transactions (for example,</td>
<td></td>
</tr>
<tr>
<td>commodity prices)</td>
<td></td>
</tr>
<tr>
<td>Less credit availability at your own institution</td>
<td></td>
</tr>
<tr>
<td>Less credit availability at counterparty banks</td>
<td></td>
</tr>
<tr>
<td>Shift toward open account transactions</td>
<td></td>
</tr>
<tr>
<td>Shift toward cash-in-advance transactions</td>
<td></td>
</tr>
<tr>
<td>Decline in support from export credit agencies</td>
<td></td>
</tr>
<tr>
<td>Decline in credit from multilateral institutions</td>
<td></td>
</tr>
<tr>
<td>Other reasons</td>
<td></td>
</tr>
</tbody>
</table>


In the absence of the coping schemes described in Chart 2, surviving firms have typically moved to the informal sector. In some cases laid off workers migrate to sectors and/or countries with better employment prospects. Displacement of workers to informal activities has featured in past crises, but the impact on these activities is difficult to capture in impact studies. In Latin America recurrent financial crises have gradually led to increases in informality, i.e., firms that stopped paying taxes. Argentina’s crisis led to a 9 percentage point increase nationally from 1992 to 2003.\(^{47}\) In the East Asia crisis displacement of workers took the form of migration to the agriculture sector. About 30 to 40 percent of urban workers moved to the agriculture sector.\(^{48}\)

Recovery of the real sector depends on many factors including the sector’s production structure (for example, a large and diversified export sector),\(^{49}\) lower labor costs, access to credit, and firm closure regulations (for example, bankruptcy laws and the U.S. Chapter 11-type regulations) that provide resilience. In Korea, unemployment increased from 2.6 to 6.8 percent in 1998 but achieved pre-crisis rates quickly as currency devaluations reduced the real wage. More generally, there is evidence that recoveries in emerging markets have been faster were real wages dropped as a result of higher inflation. This result however does not imply that higher inflation is the recommended policy for a fast recovery. Discussing this topic is beyond the scope of this paper.\(^{50}\)

### 2.b. Households: impact and coping strategies

Financial crises lead to household income drops and, where prices go up, to wealth depreciation. Typically salaries do not grow at the rate of inflation leading to lower real

\(^{47}\) Perry et al. (2007).
\(^{48}\) World Bank (2009a).
\(^{50}\) Calvo, Coricelli and Ottonelo (2012b).
incomes. The adjustment that occurs usually comes with lags. Inflation leads to depreciation of domestic currency savings and lowers income in households where gas, food and rent are important components of expenditures—this is particularly true for low-income households. Pensioners on state benefits are also on the whole vulnerable to price increases, so are those with domestic currency denominated savings. Domestic currency borrowers, including the government, benefit as the real value of their debts which are not indexed to price increases drops. Currency depreciations also lead to costlier imported product expenditures, for example, food and oil, having a direct impact on the consumption basket economy-wide. Table 5 illustrates the impact on income and consumption in selected crises episodes since the mid-1990s.

Table 5. Income and Consumption Expenditures Drops

<table>
<thead>
<tr>
<th>Crises episode</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico 1994-96</td>
<td>Average monthly household income (at constant 1994 prices) fell 31 % between 1994 and 1996. Consumption expenditure dropped 25 %.*</td>
</tr>
<tr>
<td>Indonesia, Thailand and Malaysia 1998</td>
<td>Significant drop in consumption expenditure. **</td>
</tr>
<tr>
<td>Argentina 2001</td>
<td>Incomes fall leading to a drop in welfare. ***</td>
</tr>
</tbody>
</table>


Sources of income include labor income—the most important contributor—and non-labor income such as private and public transfers and international remittances [Box 3]. A study based on a sample of 41 middle-income countries shows deceleration of GDP, employment, earnings and real aggregate labor income, that is, the real wage bill, since the mid-2000 (Figure 3). The latter started as a consequence of the food and fuel crisis, becoming negative at the peak of the GFC.

“[T]he impact has fallen disproportionately on the quality of employment rather than on the number of jobs. Slower growth in earnings accounts for nearly three quarters of the total adjustment for the average country. The bulk of the earnings adjustment was driven by a reduction in working hours, as well as a shift away from the better-paid industrial sector” (Figure 4), the same study reports, consistent with previous studies. The largest drops took place in the wage bill growth in several countries from Eastern Europe and Central Asia, for example, 20 percent in Latvia, Lithuania, Ukraine, and the Russian Federation. The rest of the economies in the sample showed drops in employment growth between 8 % and 3 %. Notably, these results reflect the impact of

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52 World Bank (2000).
the implementation of a variety of mitigating labor policies and/or stimulus packages and the quality of labor institutions, which somehow mask the direct impact of financial crisis of the recovery.

Box 3. Remittances are growing again

Remittances have increased considerably in recent years, particularly in Central America and the CIS economies, for example reaching approximately 50 percent of GDP (2011) in Tajikistan (Figure 2). For example, the association between the construction sector in the US and remittances to Mexico and El Salvador is well known. The GFC saw these dropping significantly in some countries: Formal remittances to Tajikistan fell 36 percent year-on-year during the first five months of 2009. Among regions, North Africa because of its high association with oil-producing countries was also hard hit. In other regions remittances only decelerated, reversing only recently hence these are increasing again contributing to the reversal of the income drops of 2009.54

Figure 2: Migrant Remittances Could Be Very High, % of GDP

54 World Bank (2012b).
In Latin America—as well as in East Asia—the largest economies were enjoying a concurrent boom in commodity prices and/or FDI, which lessened the impact of the GFC on income. Brazil and Colombia showed declines in real wages (mostly in the nontradable sector). Chile did not, perhaps explaining why it had the largest drop in GDP among these economies. The increase in unemployment rates in there was accompanied by falls in net job creation (of salaried jobs in Brazil, Chile and Mexico and non-salaried jobs in Colombia). The crisis had a stronger impact on the formal sector in Brazil and Chile while in Colombia the informal sector has been the most affected. In all three economies and Mexico there was a destruction of non-salaried jobs. Brazil and Chile benefited from unemployment insurance already in place. Chile and Colombia provided
wage subsidies. Mexico—which was hard hit by the US downturn—offered unemployment insurance and temporary employment programs.  

**Household coping strategies**

_The income drop associated with (full-fledged and incipient) financial crises has led households to implement a variety of strategies to smooth out consumption, including some associated with the gender of head of the household._ For example, typically women have more flexibility regarding working hours given them the possibility of increasing them if there is demand. Also, they have choices regarding fertility decisions.  

Chart 3 presents these choices. For example, a recent study on the impact of the GFC covering selected countries in Europe and Central Asia identified reduced human capital investments such as visits to doctors and spending on medicines during 2009 and 2010. Children school enrollment showed no change. The same behavioral change took place on health in East Asia in the late 1990s. Here there were also changes in the use of health services (public and private). It should be pointed out that among farmers, the distinction between households and firms, as well as formal or informal is almost inexistent (more on this in section 3).  

Chart 3. Household Implement a Variety of Strategies to Smooth out Consumption

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55 Freije Rodriguez et al. (2009).  
57 Dasgupta and Ajwad (2011) for Armenia, Bulgaria, Montenegro, Romania and Turkey. See also World Bank (2011b) and World Bank (2009c).  
The crisis vulnerable

The Thai experiment involving a credit boom described in Box A.1 in the Appendix illustrates the vulnerability of indebted low-income households to a diminution of economic status if a negative shock hits, given their limited ability to invest for the long run. New studies identified similar experiences among “crisis-vulnerable” households. These households could become poor as a result of the crisis, but would not have been poor otherwise. The crisis vulnerability emerges among members of this group despite their being more skilled and urban than the chronically poor, although less so than the general population. They also are more likely to be economically active than the chronically poor.60

2.c. The public sector: impact on and its role in smoothing impact

Output contraction affects the poor’s well-being also through deteriorated public services that typically affect crises economies. This is so partly because of the need to close the fiscal deficit in the face of lower tax revenues and increased public debt service at the expense of cuts in social expenditures.61 It is also partly a result of existing institutional weaknesses that surface in that context. Both advanced and developing countries have shown the same stylized facts, as evident during the course of the GFC and its aftermath. In recent years there has been progress in protecting social expenditures from volatility and in establishing and improving the effectiveness of social protection programs. However, as discussed, much remains to be done to ensure available resources are fully and efficiently disbursed and used, particularly in poorer countries.

In developing countries one common practice has been reducing the investment portion of government social sector budgets--typically as a result of social pressures to sustain the salary portion of these budgets.62 In education public investment dropped 50 percent during 1987-1990 in Peru. In Thailand public investment in health fell 30 percent from 1995 to 1999. Indeed, drops in health public expenditure in East Asia have been associated with the deterioration of health indicators highlighted in Table 1. Breaking with past practices, Argentina effectively prioritized health spending despite the fiscal adjustment that the crisis of 2001 required.63 Nevertheless, health outcomes suffered there, partly due to the sudden increase in the cost of imported inputs, for example, drugs, as a result of the large devaluation. A similar situation arose with HIV/AIDS imported

60 Ferreira et al (2013).
63 World Bank (2009b).
drugs used for prevention as a result of the devaluations triggered by the GFC in many
developing countries with HIV/AIDS programs.\textsuperscript{64}

\textit{In many economies health public expenditures have been pro-cyclical. Yet, world public financing of health by governments and development assistance sources (in constant US dollars) increased by nearly 100 percent from 1995 to 2006.}\textsuperscript{65} A recent study covering 108 developing countries for 1995-2007 reports that GDP downturns are associated with a steady upward trend of per capita social spending (defined as public and private domestic spending); that social spending growth rates have been volatile; and that the negative impact of crisis is stronger in poor countries than in richer countries. This study also finds that, without the involvement of advanced countries, donor responses in recent past crises have been mixed, while in episodes involving advanced countries, aid flows have been positively associated with the behavior of growth in advanced countries from 1997 to 2007.\textsuperscript{66} In light of the lagging effect of aid flow volatility, it is too soon to establish the impact of the GFC on aid flows.

\textbf{On the Millennium Development Goals (MDGs)}

The MDGs were officially established in 2000. All United Nations member states and more than 20 international organizations committed then to achieve these goals by the year 2015. The MDGs provided a framework and hence focus to address development challenges. Monitoring by international organizations was part of the associated commitments. Implementation took momentum in 2005 as advanced countries committed to providing enough resources to catalyze the project.

As reported in the World Bank’s 2013 Global Monitoring Report only 4 of the 21 MDG targets or subtargets have been met worldwide despite the solid growth and better policies and institutions of most of the previous decade—most precisely before the GFC that broke out in 2008. Where progress towards achieving MDGs was slow it remained slow. Progress continues to lag in health-related development outcomes, such as child and maternal mortality and access to sanitation.

The first Global Monitoring Report of 2004 established the current intellectual framework to address development outcomes. The two key pillars to achieve these are economic growth and delivery of services for the poor. With this in mind one cannot help wondering how much of this progress was the result of fast growth due to external factors such as fast increase in commodity prices and surges in capital inflows. Likewise, how much progress slowdown could the GFC (and associated gap between initial donor pledges and actual disbursements) bring, as discussed in the 2013 Global Monitoring

\textsuperscript{64} Price concessions from manufacturers compensated somewhat for the increase cost (Lewis and Verhoeven, 2010).
\textsuperscript{65} Lu et al (2010). The authors, although confident on the study result, acknowledge incomplete data sources in some countries.
\textsuperscript{66} Dang, Knack and Rogers (2009) also supports the latter finding.
Report. True, new MDG estimates indicate that in 2010 (that is, two years into the GFC) “the MDG 1a reducing the $1.25-a-day poverty rate was reached, falling below half of its 1990 value.”67 But as indicated, the full impact on public resources (including aid flows) of a recession following an economic crisis can be felt for several years after the crisis, contingent on the economy’s fiscal stance and growth prospects. And this in turn will be contingent on the global economic environment. Unfortunately (or perhaps luckily) we have limited information on the impact of financial crisis on the MDGs to extract lessons given the bonanza country enjoyed before the GFC broke out.

Given the lessons learned from financial crisis in developing countries discussed in Section 1, one could speculate that in some economies poverty will increase but that the outcome on other social indicators will be ambiguous. In light of this, preserving social spending (and the quality of public institutions) during troubled economic times is vital. Some countries have built up some buffers during the good times of strong growth in recent years. Among middle-income countries, Chile is the star but effective targeting remains a challenge. But has discussed below, saving bonanza process to implementing counter-cyclical policies during troubled economic times typically faces political resistance.

3. Selected options to reduce the impact of financial sector crises

The lessons learned from financial crises in both advanced and developing countries have provided macrofinancial- and social expenditure-risk management guidelines that proved effective in lessening the impact of the most recent and deepest global crisis since the Great Depression, the GFC. Guidelines for developing countries on risk management at more micro levels, that is, the firm, household/producer and community levels are still evolving in line with the increasing findings from economic theory, calibration exercises, and field experiments. Conclusions from some of these studies are presented below, given their potential for replication in other countries.

3.a. Macrofinancial-risk management.

- **Maintaining an open international trade system in both advanced and developing countries.** In emerging markets trade openness has proven to help buffer the impact of sudden stops in capital inflows. Trade opening should also contribute to sustaining jobs in the trade sector during adjustments that typically involves more competitive real exchange rates. This is even more important in economies where women account for a large share of trade sector employment, for example, Vietnam.68

- **Saving bonanza proceeds allowed developing country governments to implement counter-cyclical policies and thus sustain social expenditures.** To save bonanza

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67 World Bank (2013).
68 Nguanbanchong (2010).
proceeds countries implement fiscal rules, which have proven effective in combination with credible institutions. Chile’s fiscal surplus rule is the most frequently cited as a rule that has worked very well sustainably. Political economy considerations typically interfere with the implementation of counter-cyclical policies.\textsuperscript{69}

- **Having in place strong regulatory and supervisory structures for the financial system.** Politically, it may not be easy to implement adjustment measures and to achieve more equitable outcomes once a crisis hits. This applies likewise to ex-ante insurance design—whether for depositors, bankruptcy, or unemployment. Beyond equity considerations, crisis may not be the most appropriate time to implement constraints, for example, higher bank loan provisions, in an already credit-constrained economy.

- **Keeping high international reserves and the support of a lender of last resort (for example, the U.S.).** This has helped to buffer the impact on credit and to sustain economic policy credibility and, hence, contributed to cushioning the onset impact of a financial crisis, that is, deposit withdrawals and payment systems troubles.

However, all of the above are no guarantee of immunization against output deceleration or collapsed in the weathering of financial crises. For example, Chile, an economy that followed national policy recommendations “by the book,” suffered one of the largest drops in output in the LAC region, suggesting that liquidity injections during the crisis may not be reaching the expected target, for example, SMEs.

3.b. **Social expenditure-risk management.**

- **Rebalancing the use of public resources to prevent human development losses.** Changing allocations in the middle of an economic crisis may prove politically difficult. In this context having explicit pre-crisis contingent policies have proved helpful—although this has required strong political power from the authorities to implement them. An additional challenge is to improve the ability of central and local governments in low-income countries to disburse available resources. This calls for more involvement of local communities in joint programs with governments.

- **Having in place an efficient system of public sector delivery.** Economies with social protection programs in place were able to increase coverage, for example to cover the “crisis vulnerable” group. But lessons from other financial crisis experiences indicate that indeed, social policies in place at the time of financial crises prevented a larger unemployment rate, for example, Planes de Jefes y Jefas de Familias Desocupados in Argentina during the 2001-2002 crisis. As indicated in the Appendix, the program reduced aggregated unemployment, though it also attracted people who would have

\textsuperscript{69} Kopitz (2004); Calvo (2010); Griffith-Jones and Ocampo (2010) with focus on the financial sector.
been unemployed otherwise and formally ineligible households. Yet, it was much better targeted than other social spending which, historically, was not protected.

- **Being ready with the right information**
  
  - To expand existing social protection schemes. Collecting data takes time; hence social programs created in the middle of a crisis are likely to be ineffective. The short-term challenge in the social sectors is twofold: to improve protection programs and to increase coverage effectively. The challenge is to identify the right time to phase out shorter-hours work programs, for example, as well as to achieve well-designed, targeted, and enforced programs.
  
  - To make sure regional macro-response differences are taken into account in the design of social policies. Macroeconomic and financial policies may have different impacts depending on the composition of the regional real sector and general business environment. For example, regions concentrated in interest-elastic industries, manufacturing and construction, may be more vulnerable than others to a policy of high interest rates. Likewise, in regions with a high concentration of SMEs credit may be scarcer than in regions with a high concentration of large firms. Also small rural banks that typically use local financial markets may have more difficulty in supplying credit than larger banks that typically enjoy a variety of funding sources. This is particularly important for developing countries with geographic variety and different regional social and economic conditions, for example, Bolivia and Indonesia\(^\text{70}\) and it also implies that, where significant, this issue must be taken into account in the design of policies to mitigate risk.
  
  - To make sure public credit supply reaches the targeted group. The public buffer credit provided during financial crises does not seem to reach the targeted firm group, for example, SMEs --that typically generate job growth; this could partly explain why recovery could be jobless as highlighted above.

In addition, in the area of data collection, policy recommendations must include the design and implementation of not only standard surveys but also more imaginative and innovative surveys.

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\(^{70}\) Ridhwana et al. (2011) identified regional differences in response to monetary policy during Indonesia’s financial crisis of 1997-98. These regional differences could also explain the different behavior of households in different parts of Thailand during the crisis (Townsend, 2002)
3.c. Microeconomic risk management

**Firms.**

Credit scarcity is one of the key consequences of the leveraging process following the financial crisis. As such, it is important for firms to engage in risk management to limit the extent of the associated deleveraging. As opposed to large firms, small firms worldwide rarely engage in traditional hedging strategies such as derivative-based schemes. For example, the evidence from the industry sector of the US shows that small firms borrow from the banking system to sustain working capital and that, depending on the industry sensitivity to interest rates, firms will borrow under fixed or variable rates, that is, industries facing high interest volatility will engage in fixed interest-rate borrowing.\(^{71}\) In developing countries, borrowing from the banking system as a risk-management alternative is virtually not an option for small firms. Public banks typically channel resources to the largest firms, even though these have more borrowing options than small firms. This calls for better targeting of credit during financial crises.

An ex-ante risk management that proved effective in lifting borrowing constraints for small firms during the East Asian crisis of the late 1990s was the establishment of strong banking relationships. These relationships seemed to contribute to the reduction of bank transaction costs associated with monitoring, thus creating an incentives for banks to lend.\(^{72}\)

To support employment, the lessons from past crises indicate that post-crisis public subsidies such as low-interest rate loans for firms in combination job search assistance have proven effective. Temporary reduction of working hours and microcredit schemes also proved effective. The effect of training programs was limited; self-employment assistance programs only helped a subgroup of the vulnerable population.\(^{73}\)

**Households**

The popular Townsend Thai Project\(^{74}\) has provided significant findings in the characterization of households worth highlighting before discussing household risk-management practices.

- the distinction between households as consumers and suppliers of factor inputs and firms as producers and sources of factor income may not exist in commodity intense rural communities;

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\(^{71}\) Vickery (2004). He also finds that banks charge a premium on fixed rate debt to compensate them for interest rate risk.

\(^{72}\) Vickery (2004).

\(^{73}\) Paci et al. (2009).

\(^{74}\) Townsend (2011).
• The distinction between formal and informal (underground) economies disappears once it is acknowledged that the family and its relatives, trading and joint liability partners, or networks are key actors in the management of risks.

• Poor families face simultaneity of idiosyncratic (for example, illness) and aggregate shocks (for example, drop in commodity prices). In fact, the macroeconomic impact of financial crisis in Thailand in the mid-1990s appears small in relation to the impact of much larger idiosyncratic shocks that part of the population was facing in parallel. The most important rural lender, the Bank for Agriculture and Agricultural Cooperative (BAAC) was instrumental in helping to smooth consumption from idiosyncratic shocks, but less so in helping to smooth investment from variation in cash flows.  

• Households with female heads and the elderly seem more sensitive to idiosyncratic shocks (vulnerability in both consumption and investment) among the low-wealth households, for example, poor farmers and wage earners, than are other households.

• There are different geographical vulnerabilities. In some national regions household vulnerability may be on consumption due to income shocks while in others it may be on investment due to cash flow shocks. In Thailand for example, small and medium firms are much more likely to display investment sensitivity to cash flow.

**Household ex-ante risk management practices**

*In today’s volatile economic environment, foreign currency holdings (including liquid treasury bills) have become the more widespread risk-management practice of households across the income scale and the world to protect from the impact of financial crisis.* In fact, despite many attempts to de-dollarize the economy for a more effective monetary policy, dollarization is still widespread in many developing countries with a history of inflation episodes reaching high shares of total deposits, for example, 70 percent in Bolivia. Real estate and commodity hoarding (for example, gold jewelry) are also popular ways to protect incomes and wealth from devaluations and inflation.

*Protecting the value of savings is particularly important for low-income families because, in the face of limited access to loans, it is the most important way to deal with emergencies such as a sudden drop in incomes and/or a sudden increase in medical expenditures.* Thai families provide a good example of the importance of wealth: They use wealth to facilitate their movement out of agriculture and into self-employment or employer categories.

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75 Townsend and Yaron (2001)
But while the value of currency holdings is well understood among families, the implications of potential agreements with financial institutions are not, calling for more education on financial issues. This is important in the context of bonanzas when suddenly these families engage in borrowing agreements with lenders without understanding the short- and long-term consequences of not honoring those agreements, for example, losing a property used as collateral and not been able to borrow in the future, as was the case of Russia’s financial crisis of 1998. The commodity boom of recent years as well as the GFC has led to increased efforts to provide financial literacy to low-income families.

Findings from other projects

• **Improved financial intermediation: The role of Thai village institutions.** Thai village institutions have been successful in financial intermediation through training services, saving services and pledged savings accounts, that is, accounts attached to the payments of loans. Stability and expansion of services appear to have allowed these institutions to provide cash loans where these did not previously exist. Village institutions that have proven successful in improving financial intermediation have the potential to reduce reliance on moneylenders, which has proven central to smoothing out producers cash flows in Thailand.

• **Increased intermediation of remittances: The role of Kenya’s e-phone system.** The use of cellular phones to send worker remittances across large distances, that is, “mobile money” M-PESA, reduced transaction costs associated with the sharing of risk among different households in Kenya. As a result, households were able to smooth out consumption when an income shock hit. That was not the case in the group of households that did not engage in this type of transfers. Mobile money also contributed to reduce theft that was widespread before its introduction since remittances were formerly delivered personally through friends and bus drives.

• **How to improve insurance implementation: Lack of trust and financial literacy in India.**

Rainfall insurance adoption is low in India. Adjusting for price sensitivity, a recent study finds “that lack of trust and financial literacy. Liquidity constraints and salience present important barriers to adoption.”  

• **Dealing with persistent commodity shocks: Insuring Thai rubber farmers.** Farmers in developing countries are sensitive to fluctuations in commodity prices in addition to fluctuations in weather. A recent field experiment showed that rubber price shocks

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76 Townsend (2011).
77 Jack and Suri (2011).
78 Cole et al. (2013).
79 Townsend and Vickery (2013).
are not well insured or smoothed compared to weather shocks. A recent study attributed the difference to the temporary character of weather shocks that allows farmers to implement countercyclical strategies and hence to smooth out consumption. This situation calls for differentiated insurance schemes taking into account the persistence of commodity shocks.

**Household ex-post risk management policies**

Conditional cash transfers (CCT) *already in place when the crisis hit proved to be very cost effective option for protecting the most vulnerable in past crises*. However, the challenge with cash transfers is avoiding perverse incentives and their negative impact on formal employment, productivity and growth as identified in the case of Mexico’s Solidaridad/Progresa program. Proposals to achieve this in Mexico include replacing the current mix of social insurance with a system of universal benefits out of the government general value-added-tax collections. This proposal would also include compensation via monetary transfers to the poor.

Unemployment benefit schemes in advanced countries are quite widespread that is not the case in developing countries. Here public works as a source of employment are more popular. The cost effectiveness of this however remains questionable. 

**4. Final Words**

In this paper we reviewed selected findings on the social impact of financial crisis and on risk-management practices. With a broad focus on the impact on the poor from developing countries, this report has made virtually no distinction between low-income and middle-income countries. Review of the available empirical evidence suggests ambiguous results regarding the impact on income inequality and health and education. In previous decades, poverty increased in most crisis countries. The good news is that the lessons from these crisis episodes were learned and the impact of the GFC on the financial sector was somewhat buffered in most countries.

However, in some instances output dropped significantly despite having in place mitigating policies. It is too soon to report whether or not the social policies in place, for example, social security systems and extended CCT have been effective in buffering the impact on poverty and social indicators. Preliminary assessments suggest that developing countries will stop enjoying fast progress in poverty reduction and improvement of social indicators like in the last decade. In the current volatile global economic environment priority for both country groups is to protect the significant social improvements of the 1990s which are vulnerable to reversals.

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There are a large number of country specific studies on the impact of crisis on poverty and income inequality. The challenge now is to identify common factors and to deliver a set of risk management guidelines, as planned for the World Development Report 2014. This challenge has virtually been met at the macro-financial levels, as evident by the risk management practices implemented in the face of the recent global crisis. Much remains to be understood at more micro level, given the heterogeneity of household, producers and firms.

Going forward, sustained data collection and thus fine tuning of surveys is a clear priority. In this regard significant projects are underway covering all theory, calibration models and field experiments that could provide more light on the channels of transmission and thus help prevent policy mistakes and improve the design of policies to mitigate risks.\textsuperscript{81}

\textsuperscript{81} MIT’s  Consortium on Financial Policies and Poverty and The Abdul Lateef Jameel Poverty Lab.
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Appendix. The role of external factors, credit and economic adjustment

In developing countries credit booms (and associated bonanzas) have been driven primarily by external factors such as a surge in capital inflows and/or commodity prices and fast growth in the world’s largest economies. In both advanced and developing countries credit booms have been associated with faster growth and preceded financial crisis, highlighting the need to improve financial sector regulatory systems and supervision.

Chart A.1 describes the build up of bonanzas. During booms more credit at lower cost becomes available, relative prices change favoring the non-tradable sectors (for example, real estate and labor), and higher loan collaterals lead to higher supply of credit growth. As a result, aggregate demand shoots up and GDP growth accelerates. Current account balances deteriorate reflecting higher public and private sector external indebtedness.

Chart A.1. Favorable external environment, faster growth, and vulnerabilities

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82 The credit-growth causality has been discussed in economist circles extensively. Today there seems to be consensus that credit explains growth as shown in Mendoza and Terrones (2008).
Box A.1. Booms and the poor: The Thai Million Bath Village Fund, a revealing experiment

In boom countries increased credit has unambiguously lead to higher consumption across the income spectrum. But among the lower income segments, casual evidence suggests it has not led to investment in new nor in more productive business, hence poverty reduction driven by booms may be short-lived. In some aspects the Thai experiment shared some results with those found in a similar experiments in Hyderabad, India.  

The Thai Million Baht Village Fund distributed loans in 77,000 rural villages. The program provided a million baht to create banks in each of those villages. The impact on households that received the associated loans wages and consumption grew (the latter grew quite fast), income for those in agriculture and other forms of business also grew, but overall asset growth in the villages decreased. “Our interpretation is that when they introduced these village funds, households … needed less in their rainy-day funds, and they converted part of that savings into consumption. Others likely lacked liquidity at the time the program was introduced and borrowed to increase consumption. Still others likely reduced consumption in order to invest, although there are not enough data to nail that down definitively.”

Most people used the loan for home or business repairs (for example, a truck repair). Small business increased the number of employees, leading to a 7% increase on wages for the average household whether or not this received the loan—a positive spillover effect. However, the Fund did not create many new nor more productive businesses. Thus, households that received loans changed their spending and investment habits, but not necessarily in ways that produce long-term growth. Hence, after six or seven years after the program was implemented, consumption dropped back down significantly.

But bonanzas create vulnerabilities and macro-risks. Balance sheet maturity and currency mismatches make the economy vulnerable to bank runs as perceptions on economic instability (for example, due an imminent devaluation) start mounting. While these channels of transmissions have been associated with emerging markets behavior, the situation is similar in low-income economies such as small African economies exposed to commodity price and capital flow volatility (that is, capital flight volatility). With decreasing international reserves, no access to international markets, and no lender of last resort, central bank liquidity injections to prevent the collapse of the banking sector deepens the crisis further, leaving the economy with financial and real sector

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83 This was a microfinance experiment by economists in MIT’s Abdul Latif Jameel Poverty Action Lab (J-PAL).
84 World edu website interview to Robert Townsend.
85 Kaboski and Townsend (2012).
86 Collier et al. (2004).
troubles. Not surprisingly, bonanzas have been associated with a higher probability of depositor runs on banks, debt defaults, and inflation. ⁸⁷

Chart A.2. Reversal of External Factors, Output Collapse and Poverty Increase

-Economic adjustment-. As the favorable external environment reverse and credit dries up, aggregate demand drops accompanied by a real devaluation, closing thus the deficit of the current account of the balance of payments. Argentina’s 2001 crisis makes a good example of this scenario (Case Study 1). ⁸⁸ If credit is quickly restored, competitive exports could drive a quick recovery, offsetting somehow the decline in GDP. However, if that is not the case, for example, East Asia in the late 1990s, financial crises may have much stronger effects as the depreciation of the currency translates in higher domestic prices and lower real wages. Country experiences with boom-bust cycles have been costly in terms of output and investment contractions (Table A.1). ⁸⁹

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⁸⁸ Claessens and Kose (2013).
⁸⁹ Analyzing the behavior of 32 developed and developing countries, Calvo, Izquierdo and Mejia (2004) found that the probability of a sudden stop episode is higher the more closed to international trade and the higher foreign currency debts are. Episodes of growth acceleration followed by growth deceleration have also been discussed in Hausmann, Rodriguez and Wagner (2006).
Table A.1. Output, Investment Contraction, and Rescue Packages in Developing Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Output % Contraction</th>
<th>Investment % Contraction</th>
<th>Rescue Package % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia, 1997</td>
<td>-13</td>
<td>-39</td>
<td>18.1</td>
</tr>
<tr>
<td>Korea, 1997</td>
<td>-7</td>
<td>-31</td>
<td>11.7</td>
</tr>
<tr>
<td>Mexico, 1995</td>
<td>-6</td>
<td>-35</td>
<td>13.5</td>
</tr>
<tr>
<td>Morocco, 1994</td>
<td>-7</td>
<td>-25</td>
<td>NA</td>
</tr>
<tr>
<td>Russia, 1998</td>
<td>-5</td>
<td>-44</td>
<td>5.8</td>
</tr>
<tr>
<td>Thailand 1997</td>
<td>-12</td>
<td>-62</td>
<td>12.1</td>
</tr>
</tbody>
</table>

35 Output collapses in developing countries

Mean: -9.9
Mean: 42.2

Source: Calvo and Reinhart (200). NA: not available.

Contagion and accumulation of international reserves. Another common feature of recent financial crises is regional and global contagion. In virtually all the crisis episodes of the 1990s there were incipient bank runs (for example, Central America in 1996 and Bolivia 2001). At the heart of these systemic effects is the absence of a global lender of last resort ready to inject enough liquidity when an incipient bank run occurs. In the case of Mexico 1994 and Uruguay 2002, an Emergency Loan from the US contributed to preventing the breakdown of their financial sector systems. Yet, in the cases of Russia 1998 and Argentina 2002, no lender of last resort came forward. It is beyond the scope of this note to discuss the rationale behind these outcomes.

The high economic and social cost of financial crises has led policymakers to build up international reserves (and some exchange rate flexibility) to mitigate the risk of shocks, whether internal or external. Thus, the lessons from these experiences were learned and when the GFC bankruptcy took place and global financial markets froze, developing countries made use of their own international reserves (in addition to some exchange rate devaluation in some countries). Some financial systems where further buttressed through US FED liquidity swaps, for example, Brazil, Korea, Mexico, and Singapore. The commodity bonanza concurrent with the GFC contributed to the accumulation of international reserves.

Box A.2. Sudden stop, financial crisis and poverty increase in Argentina 2001/02

The making of the financial crisis. Like all emerging markets, during the 1990s Argentina enjoyed large capital inflows and fast growth. Throughout the 1990s, the macroeconomic framework compared favorably with countries renowned for their fiscal behavior, for example, Euro countries. Contagion from Mexico’s crisis in 1994/5 brought fast growth to halt, but the economy recovered quickly and with a sounder financial sector. As the Russian crisis of 1998

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froze international capital markets, risk premiums in emerging markets rose, leading growth deceleration and mounting expectations of devaluation. Deposit withdrawal followed, despite several attempts to establish credibility. Failure to achieve this, March, 2001, the central bank injected liquidity into the economy leading to further deposit withdrawals and international reserve losses. By December 2001 bank deposits had dropped 18 percent; international reserves had fallen to less than half their January level. To prevent a collapse in the financial sector’s payment system, bank customers were not allowed to withdraw deposits (the so called corralito measure). As foreign reserves continued to plummet, the peso was devalued, bringing balance sheet problems in firms and individuals indebted in dollars but receiving income in pesos). A weaker peso together with higher interest rates and slower growth rendered the public debt unsustainable. Political constraints to adjust the fiscal accounts led the government to default on its debt. Many have blamed Argentina’s fixed-exchange-rate-regime for this crisis. But in the lack-of-credibility environment that prevailed in 2000, the large credit expansion that took place would have resulted in hyperinflation.\textsuperscript{94}

\textit{Outcome of the crisis.} As a result of the crisis, output and investment dropped 18.4 percent and 56 percent, respectively. Unemployment increased from 11.7 percent to 15.9 percent during 2001/2. The recession and the ensuing crisis had an enormous impact on poverty through a combination of price increases (due to the devaluation of the country’s currency) and falling nominal incomes (due to the sharp reduction in economic activity). This program was far better targeted than other social spending. However, it appears that the program still had to assure that a small but relatively well-protected share of its benefits went to the non-poor. This appears to be a political economy constraint

Poverty as traditionally measured increased from 38 percent in 2001 to 53 percent in late 2002. That year, with unemployment reaching 20 percent, the government introduced the social program “Programa Jefes y Jefas de Hogar Desocupados” covering about 2 million households. This was a cash transfer program for the unemployed conditioned on their participation in community services or training programs, and child sustained participation in education and health programs. The program reduced aggregated unemployment but was poorly targeted, that is, it attracted also people who would have been unemployed otherwise and formally ineligible households.\textsuperscript{95} Yet, it was much better targeted than other social spending—that was not protected historically.\textsuperscript{96} The program was discontinued a year later when economic recovery started, and newly-employed people were no longer eligible. Extreme poverty was reduced but impact on health and education indicators shows ambiguous outcomes.

\textit{Recovery.} The economy recovered quickly: The average annual growth rate remained high at 8 percent between 2003 and 2007, while the unemployment rate fell to 8 percent. Argentina’s quick recovery since 2003 largely has been associated with the commodity boom of the following years. Poverty and inequality indicators dropped continuously during the same period.

\textsuperscript{94} Calvo, Izquierdo and Talvi (2004). IMF (2004) and references there.
\textsuperscript{95} Cruces and Gasparini (2008) and references cited there.
\textsuperscript{96} Ravallion (2002).