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THE GLOBAL FINANCIAL CRISIS OF 2007-2009:
MICROECONOMIC, AND MACROECONOMIC CAUSES AND THEIR GLOBAL EFFECTS

Abstract

The global financial crisis of 2007-09 has been characterized as the most severe economic calamity since the global great depression of the early 1930s. In this paper we argue that its magnitude in terms of global GDP declines and losses in jobs cannot be explained by a single cause. We organize the contributing causes in groups of microeconomic and, macroeconomic effects and conclude that no individual group alone was sufficient to cause the crisis but that both generated the great global recession. We then focus on the spillover effects on the crisis on the different regions of the world.

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1. Introduction

The global financial crisis of 2007-09 evolved to one of the worst crises since the Great Depression. It started early in 2007 as a subprime loan crisis and evolved into a major financial crisis that affected, seriously, the U.S. and global economies. In the U.S., the great recession associated with this financial crisis lasted 18 months between December 2007 and June 2009. Some of its special characteristics include the first nationwide sharp housing price decline, the total reshaping of Wall Street with Bear Stearns, Lehman, Merrill and Wachovia all gone, the labor market experiencing its worst slump since the 1930s with unem-

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employment going from 4.4% to 10.1%, employment taking a long time to recover to the pre-crisis trend level, and generating a worldwide contagion. Federal Reserve Chairman Ben Bernanke called it the worst financial crisis in modern history.

The likely causes can be categorized in subgroups that include three sets of factors. First, microeconomic factors that include subprime lending, financial innovation and opaque derivative securities, excessive risk taking, failed risk management strategies, government deregulation (the revision of the Glass-Steagall Act and the absence of regulation for credit derivatives), institutional (problems with rating agencies and originate to distribute), ethical (greed and corruption) and even psychological (animal spirits). The second group includes macroeconomic factors such as the decline in real estate prices and monetary policy (low interest rates during 2002-4, ambiguity about the role of central banks to address asset price bubbles). Finally, global factors, such as the international saving glut, fixed exchange rates for certain countries such as China, and free global capital mobility. The intensity, complexity, and length of the crisis justify the multiplicity of causal factors. In this essay we refocus the analysis on these three groups and argue that their investigation can give us valuable clues, both about the occurrence of the crisis and how to prevent future ones.

2. MICROECONOMIC FACTORS

The loose monetary policy following the dot.com crash of 2001 to prime the economy had led to an expansion in domestic credit, and this coupled with the deregulation of banking already done in the 1990s drove up the housing market. Lending standards, partially because of political pressure, were reduced to serve the sub-prime section, as well as, the prime and near-prime borrowers causing demand for mortgages to expand rapidly. This is when financial innovation began to cause a number of problems for different sections of American society. Financial institutions enjoyed a wide spread of mortgage rates over the federal funds rate, and were happy to expand the market still further. The financial institutions turned to more risky lending practices, for example, ignoring credit criteria on maximum levels of total debt service ratios for mortgage borrowers.

2.1 The Role of Credit Rating Agencies

We now focus in more detail the role of the rating agencies, their institutional framework, their regulation in this crisis, and the role of financial innovation. In the last few decades, the three traditional global rating agencies - Standard & Poor’s (S&P), Moody’s, and Fitch - have come to play a major role in the functioning of international financial markets. All across the world, their ratings are one of the main concerns of sov-
ereigns, municipal authorities, banks, and non-financial companies. Rating agencies rate the quality of debt of companies. Initially, these agencies rated only particular debt issues. Now, they also rate various complex financial instruments. The role played by rating agencies was enhanced in importance due to two factors, disintermediation and globalization (Kerwer, 1999). The tendency towards disintermediation picked up in the 1980s, with factors like mutual funds, commercial paper market, securitization, and junk bonds de-linking the borrowers and the investors from the banks, which also required concomitantly a greater role for credit rating agencies to provide information on credit worthiness. Globalization, which meant a greater role for investment funds and a reduced importance of official flows, also placed greater demands on trustworthy information from credit rating agencies.

Rating agencies’ natural monopoly position was strengthened by the regulators’ dependence on these ratings, formalized in the recognition given to the rating agencies by the SEC and the Basel Agreement. The regulators have also been effectively contributing to strengthening the barriers to entry in the industry, by the requirement of regulatory licenses for any new ratings firm. These three firms - Standard & Poor’s, Moody’s and Fitch Ratings - have retained dominance in the industry, which may be considered an oligopoly, with considerable market power for them.

Until the 1970s, the rating agencies made their living from subscription fees paid by investors for ratings of credit-worthiness of the issuers of debt securities. Increased investor demand for reliable, independent credit ratings during the recession of the 1970s allowed the rating agencies to adopt their prevailing business model of charging the issuers of securities, rather than investors. In fact, almost 90% of Moody’s and Fitch’s revenues come from issuers of securities who pay for ratings (Securities and Exchange Commission, 2003). The shift to charging the issuers had also become necessary because in the age of free information, it became difficult to prevent investors from finding issuer’s ratings from sources other than the rating agencies. However, this may have led to potential conflicts of interests between them and the issuers as explained below.

Calls for reforms of rating practices were wide-spread after the Enron and WorldCom scandals, in which the agencies had maintained investment grade ratings for these firms up to four days before bankruptcy. In 2006 Congress passed the Credit Agency Reform Act, which invested the SEC with the authority to regulate competition within the credit ratings industry. These reforms seemed comprehensive, but were not able to keep the rating agencies from being blamed for gross incompetence and/or for acting in their own self-interest to such a magnitude as to take the financial system on the fast track to a systemic crisis in 2007.
2.2 Credit Rating of Structured Investments

Financial innovation consisted of investment firms setting up *structured investment vehicles* (SIVs) and packaging mortgages into high yielding complex securities, called *collateralized debt obligations* (CDOs). The SIV's involved investing in high-yield CDO's by having the investment firms borrow short-term money by issuing commercial paper at close to LIBOR rates, and this made excessive credit creation possible. Easy credit conditions and deregulation requiring the extension of housing loans to lower income classes expanded the mortgage market vastly. With the U.S household debt climbing to a level exceeding total disposable income by some 35 percent by 2007, the default risk of households had increased greatly. The ‘originate and distribute’ model followed by the financial institutions selling these CDOs meant that the sub-prime mortgage loans they issued were successfully offloaded from their balance sheets by investment banks, leaving the financial institutions with no default risk from the mortgages. These CDOs, made of sub-prime mortgages, somehow got a much higher credit rating than the original, underlying mortgage loans. That is, loans with BBB ratings or lower were combined to form securities with reduced risk, seemingly substantiated by some complex mathematical models of the rating agencies, to obtain AAA ratings by the nation’s dominant credit rating agencies; a process which was referred to by Nobel Prize winning economist Joseph Stiglitz in a televised interview as hocus-pocus (Stiglitz, 2008)!

The only logic that has been advanced for this transformation is that the underlying mortgage tranches are from different regions. It seems that the credit rating agencies may have underestimated default correlation in mortgages by assuming that mortgage defaults are rather independent events. The geographical spread may have added to the strength of this assumption. But, in fact, it can be easily seen from historical data that mortgage defaults get highly correlated during downturns, even if they have fairly independent lives during booms.

As some insider stories become public, it seems hard not to believe that conflicts of interest, arising from the fact that the rating agencies were paid by the CDO issuers for the ratings, contributed to the elevation of the credit ratings for these packaged securities. A former employee of one of these powerful rating agencies says, when he asked for details of some sub-prime loans, he was castigated by his boss, and asked to rate the security by some guess work (Pelley, 2008). Requests for better models for risk analysis seem to have been turned down by the agency management due to budgetary reasons. There seems to have been a clear divide between the analysts in these agencies, who would be inherently oriented towards better models, and the business executives who had to show profits.

It seems that issuers were also able to ‘shop’ for the best ratings. The credit rating agencies were not paid during the initial review of loan pools or during negotiations with investment banking underwrit-
ers about the structuring of the loan pools. Thus, the investment banking underwriters could make data available to all the three major credit rating agencies, get their opinion on the packaged deals, and shop for the best rating. The investment banking underwriters also managed to do all this while withholding much of the detailed data on the loans from the rating agencies. So it seems in the whole process the rating agencies were the underdogs playing to the tune of the investment banks.

It may be mentioned that credit rating agencies have not had to live in fear of litigation or reprisals. The SEC does not scrutinize these agencies with a view to imposing penalties for bad performance.

Who bought these toxic assets, packaged securities? The buyers were ordinary deposit banks, investment banks, insurance companies and other financial institutions in the U.S and abroad.

Credit rating agencies seem to have enjoyed the status of quasi-regulatory bodies in the applications of the Basel I and II accords and the internationally accepted Fair Value System of accounting. This has had negative implications in terms of dampening the crisis once it broke out, by adding to procyclicality created by the applications of these standards.

While the Basel Committee on Banking Supervision develops the Basel Accords, the International Accounting Standards Board (IASB) advances international accounting rules, such as Fair Value Accounting Standards. The Basel II accord stipulates capital adequacy covering credit, market and operational risks. Of these, credit risk can be estimated by standardized methodology, using external credit ratings, such as by credit rating agencies, or by internally generated ratings. Similarly, the Fair value System of accounting has also placed unwarranted reliance on these agencies. When market prices are not readily observable, asset valuation under this system can proceed by the so-called level 3 methodology, the mark–to–model methodology. This method uses unobservable input, and model assumptions may be used to obtain a fair value for the asset, which may be a structured security held off-balance-sheet, with no market prices, trading activity, observable inputs, or comparable instruments. When housing prices started on the downward spiral, this led to an erosion of the capital base of banks by drastic devaluation (degrading) of their holding of these toxic packaged assets. When foreclosures started increasing, through 2006 and into the spring of 2007, interest rate premiums on CDOs jumped sharply. In February, the ABX Index, which reflected a basket of sub-prime securities, fell sharply. Then in July 2007, Bear Stearns hedge funds collapsed, both filing for bankruptcy in August. It was in July 2007 that the rating agencies finally woke up, rather late critics are quick to point out, and acted to reduce the CDO ratings (Ng and Simon, 2007). Standard & Poor’s downgraded more than 600 securities valued at 12 billion dollars, Moody’s around 400 at more than 5 billion, and shortly thereafter Fitch went in to downgrade ratings of securities valued at 7.1 billion. These downgrades added fuel to the panic, and the run on these assets
a strong procyclical effect. A similar procyclical effect at the international level is discussed below is the Global Spillovers section.

The downgrading by the rating agencies would naturally affect investor sentiments in markets with less than strong market efficiency. The strong form of market efficiency requires all public and private information about an asset be reflected in its current price. But this is clearly not what is seen in practice with plenty of insider information not made public. Similarly, the rating agencies also are likely to have information not available to the public at large, therefore a rating downgrade announcement will affect investor behaviour and the price of the asset.

Thus, the credit rating agencies not only contributed to the domestic crisis, they also had a role in making the crisis a global one. The big banks were too big to fail, the regulators reasoned, and if news got around of their insolvency, everyone will run for the exit, creating a bank run.

3. MACROECONOMIC FACTORS

3.1 The Housing Bubble

Most economists agree the bursting of the housing bubble is the basic macroeconomic cause of the financial crisis. As the graph below indicates, the price of the average house in the U.S. increased dramatically beginning around 2002 and after reaching a peak in early 2007, it started correcting with an eventual drop of about 35%. The increases and declines were significantly higher in certain areas like Florida, California, and Nevada, and much lower in others.
This real estate bubble can in turn be traced to an easy monetary policy during the 2002-2005 period. The story told by several authors such as Taylor (2007) is that the bursting of the internet bubble in 2001 destabilized financial markets and wiped out about 30% of the stock market capitalization causing substantial losses in household wealth. The Fed initiated significant decreases in fed funds rates and kept them low for too long. The famous graph Taylor presents to substantiate his argument is presented below.

The easy monetary policy by the Fed during 2000-2004 to offset the bursting of the internet bubble contributed to a dramatic increase in the demand for housing. In turn, this increased demand for housing caused prices to increase significantly during 2002-2006 in the U.S. Similar policies in several other countries such as the U.K., Ireland, and Spain, fueled a global real estate boom. As a consequence of the falling housing prices beginning in early 2007, the prices of securitized mortgages fell and in particular subprime mortgages fell quite dramatically, affecting financial markets worldwide.

In summer 2007, U.S. and the global financial markets found themselves facing a potential financial crisis. It was becoming clear that banks and other financial institutions would ultimately lose tens or even hundreds of billions of dollars from their exposure to subprime mortgage market loans. Bank lending is closely tied to bank capital or net worth. Specifically, bank regulators require that loans do not exceed a certain multiple of capital. Thus, the Federal Reserve faced the danger of a sharp contraction in credit and bank lending in a way that threatened a recession.
The subprime mortgage meltdown started in early 2007. Eventually, the subprime mortgage crisis expanded to a liquidity crisis with serious financial difficulties for Bear Sterns and the eventual bankruptcy of Lehman Brothers. Kaminsky and Reinhart (1999) find the run-up in U.S. equity and housing prices to be the best leading indicators of potential future financial crisis.

3.2 The Financial Instability Hypothesis

If we accept as logical macroeconomic causes of the 2007-09 financial crises the easy monetary policies and the emergence of a housing bubble, can these causes be explained by any macroeconomic theories? In the tradition of Schumpeter and Kindleberger, Hyman Minsky (1986) cites numerous economic episodes as evidence that economic systems do not always conform to neoclassical assumptions of achieving stable growth. Minsky called his theory the Financial Instability Hypothesis. He argues that in a modern capitalist economy with expensive capital assets and a complex and sophisticated financial system, actual economic activity by economic agents, both individual and firms, is greatly influenced by expectations of future profits and financing decisions by banks and other financial institutions. Minsky proposes a credit cycle model of five stages: displacement, boom, euphoria, profit taking, and panic. Yellen (2009a) updates Minsky’s ideas. For example, during the mid-1990s a displacement occurred with the invention of the internet and the computer revolution. This led to the boom of technology and internet stocks and was followed by the general euphoria that the new economy could generate rapid wealth and high productivity for a long time. A certain group of investors started taking profits in 1999 and early 2000 and when the much anticipated Y2K crisis did not fuel further profits for the technology stocks, a panic selling in 2000-2001 caused NASDAQ to crash by around 80%. Similarly, after the burst of the internet bubble, the easy monetary policy by the Fed, encouraged financial institutions to offer low interest rate mortgages. As previously mentioned, these mortgages were bundled in mortgaged backed securities and bought by investors. A euphoria developed that housing prices were going to continue increasing and lenders relaxed their lending criteria. Towards the end, some financial firms started taking profits and the housing boom turned into a bust. Beyond the various economic theories that attempt to explain financial crises, several authors have proposed explanations that go beyond economics. For example, Keynes advocated that the free enterprise system is inherently unstable, Akerlof and Shiller (2009) elaborate in detail Keynes’s concept of “animal spirits” as the fundamental driver of financial instabilities.

The above analysis leads to us asking the important question. In view of the internet bubble and its bursting in March 2001 and the subsequent housing bubble and its bursting in 2007, what can central banks do to avoid the emergence and growth of asset bubbles for either the
stock market of the real estate market? On this question, there is a large amount of literature that addresses several related issues. Hayford and Malliaris (2001, 2004, 2005) is an example of literature addressing these issues. In summary, Yellen (2009b) gives an overview of the lessons learned from the current financial crisis about financial bubbles and monetary policy. She acknowledges that there are several difficult issues for monetary policy makers that prevent them from taking action. Among these issues are the following: (1) Do we know that a bubble exists?; (2) What is the optimal timing to lean against the bubble?; (3) How can we assess the risk and reward characteristics of the bubble?; (4) How much risk is too high?; (5) How can we estimate or evaluate the consequences of the bursting of the bubble?; (6) What tools do we have to manage or target the bubble? She concludes that the current crisis challenges economists to provide answers to such questions instead of advocating the asymmetric approach.

4. GLOBAL SPILLOVERS

As a consequence of increased globalization and interdependence, the global impact of the financial crisis was unusually widespread and severe. Worldwide, economic growth slowed to 3.0 percent per annum in 2008, down from 4.4 percent in the 2002 – 2007 period, and then fell to a negative 0.6 percent in 2009 (Akyuz 2010). Many observers date the start of the global crisis to September 2008 when Lehman Brothers failed. At this time, analysts were unnerved by the US regulatory inconsistency which after bailing out Bear Stearns, allowed Lehman Brothers to fail.

As mentioned previously, the purchase of structured finance products and mortgage-backed securities was by no means limited to U.S. banks. Also, taking a significant beating on these products were some prominent European institutions such as RBS, Greenwich Investment Capital, Credit Suisse, UBS, and HSBC. In addition, collapsing property values in their home countries gave a severe blow to Irish, Spanish, and United Kingdom banks. French and Italian banks, which focused on local, retail loans, fared much better. Some central banks also took heavy losses in the US mortgage markets. For example, the Bank of China was hit with approximately $2 billion in losses.

With globalization, national borders became increasingly leaky, thereby the transmission of both positive and negative impulses from advanced countries to emerging and developing economies (DEE) increased. Among the channels for these effects were equity market spillovers, foreign bank flight, drying up of foreign direct investment, reductions in exports, and declines in remittances. Though sometimes overlooked, worker remittances assist countries by providing both foreign exchange and income.

Forbes and Chinn (2004) found that in recent years, a country’s stock market returns were increasingly explained by expanding bilateral trade and financial linkages while country-specific effects became less impor-
tant. Angkinand, et al, (2010) found that there was a significant spillover effect from the US equity markets to 17 other advanced countries. The interdependence increased in the 1980s and 2000s especially after the emergence of the South East Asian crisis of 1997. Japan’s market return interdependence also rose in the 2000s, but did not increase in 2008.

4.1. Foreign Bank Flight
In 2008, many emerging European countries were highly vulnerable because of their significant indebtedness to foreign-owned banks. A major concern was that these foreign banks, who were becoming increasingly anxious, would abruptly withdraw their funding. If such a widespread departure were to arise, there would be an obvious gain to be the first to depart and a significant penalty on the last bank to exit. Such runs on indebted countries by banks along with their reluctance to rollover loans had been previously observed in other financial crises.

To prevent such a predicament, the European Bank Coordination Initiative (the “Vienna Initiative) staged a series of meetings to discourage foreign-owned banks, mainly Western European, from pulling out of Central and Eastern Europe. The Initiative, played a vital role in preventing a systemic crisis by opening a dialogue with foreign banks that stressed coordination. It was able to encourage the banks to remain in emerging Europe thereby stabilizing market expectations. Because of their long-term interests, banks had an incentive to remain in emerging European nations, but they first required certain assurances that the Vienna Initiative was able to provide. As Anne-Marie Guide, senior advisor in the IMF’s European Department put it, “If the banks weren’t willing to roll over their loans, recapitalize their subsidiaries and, more generally, maintain their exposure to the region, it would have been difficult to avert a systemic crisis.” (Andersen, 2009 p. 3)

4.2. Impact on Developing and Emerging Economies.
For the DEE, there were differences of opinion as to how large would be the impact of the crisis in the West. Some regions such as Asia and the Middle East and North Africa (MENA) expected the impact to be minor because of both their ample holdings of foreign reserves and their perceived isolation from globalization. The pessimists, however, expected truly dire effects. Given some emerging market economies’ strong linkages with the Western economies through financial and trade relations, some experts felt that the emerging markets would be especially battered by the global recession. There were widespread forecasts of increasing hunger, political instability, and a return to isolationism (Economist 2009).

As mentioned previously, faulty assessment by credit rating agencies amplified the financial crisis. These shortcomings extended globally as empirical studies show that sovereign ratings often lag market sentiment and
overreact with a lag to business cycles and economic conditions (see for instance Reisen and Von Maltzan, 1999). During the Asian crisis of 1997–98, ratings lagged market events, and overreacted during the pre-, as well as, the post-crisis periods, thus amplifying the business cycles. It seems that the agencies neglected some important economic variables that have been found to be determinants of economic crises. For instance, prior to the crisis of 1997-98, the interest rate differential, the real exchange rate, and the ratio of short-term debt to reserves or total debt were overlooked by the agencies, so that the methodology used was below par. This is disturbing, because, especially for DEE, these ratings can make a difference between more than adequate foreign direct investment inflows and a shortage. The sovereign bond spreads are also dependent on these ratings. Elkhoury (2008) wrote that the 1997-98 crises highlighted the fact that the credit ratings have a pro-cyclical effect: ratings lagged, instead of leading market events and overreacted during the pre- and the post-crisis periods.

Cantor and Packer (1996) noted that rating downgrades had negative effects on credit access and borrowing costs for DEE. It seems that the rating agencies favor orthodox policies that focus on reducing inflation and reducing government budget deficits (similar to the policies espoused by the IMF). The danger, then, is that, to avoid rating downgrades, DEE debtor countries might adopt controversial policies addressing the short-term concerns raised by portfolio investors, even if these may conflict with long-term development needs.

4.3 Latin America

Jara et al (2009) found that among the adverse effects in Latin America has been a sharp drop in remittances especially in the Central American countries of El Salvador, Guatemala, Honduras, Mexico, and Nicaragua, as well as, the Dominican Republic. In addition, the crises resulted in a decline in exports, such as for agricultural goods, mining products, and textiles. Yet, the impact in Latin America was considerably milder than that of the crises of the late 1990s and early 2000s. Among the factors mitigating the severity of the crisis were the improved financial environment of the region and more aggressive government policies. The financial conditions were more stable than during previous crises partially due to the development of the bond markets. Despite the outflow of foreign funds from regional bond markets, some countries such as Chile and Columbia were able to continue to issue domestic bonds thereby partially stabilizing the financial sector. While the performance of the bond markets in the region was mixed, the markets were more stable than international markets. Also, foreign bank funding became more stable as the banks had predominantly shifted their operations, and hence their funding, from cross-border to local activity. Moreover, the region had large holdings of assets invested abroad, that were repatriated in 2008 thereby helping to offset the capital outflows. Final-
ly, there had been a significant reduction of government external debt.

In response to the downturn, central banks of the region undertook a variety of counter-cyclical and financial stabilizing measures. Monetary policies, in addition to open market operations, also included expansion of the variety of assets accepted for loan collateral such as in Argentina, Brazil, Mexico, and Peru, and reductions in reserve requirements as in Brazil, Columbia, and Brazil. Mexico guaranteed the issue of some corporate debt. The eventual decline in market rates and the expansion of domestic credit may well be attributable to such policy actions. Also, central banks injected liquidity into the foreign exchange markets and in addition, Brazil and Mexico engaged in currency swaps with the Federal Reserve while Columbia and Mexico established credit lines with the IMF.

4.4 Middle East and North Africa

At the beginning of the global crisis, the MENA economies were relatively unaffected due to their limited contact with derivative financial products and limited financial integration. Nonetheless, they also were hit with a slowdown in real GDP following the Lehman shock. Moriyama (2010) estimates that two-thirds of the spillover effect on the MENA economies stemmed from direct or indirect effects from stressed advanced countries. These adverse spillover effects included declines in MENA exports, remittances, and capital inflows such as foreign direct investment. In addition, the recession led to a surge of borrower defaults, and in late 2008, the Central Bank of Kuwait rescued Gulf Bank which was the first such rescue in the Persian Gulf.

The impact of the crisis in MENA may be partially attributed to the operations of Islamic Banks. In their analysis, Hasan and Dridi (2010) found that prior to the crisis, 2005-07, Islamic Banks (IBs) earned significantly higher average profits than conventional banks (CBs) and that with the advent of the crisis of 2008, the IBs continued to outperform the CBs. Islamic banks have been able to avoid many of the problems of CBs primarily because they follow Shariah law which prohibits engaging in derivatives and collateralized debt obligations. Instead, IBs focus on asset-based lending which is much closer to the real economy and consequently contributes less to speculative financial bubbles.

In 2009, however, with the second round effects of the crisis taking their toll on economies, IBs suffered larger profitability declines than their CB counterparts. This decline was attributed to weaker risk management practices, the erosion of the collateral value of their asset-backed loans and their lack of diversification. The diversification problem stems from the limited amount of loans and investments that are compatible with Shariah law.
4.5 Sub-Saharan Africa

The integration of Sub-Saharan Africa (SSA) with the world economy has been mixed. Some countries had only modestly joined the globalization wave while others such as East African countries such as Kenya, Tanzania, Rwanda, Tanzania, and Uganda have doubled the export share of GDP since 1980 (Drummond and Ramirez 2010). Arieff et al. (2010) found that even those less integrated SSAs also suffered significant negative effects due to falling exports, slumping commodity prices, declines in remittances, and reductions in foreign direct investment. Drummond and Ramirez found that Kenya was especially hit hard by the last two factors. While some of the poorest SSA countries suffered the least effects from the global crisis, some of the strongest economies, e.g., South Africa, Nigeria, and Angola, have faced the most severe downturns. Fortunately, both the World Bank and the African Development Bank increased their assistance to the region.

Ultimately, the SSA economies suffered a drop growth from 6.5 percent for the 2002-2007 period to less than 5 ½ percent in 2008 and 1.7 percent in 2009 (World Bank, 2011). Thus, the region was able to maintain positive, though much slower, economic growth, even in 2009 which was an impressive demonstration of economic resiliency. Since the crisis, the SSAs have attained a growth rate of 4.7 percent in 2010, up sharply from the previous year. (World Bank 2011). This acceleration was largely driven by domestic demand and increases in exports, commodity prices, foreign direct investment, and even modestly, remittances.

4.6 Asia

Growth in Asia slowed in 2008 and became negative for several countries, such as Malaysia, Thailand, and Singapore in 2009. Akyuz (2010) found that a sharp decline in export demand was the major channel of the slowdown in the region’s GDP as nine Asian countries suffered double digit declines in their exports in 2009. Adding to the problem was a reduction in worker remittances in most Asian countries due to rising unemployment and falling wages in host countries. These remittances had been making an important contribution. For example, Lim (2010) found that remittances were the major source of growth in the Philippines in recent years.

In response to the crisis, the Asian countries undertook financially stabilizing policies such as expanding deposit insurance (Indonesia, Korea, Malaysia, the Philippines, and Thailand), reducing reserve requirements in several countries, and generally injecting liquidity. In addition, Akyuz (2010) found unprecedented expansionary fiscal policy measures, particularly increases in government expenditures. These policies appear to have played an important role in mitigating both the severity and duration of the downturn.
4.7 Summary of Global Spillovers
The crisis’ impact has varied by both region and country. The Baltic countries suffered a severe recession while the Asian countries suffered much less than either Eastern Europe or Africa. Overall the global recession’s impact on DEE was much milder than what was once feared. For example, according to IMF figures cited by the Economist (2009) it was found that the average DEE was able to maintain positive economic growth even though it was reduced by approximately 2 percent. In contrast, the average advanced country suffered over 3 percent negative growth. Moreover, the DEE were soon able to resume growth such that, in general, they were able to avoid the 2009 slump that plagued the average rich country. Moreover, in the post-2009 rebound, DEE growth exceeded that of richer countries by approximately five percent. Not surprisingly, since 2009, there has been a surge of money from rich countries into developing countries’ stock markets.

A major factor as to why the average DEE did not suffer more was because the large population economies such as China, India, and Indonesia, while suffering slower growth, were nonetheless able to avoid recessions. Among the factors contributing to the relatively milder impact on DEE were rich countries’ aggressive monetary and fiscal policies that helped quiet financial markets. Additionally, the DEE also implemented similar expansionary policies and maintained much of their assistance to their poorest citizens was also helpful. Fortunately, the recession did not cause the political instability that often accompanies severe economic contractions, such as widespread fall of governments, the massive street demonstrations, e.g., that were seen during the Asian crisis of 1997-98, and the adoption of extreme political views.

5. SUMMARY AND CONCLUSIONS
When the world suffers the most severe and widespread economic and financial crisis since the 1930s, not surprisingly there were a host of macroeconomic, microeconomic, and financial causes. Among these were the Federal Reserve’s low interest rate policy, the growth of sub-prime lending, the emergence of structured financial innovations, deregulation, regulatory shortcomings, credit rating agencies’ inability to spot rising risk, excessive risk taking by lenders and investors, and unwarranted market optimism. Given increased globalization, the international spillover effects were widespread though more severe in some regions than others. Contrary to some expectations, the DEEs suffered less and were able to resume economic growth sooner than the advanced countries. The financial and economic crisis spotlights the role of government and regulatory policies both critically in their failing to spot and avert the overheating of the financial markets, but also, positively in their response, in many instances, with the necessary macroeconomic policies that limited the damage of the crisis.
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