BOND UNIVERSITY
GLOBALISATION & DEVELOPMENT CENTRE

Dilip K. Das

CURRENT GLOBAL FINANCIAL CRISIS: THE GREAT RECESSION AND THE NASCENT RECOVERY

No. 35, March 2010

The global financial crisis presents an unprecedented challenge that calls for and has in many ways already produced—an unprecedented response. Countries have acted together in ways that have been innovative and effective.

~John Lipsky (2009)

We have an enormous challenge of saving capitalism from itself.

~Lawrence H. Summers (2008)

The only surprise about the economic crisis of 2008 was that it came as a surprise to so many.

~J. E. Stiglitz (2010)

1. Onset of the Global Financial Crisis and Recession

The global financial crisis of 2007-09 will go down in the history indubitably as the foremost economic and financial cataclysm of the twenty-first century, a seismic economic and financial event. It also acquired the dubious distinction of being the gravest crisis since the Great Depression, adversely affecting both the financial and real sectors of the global economy. Banking and financial system in the advanced industrial economies was the epicenter of this crisis, which was driven close to a collapse. Soon it had dismal consequences for the global economy. Crises of this dimension transpire once or twice in a century. The contemporary phase of financial globalization was progressing at a commendable pace until the crisis interrupted. According to the McKinsey Global Institute (MGI, 2009), financial assets in the international markets, which included equities, private and public debt and bank deposits, had increased almost four-fold during the1980 and 2007 period. The crisis brusquely stopped three decades of expansion in the international financial markets.

Although multiple short- and long-term factors were responsible for the financial crisis (section 2), it was sparked by the bursting of the housing bubble in the United Kingdom (UK) and United States (US) in the autumn of 2007. The US housing bubble burst in August 2007 and in the UK the Northern Rock failed in September 2007. That said the seeds of sub-prime[1] mortgage crisis in the US were sown much earlier, in the late 1990s. Large inflows of foreign capital and low interest rates had created easy credit conditions for several years before the financial crisis essentially materialized. This financial environment not only promoted a housing market boom but also encouraging debt financed over-consumption. Such excesses are never sustainable. History testifies that such excesses, without fail, culminate in financial crises. Sub-prime loans were the riskiest category of loans. Consequently, in 2007 a dramatic increase took place in mortgage delinquencies and foreclosures in the US, which had a severe adverse effect on banks and financial markets around the globe. The largest banks in the world like HSBC and Citigroup had begun writing down their holdings of sub-prime related mortgage-backed securities (MBS) since early 2007.

[1] The term sub-prime was invented and popularized by the media during the credit crunch that began in 2007.

1.1 Financial Crisis Spills out Globally

The financial crisis spilled over globally when Lehman Brothers[2] declared bankruptcy on September 15, 2008. This event traumatized financial markets, causing panic in the global financial system.[3] Failure of a reputed investment bank of long standing shocked the financial world. It took heavy toll on market confidence. Other similar catastrophic events included near-failure of American International Group (AIG), which occurred because it sold large amounts of credit default swaps (CDS) without properly offsetting or covering their positions. As market confidence plunged, many financial giants struggled to remain on their feet. After the failure of Lehman Brother, Merrill Lynch came under pressure and agreed to be acquired by Bank of America. Other high-profile debacles included Washington Mutual, a prominent thrift institution, which was resolved by the Federal Deposit Insurance Corporation (FDIC). Wachovia, a large commercial bank, suffered large liquidity outflows and agreed to be sold. This list of demise of elite financial institutional is far from exhaustive. It manifestly caused unimaginable loss of wealth.

At this point many of the world's largest banks were undercapitalized. Day by day, the global financial system was inching close to sheer disarray and disintegration. These catastrophic events proved to be a catalyst for a massive sell-off in the credit and stock markets. They set off a general flight from risk to safety in the capital markets of the advanced industrial economies first and the EMEs followed suit. The financial crisis went into an intensified phase and mutated into a global recession. According to the National Bureau of Economic Research (NBER, 2008), the US recession had began in December 2007. In its composition and character, this recession was a balance-sheet drive recession. It originated in the financial sector and spread into the real economy. Its tentacles spread into household budgets and balance-sheets of business firms, banks and non-bank financial institutions.

Given the economic, financial and trade inter-linkages of the global economy, the US financial crisis briskly spilled over into the other economies. The impact on and reaction from advanced industrial economies, EMEs and developing economies varied. They essentially depended on their degree of economic and financial integration with the global economy and the macroeconomic policy responses devised individually by them. Some large and venerable European banks were driven into enormous financial distress by their exposure to the so-called toxic assets.[4] The Union Bank of Switzerland (UBS), the largest and most resourceful Swiss bank, which was reputed to be world's largest wealth manager, was among the hardest hit banks by the sub-prime crisis. After suffering disastrous losses in the US housing mortgage market, USB was forced to write down the value of billions of franc worth of

[2] It was founded in 1850 by the three Lehman brothers in Montgomery Alabama, as a cotton trading firm. In 1858, it opened its first branch office in New York city's Manhattan borough.

[3] One recent scholarly books on the failure of Lehman Brother and subsequently the financial system is by Reinhart and Rogoff (2009a), while a highly readably yarn, which rings true, on the same theme was written by McDonald and Robinson (2009).

[4] This non-technical term began to be used widely since the financial crisis started in 2007. It is used to describe financial assets whose value has markedly declined and there is no functioning market for them so they cannot be resold. Toxic assets played a major role in the on-going financial crisis. When the market for toxic assets ceased to function it was termed as "frozen". Markets for these assets froze in 2007. It became worse in 2008, particularly in the latter half. Toxic assets poison a bank's balance sheet.

assets and retreat from its previously profitable investment banking operations.[5] Citigroup enjoyed the reputation of being world's most sophisticated financial institution with operations around the globe; this reputation was gravely tarnished by its *de facto* nationalization. Numerous hedge funds folded. There is no gainsaying that global financial system was driven to the brink of a collapse. So was the global economy. The worst point of the global financial crisis was the last quarter of 2008 and the first of 2009.

Stark forewarnings of dire consequences were given by Nouriel Roubini of Stern School of Business[6] and the Bank for International Settlements (BIS)[7], but they were ignored because relevant macroeconomic variables reflected sound economic health. Economic fundamentals justified rapid rise in asset prices. Alan Greenspan (2005), erstwhile Federal Reserve Board (Fed) Chairman, supported the view that this was a new era of prosperity and its *causae causante* was improved productivity due to endemic use of computers, IT and other high-technology equipment. He found the pre-crisis years comparable to the periods of the advent of electricity and automobile. Large global capital flows into the US economy and worsening current account deficit was explained away by Greenspan by decline in home bias. To him global savers were reaching across national borders to invest in foreign assets. His logic was that the risk-adjusted expected returns in the US economy were higher, therefore, as the home bias declined, the demand for US financial assets increased globally.

1.2 Failure of the Economics Profession

No one foresaw the timing, extent, scale, intensity and severity of this crisis that convulsed the very foundation of the global financial system and economy. The economics profession was squarely excoriated from inside and externally for its failure to see the origins of the crisis and appreciate its worst symptoms. Trenchant criticism by Nobel Laureate Robert Lucas and Robert Barro was widely sited in the financial press.[8] Paul Krugman (2009a) wrote about "the dark age of macroeconomics" in his *The New York Times* column. A global recession of this dimension is undeniably an unmitigated economic adversity. One of this severity had occurred for the first time during the last eight decades. It is reasonable to ask to what extent it could have been foreseen. The answer is that its causes were a highly

[5] In August 2009, it declared a loss of SFr1.9 billion, the seventh quarterly loss in two years.

[6] On September 7, 2006, Nouriel Roubbini told an IMF audience that a crisis was brewing. He admonished that the US was likely to face once-in-a-lifetime housing bust, an oil shock, dramatic decline in consumer confidence followed by a severe recession. The sequence of events according to Roubini was going to be as follows: First the homeowners would default on their mortgage loans, trillions of dollars worth of mortgage-backed securities (MBS) would be unraveled worldwide, which would lead to a financial disarray, if not a debacle, in the global financial markets. These developments in turn would cripple hedge funds, investment banks and other major financial institutions, like Fannie Mae and Freddie Mac. The moderator of the event reacted by asking for stiff drink in jest, while his audience was dismissive. (As reported in *The New York Times* by Stephen Mihn, August 15, 2008. "Dr. Doom".

[7] See chapter VII of the *74th Annual Report*, 2004, Bank for International Settlements, Basel, Switzerland.

[8] Robert E. Lucas won the coveted Nobel Prize in 1995, while Robert Barro was one of the three finalists for it in 2003.

complicated and interconnected set of issues, errors and policy flaws. As seen below (section 2), no one institution or group thereof could be blamed for it.

However, on a fundamental level, failure of the economics profession to see the possibility of a catastrophic malfunction of market economy was unquestionably much worse than its predictive failure. During the halcyon period of global growth and expansion, economists had come to the belief that markets were stable, even self-correcting. The economics profession went up the garden path because it "mistook beauty, clad in impressive-looking mathematics, for truth" (Krugman, 2009b). For several decades they had regarded capitalism as a perfect and flawless system. They were in love with idealized vision of an economy in which rational individuals interact in perfect markers. During the contemporary period this idealized vision was fortified with fancy mathematical equations. This romanticized vision of the economy made economists disregard all that could possibly go wrong. They remained oblivious to "the limitations of human rationality that often led to bubbles and bursts; to the problems of institutions that run amok; to the imperfections of markets—especially financial markets—that can cause the economy's operating system to undergo sudden, unpredictable crashes; and to the dangers created when regulators don't believe in regulation" (Krugman, 2009b).

The reputation of market forces and the institution of free markets took a knock during 2007-09. Particularly the financial meltdown of 2008 did considerable discredit to the mystique of free markets. Anglo-Saxon model of liberalism and deregulation was upbraided by many, ranging from Kevin Rudd to Yukio Hatoyama. Some of the ideas of Keynes, which held sway early during the post-World War II period, became relevant again in 2008. Keynes regarded market economies fundamentally uncertain and markets far from self-correcting. Large shocks like the current financial crisis were not anomalies but normal market behavior. Governments therefore need to intervene in crises, providing a judicious and firm hand on the tiller (Keynes, 1936). Since the adoption of the free-market ethos of Reagan and Thatcher Keynesian ideas were spurned.

2. Principal Contributing Factors

An unmitigated disaster of this magnitude characteristically does not have one or two causal factors or lapses. Therefore, identifying the elemental causal factor of the crisis is not possible. Several factors coalesced and together they were responsible for the crash of 2008. While multifarious, these causes were interrelated and in many cases they were also the causes and consequences of each other. The seeds of the crisis were planted in the past. The beginning was the financial and payments imbalances in the global economy which steadily grew (section 8.2). Huge inflows of external capital into the US economy were responsible for low real interest rates in the US during the first half of this decade. Accommodating monetary policy and excessive liquidity were explained by these capital inflows and global payments imbalances. The so-called "global saving glut" supported the low US interest rates. Little was done to offset the imbalances, albeit they were being constantly analyzed in the academic fora and debated in the supranational institutions. Steadily worsening global financial payments imbalances proved to be tinder for the global financial crisis. The imbalances in the US economy were particularly flagrant and deteriorated from year to year (Cline, 2006). Unsound policy configuration dangerously debilitated the global financial system.

In the financial environment of low interest rates, financial markets went in search of high yields. Low interest rates were the source of easy credit conditions and cheap money that spawned a consumption binge in the US and some of the other high-income industrial economies. In this macroeconomic environment sub-prime mortgage and risky asset markets boomed. It encouraged increased financial leverage and excessive risk-taking in the intermediation of global savings and investment across economies. Under these circumstances, a competent, well-organized and prudent regulatory and supervisory regime was sorely needed. It was conspicuous by its absence.

One consequence of easy credit conditions was that lending standards were outrageously lowered, particularly in the mortgage and corporate buy-out markets. The debt of financial firms in the US climbed from 39 percent of GDP to 111 percent in 20 years to 2008 (*The Economist*, 2009a). Easier access to housing loans, often secured with no down payments to encourage home ownership, was a noble social objective but an imprudent and hazardous financial strategy. The sub-prime borrowers in the US housing loan market characteristically had poor credit history and limited capacity to service loans.

The other contributing factor was over two decades of deregulation and expansion in a large number of financial markets, particularly those in the advanced industrial economies. They infused lack of market discipline, failure of supervision and regulatory systems during the period leading up to the crisis. The financial regulatory system failed in a fundamental sense, so did the prudential supervision. SaKong (2009) described the crisis as “the greatest regulatory failure of modern history”. Both regulatory and supervising agencies poorly understood the potential risks. The erstwhile regulatory framework was inadequate, obsolete and failed to manage risk across a variety of institutions and market players. The global financial scenario in the 21st century had transformed significantly. The regulatory framework needed updating accordingly, even considerable redesigning. Furthermore, the inadequate regulatory framework was not enforced. Publicly-funded supervising agencies were found to be incompetent. They slumbered through the crisis.

One lesson from the events of the last quarter century is that while the current financial system was a source of prosperity and flexibility, there have been several crises since the stock markets crashed in 1987. A financial system with over ten crises in a quarter century cannot be considered to be functional. Events of 2007 and 2008 further corroborate the same observation that the present financial system is dysfunctional and the systemic architecture needs to change radically. Summers (2008) observed, “Regulation will have to shift from its traditional focus on regulating individual institutions to focus on the stability of the entire system”. In the backdrop of the current financial crisis this thought is realistic, germane and sagacious.

A lesson from the crises of the past is that rapid growth of novel and untested financial instruments plays an extremely destabilizing role and exacerbates a crisis. This crisis was no exception. Certain design features of sub-prime mortgage securitization and the use of market-value accounting had destabilizing attributes. Use of securitization grew at a rapid pace in the capital markets. Hindsight reveals that asset mangers did not fully understand the ramifications of this novel instrument.

Excessive risk was build-up in the financial system over many years, which in turn was facilitated by new complex securitization instruments that obscured debtor-creditor relations. This build-up of risk was one of the major causes of the financial crisis.

Mortgage-backed securities (MBS) bear a great deal of culpability for causing the financial crisis. The risk contained in the securitized assets was highly underestimated. Securitization and financial globalization connected the financial institutions within and across countries. In the initial stages of the crisis, the large exposure of some regional German and Swiss banks to the US sub-prime loans was a topic of discussion. Finally, the financial institutions increased leverage. They financed their portfolios with less and less capital, which enabled them to increase the rate of return on capital. They did it because they underestimated risk at play. In doing so, banks were helped by regulatory weaknesses. As they were allowed to reduce their capital requirement by moving assets off their balance sheets in so-called structured investment vehicles. Consequently the off-balance-sheet assets of large banks grew rapidly and took large dimensions, measured in trillions of dollars (Blanchard, 2009). This was a highly unstable financial situation. Sooner or later the house of cards had to come tumbling down.

Unnecessary and excessive risk taken by banks and other financial institutions is another causal factor. They are known to do so when they know that while they can reap the benefits of risk, if they do incur losses they will be passed on to taxpayers. As noted above in this section, banks and financial institutions got away with this misbehavior because regulations were inadequate and supervisors were asleep at the switch. In addition, there is universal agreement on the excesses committed and egregious errors made by large banking institutions and the other financial entities. Failures and near-collapses of several large banks and leading financial institutions are still justifiably blamed on the short-term mentality and incompetence and venality of the bankers and financiers running them. Reckless and myopic strategies were continued until several large banks and non-banking financial institutions stood at the brink of an abyss. Despite warnings of large debt and high exposure to MBS, Lehman Brothers failed to address them and continued blissfully on its self-destructive path until the end. Smug disregard for the mounting risk eventually had a massive cost, corporate death. Corporate conduct of other large financial institutions was not much different.

The major credit-rating agencies also failed to play their intended role. They customarily assign credit ratings for issuers of certain types of debt obligations as well as debt instruments. They have been roundly criticized for severely understating the risk involved with new complex securities that fueled the housing bubble in the US. These securities were MBS and collateralized debt obligations (CDO). The operations of credit-rating agencies are now under scrutiny. They unhesitatingly gave investment grade and “money safe” ratings to securitization transactions based on sub-prime mortgage loans. These high ratings facilitated steady flows of global capital into MBSs and CDOs. Some regard credit rating agencies as the principal culprits responsible for the financial crisis. They were the sources of an extreme degree of deception in the financial transactions.

Systemic mis-pricing of assets added to the financial confusion. Calomiris (2008) noted that that the origin of the sub-prime debacle in the US, widely regarded as the spark of the global financial crisis and recession, was essentially caused equally by accommodative monetary policies and government subsidization of risk-taking. The maximum blame for the sub-prime lending debacle needs to go to the financial institutions and institutional investors who were the large purchasers of securitized loans. They deliberately allowed asset managers to under-price the risks of sub-prime loans and securities backed by these loans.

This crisis testified to the fact that the belief of the policy makers in the efficiency and self-correcting nature of financial markets, which was regarded as the rationale for liberalization and globalization of financial markets, was highly exaggerated, if not absolutely erroneous. The term self-correcting was, and subsequently proved to be, an oxymoron. Wall Street took the efficient-market theories literally and paid academics extravagant fees to design complex financial strategies based on them. They played a significant role in leading the financial markets into the catastrophe that followed. Fox (2009) recently delved into how the structure of efficient-market hypothesis was built and concluded that it was a veritable house of cards. The financial crisis is a living proof that financial turmoil can occur in any economy, regardless of the fact whether it is small or large, whether it is developing, emerging or developed, whether it is macro-economically well managed and disciplined or poorly managed. Given the globalized nature of the world financial, trade and payments systems, it can impart huge externalities on the rest of the world.

There are some who believed that the causes for the financial crisis and recession were much more than mere systemic shortcomings and mistakes made in the financial sector of the global economy. They call for a complete and comprehensive reform of the global economic and financial system. Stiglitz (2009) blamed the financial crisis on “the deeper problems of the modern version of capitalism, at least of the American style”. He went on to say, “I think we are coming to a realization that the institutions that were created sixty years ago are not up to the task, and we need to begin re-thinking these institutions. We are also realizing that some of the ideologies that prevailed over the last quarter century are greatly flawed”.

3. Liquidity Crunch

In general, in a crisis situation the balance sheets of banks and other financial institutions are adversely affected. They are weakened by loan losses and therefore these institutions reduce or stop lending. This has a direct and debilitating effect on the performance of the real economy. Claessens, *et al* (2008) studied the linkages between macroeconomic and financial variables around business and financial cycles for 1960-2007 period. They paid particular attention to the implications of recessions, when they coincide with financial market difficulties, including credit crunches. They found that recessions frequently coincide with episodes of contraction of domestic credit and declines in asset prices. Their conclusion also demonstrated that recessions associated with credit crunches and housing price busts tend to be deeper and longer than other recessions.

Situation during the current crisis was more complicated than described above. The recession was indeed activated by bursting of the housing bubbles in the UK and US. However, different financial institutions were exposed to toxic assets to varying degrees. There was serious loss of confidence in the financial system *per se*, which caused a liquidity crunch in *inter alia* the inter-bank market. In this crisis, as the lending banks did not know the exposure of the borrowing bank to toxic assets. As they wanted to err on the side of caution, they stopped lending to one another. Liquidity in the financial markets dried up. Freezing of credit adversely affected the real economy. Unemployment soared, numerous business firms failed and output contracted. In addition, spreads on inter-bank loans and what banks expected pay to central banks jumped to unprecedented levels. The pall of uncertainly about future hovered for a long time and apprehensions regarding a prolonged recession, even a depression, increased.

4. Estimates of Direct and Indirect Losses

The crisis and its impact critically shook confidence of investors, business corporations and households. For quite some time, the probability of this crisis turning into full-blown financial and economic catastrophe—something of a second Great Depression—seemed threateningly high, particularly during the late 2008 and early 2009. This implied a sizeable welfare loss to the global economy. In a seminal paper, Reinhart and Rogoff (2009b) put forth three essential pernicious effects of the current crisis. First, they found that the asset market collapses in most large economies were deep, even profound. Second, global output and employment suffered grievous losses. Third, the budget deficits and real value of government debt tended to explode. The impact of the current global financial crisis may take an increasing toll on education, health and welfare expenditures even after the global economy has stabilized.

According to the World Bank projections made in June 2009 the global economy is to shrink by almost 3 percent in 2009, the first such contraction since World War II (Table 1). A moderate recovery has been projected for 2010. As firms failed and number of bankruptcies rose, record number of jobs was shed. An OECD annual publication on employment, called *OECD Employment Outlook,* forecasted that in most OECD countries unemployment would continue to rise.[9] This would occur notwithstanding the early signs of recovery from recession in the third quarter of 2009. The rate of unemployment had reached a post-World War II high of 8.5 percent for the OECD economies, corresponding to an increase of more than 15 million in the ranks of the unemployed since the end of 2007. In case the recovery takes hold slowly, the OECD unemployment rate could increase further and reach a new post-War high level of 10 percent, with 57 million out of work (OECD, 2009a).

That the impact of current financial crisis was widespread and precipitous is revealed by a fleeting examination of the database of the *World Economic Outlook* (2009a). Out of 182 reporting countries, 78 are expected to record negative GDP growth rates in 2009. To put this in perspective, in 2006 and 2007 only 3 economies recorded negative GDP growth, while in 2008 this number was 12. Considered in groups, the advanced industrial economies and central and eastern European economies were projected to record the largest economic contraction in 2009. For three groups of economies growth forecasts were slashed continually in 2008 and early 2009. They were: the highly globalize economies, the commodity economies and the countries that were part of the former Soviet Union. All the three categories shared one

[9] These forecasts were published in September 2009. Available on the OECD website at http://www.oecd.org/document/62/0,3343,en_2649_37457_43701438_1_1_1_1,00.html.

characteristic, a high degree of exposure to external shocks (Chandy, *et al* 2009, p. 3). They were far more dependent on international economic activity, international financial flows and global demand *per se*. During the crisis period, unemployment has proliferated globally. In addition, multilateral trade, FDI and cross-border capital flows had slumped.

The sub-prime loan defaults caused serious losses in the US banking system and capital markets. Of the $1.4 trillion exposure to the sub-prime mortgages, almost a half of the losses were borne by the US leveraged financial institutions, which included commercial banks, securities firms and hedge funds. In addition, a third of these losses were born by foreign leveraged financial institutions. Greenlaw *et al* (2008) remarked, “Far from passing on the bad loans to greater fool next in the chain, the most sophisticated financial institutions amassed the largest exposures to the bad assets”. In principle, securitization was originally expected to disperse credit risk. As banks buy each other’s securities with borrowed money, they weave cross-claims on each other. The end result is that one bank’s liability becomes another bank’s asset. Thus, the real impact of securitization was not dispersal of credit risk. Securitization ended up concentrating risk in the financial intermediary sector (Shin, 2009a). The first post-securitization financial crisis will have a definite effect on the securitization process and sector. Shin (2009b) speculated that the securities sector would emerge much smaller from the crisis. Its intermediation chain would be much shorter, maturity transformation would decline and so will its profitability. The overall consequence of innovative securitization on the banking industry in the advanced industrial economies was increased fragility, not less.

Like all such financial crises, this one also affected the stock of global wealth. Equity markets recorded enormous losses all around the world; they declined in 112 countries. Sharp decline in the values of equity and real estate wiped out $28.8 trillion in global wealth during 2008. Equity markets regained some ground during 2009, replacing $4.6 trillion in value between January and July (MGI, 2009). Replenishing this wealth would require increasing saving efforts, curtailing consumption and raising investment rate. This in turn would lead to lower global GDP growth rate in the short term. The International Monetary Fund (IMF, 2009a) calculated the direct cost of the current financial crisis and recession. Banks will bear about two-thirds of the total losses as their asset values have degraded. This threatened their capital adequacy and seriously discouraged them from lending. Non-bank financial institutions like insurance companies and pension funds have also been hit by decline in asset prices, both equities and bonds. The IMF estimates show the financial institutions in the US suffered the largest losses, $2.7 trillion. European institutions needed to write down $1.2 trillion, with Japan adding another $150 billion. Thus estimated losses add up to around $4 trillion. These estimates went on increasing because as the crisis went on intensifying, more types of assets went on depreciating.

In a recession, clear linkages exist between the financial sector and the real economy. Claessens, *et al* (2008) analyzed exhaustive data covering 122 recessions over 1960-2007 period. They provided a comprehensive empirical characterization of the linkages between key macroeconomic and financial variables around business and financial cycles. They found evidence that recessions associate with credit crunches and housing- price busts tend to be deeper and longer than other recessions. They estimated that a credit crunch episode typically lasts for two-and-a-half years, with nearly 20 percent decline in credit. However, a housing-price bust tended to last four-and-a-half years, with a 30 percent decline in real, that is inflation-adjusted, house prices.

The crisis exacerbated poverty in the developing economies. Before the outbreak of the crisis, 1.4 billion people lived below the poverty line worldwide. Preliminary World Bank estimates show that the global downturn will be responsible for inflating this number by 53 million in 2009 (Lin, 2009). The long-run consequences of crises for the developing economies may be more severe than those observed in the short-run.

The indirect cost of the crisis for the global economy was also huge, albeit difficult to compute. The financial and economic crisis in the global economy provoked liquidation of investments, significant erosion of wealth around the world and tightening of lending condition. Economic uncertainly was widespread. Economic activity weakened globally and GDP growth rates slumped. Owing to flaccid trans-border capital flows, low- and middle income developing countries came under serious financial strain. As demand weakened globally, many developing economies could not generate sufficient currency from their exports. Many of them found it difficult to borrow to cover their imports, therefore consumption suffered in these economies. One way of meeting this financing gap was drawing down on their reserves assets that they built up during their buoyant economic periods and many developing economies took that route. Thus, global welfare losses were enormous.

5. Averting the Second Great Depression

In August 2009, Paul Krugman (2009c) declared that "… we are not going to have a second Great Depression after all". Some semblance of a stimulus-triggered recovery did appear to be taking hold around this period. What saved the global economy? The answer is decisive and coordinated measures aggressively taken by the governments and central banks in all the systemically important economies of the world. They moved briskly, purposefully, resolutely and in a collaborative manner. Timely, innovative and effective action by governments and central banks needs to be commended. History provides evidence of many instances when the policy responses to financial crises by governments were slow, untimely and inadequate. The result was huge economies damage and large fiscal costs. However, during the current financial crisis policy makers responded with "speed and force to arrest a rapidly deteriorating and dangerous situation" (Bernanke, 2009).

Forces that ushered in a restrained recovery in the global economy included widespread and coordinated fiscal and monetary stimuli initiated in the advanced industrial economies and EMEs. They succeeded in activating this slow economic rebound. IMF supported measures and enhanced lending to the developing and emerging-market economies also contributed to it. In addition, role played by central banks in the systemically important economies was significant. They slashed interest rates, injected liquidity and propped up credit flows when they were most needed. Equally important were the financial support function of the governments, which launched sizable fiscal stimulus programs. Simultaneous impact of these public policy measures was reduced uncertainty in the financial and real sectors of the economies.

In their policy response to the financial crisis, many governments in advanced industrial economies and EMEs and their central banks intervened in two-pronged manner: First, they took measures for stabilizing the financial and banking sector, which in some cases included nationalizing the crippled financial institutions. Second, they used standard repertoire of fiscal and monetary tools to counteract the recessionary forces. These policy steps were indispensable for turning the tide of contracting global demand, spurting unemployment rates and looming deflation. If these policy measures were not implemented in a judicious and timely manner, and if the global financial markets had continued to remain dysfunctional and frozen, most forms of global commerce would have ground to a halt.

In averting the materialization of second Great Depression, the Fed played a constructive role. As the crisis erupted, the Fed began flooding financial markets with liquidity. By keeping federal fund rate close to zero in 2008 and encouraging lending, the Fed averted an L-shaped near depression. Ben Bernanke, the chairman of Fed, is a former academic authority on Great Depression, did make error by initially supporting the flawed policies of Alan Greenspan that had created housing and credit bubble. In the initial stages, he was famously wrong but he succeeded in engineering a U-turn in Fed policy that prevented the crisis from worsening. A first dose of financial stimulus was administered in the US in February 2008. This stimulus was small at $152 billion, around 1 percent of the GDP. Therefore, it was hoped that the next one would be larger. In February 2009, President Obama signed $787 billion stimulus package amidst a global wave of stimulus spending. Bernanke also used tools that hitherto were not part of the traditional repertoire of monetary policy. Governments in many countries responded by putting in place appropriate fiscal and monetary policy measures and planned their stimulus packages. In addition, central banking authorities took aggressive policy action and were ready to do more. Massive assistance in the form of capital, loans and guarantees were provided to banks in the advanced industrial economies and several of the EMEs.

For the first time since the Great Depression, the Fed's role as the lender of last resort was extended to investment banks. The Fed was also directly involved in rescuing financial institutions like Bear Stearns and the American International Group (AIG) and it lent large sums to foreign central banks to ease their dollar shortages. The Fed committed to purchasing up to $1.7 trillion of Treasury bonds, mortgage-backed securities (MBS) and agency debt to reduce market rates. These radical actions were never undertaken by the Fed in the past (Roubini, 2009).

During the third quarter of 2009, it was widely being felt that the worst of the global recession is behind us. The first signs of a global recovery began to appear. A lot of credit needs to be given to the sustenance and reinforcement provided by fiscal and monetary stimulus packages by governments in the high-income industrial economies and EMEs as well as financial repair measures and *ad hoc* assistance programs for financial institutions. First, they succeeded in encouraging overly cautious banks to resume lending. A thaw set in in the credit market, albeit volume has remained low. Official interventions in the form of loans to banks and monetary and fiscal stimulus, in both high-income industrial economies and the developing economies, helped restore short-term liquidity (WB, 2009a).[10] Secondly, official

[10] For a detailed account see WB (2009a), chapter 1.

initiatives effectively improved economic performance in several crisis-affected economies during the latter half of 2009. This was evident in the US economy. In May 2009, inter-bank spread began to come down both in the US and the Euro area. In contrast to the EU and the US, during the third quarter of 2009, Japan and the EMEs of Asia were showing more and clearer symptoms of rebounding. Quarterly GDP growth rates and industrial production statistics in these economies recorded strong up tick (*The Economist,* 2009b). In addition, by September 2009 the interest rates at which banks lend to each other had fallen to near pre-crisis levels. Also, stock markets had stabilized and were showing a rebounding proclivity. While small banks continued to be vulnerable and were in danger of extinction, the large ones were not. They had raised enough equity capital. The healthier ones among them repaid public capital, at a profit to taxpayers. Capital markets were partially revived, adding to market optimism.

6. Creeping Financial Deglobalization

This was idyllic climate for financial deglobalization and Cassandras began warning about the era of globalization being behind us. Globalization did tend to be fragile in the past. As set out above (section 1), financial crisis stalled financial globalization in its tracks; it proved to be an effective trend breaker. With the onset of recession, firms, investors and financial institutions in the advanced industrial economies began a large-scale repatriation of their capital. They needed it for strengthening their own balance sheets. Global stock markets, particularly those in the EMEs, paid the price of this by slumping. Individual stock markets lost 40 percent to 60 percent of their dollar value. Also, currencies depreciated vis-à-vis the dollar globally, implying a colossal loss in global wealth. The movement towards market liberalization and deregulation stopped in its tracks, particularly in the advanced industrial economies which were hit intensively and directly by the financial crisis.

6.1 Contracting Multilateral Trade and Plunging Trans-Border Financial Flows

Collapse in global demand brought on by economic downturn led to contraction in multilateral trade. Non-tariff barriers have been rising. A paltry 2 percent growth was recorded in 2008. This was less than half the trend growth rate expected for that year. A 9 percent decline in volume terms was projected in multilateral trade for 2009 by the World Trade Organization (WTO), the largest decline in six decades. Contraction in the advanced industrial economies will be particularly severe. They will record a 10 percent decline in their exports. In contrast, the developing economies, which are more dependent on trade for growth, exports will shrink by 2.5 percent (WTO, 2009a). Besides, the sharp fall in multilateral trade was partly caused by a rapid contraction in the availability of credit to finance movement imports and exports.

During crisis periods governments face pressure to adopt measures to restrict trade so that domestic employment can be protected. Although countries did not resort to tit-for-tat protectionism and high intensity protectionism did not seem imminent, there was a danger of an incremental build up of restrictions that could slow down multilateral trade further. This would in effect undercut the policies to boost aggregate demand and restore global growth.

In early 2009, many WTO members appeared to have kept pressures to take protectionist measures under control, but after that point in time there was a significant slippage. Both developed and developing countries were turning inwards.

Many countries that had launched stimulus packages also had tacit or open buy domestic provision. The World Bank noted that, after committing not to increase protectionism, 17 Group-of-Twenty (G-20) members implemented 47 trade restricting measures (WTO, 2009b). In addition, the stimulus packages launched by governments were so devised that they had elements of subsidies and purchase requirements favouring domestic goods and services over imports. The WTO identified 85 such protectionist measures imposed by 23 countries the last quarter of 2008 and the first quarter of 2009 (EIU, 2009a).

The crisis affected trans-border financial flows adversely in a striking manner. Taken together, global FDI flows, sale of foreign equities and debt securities and cross-border lending and deposits fell from $10.5 trillion in 2007 to $1.9 trillion in 2008, a decline of 82 percent (MGI, 2009). Such a massive short fall in trans-border credit flows resulted in serious destabilization in the global banking system, causing severe liquidity crises. Investors, banks, non-bank financial institutions and corporations hastily sold their foreign assets and brought their finances home where they were badly needed. Borrowers who relied on foreign borrowings were stranded. In addition, such a serious disruption of international capital flows resulted in a spike in short-term exchange rate volatility. For instance, the Korean won and Mexican peso depreciated by 20 percent in a short span of a week.

In this backdrop of widespread financial turmoil, it could not be overlooked that countries that had not totally liberalized their financial sector and capital account transactions, like China, India, Indonesia and some EMEs, suffered the least direct damage from the current crisis and recession. Although their GDP growth rates distinctly suffered, they remained in the positive quadrant. A rare achievement indeed! A new era of protectionism, re-regulation, market intervention had begun. Financial globalization that had made impressive progressive over the preceding three decades went into a reversal. The philosophy of a globalized economy being a win-win game for all the participants began to appear irrelevant. Benefits from economic insulation and nationalism began to appear real.

6.2 Plummeting Global FDI Flows

Deglobalization intensely disturbed the global FDI flows. The global financial crisis gravely dampened their momentum. After an uninterrupted period of growth over 2003-07, they peaked in 2007 at $1,979 billion. They recorded a decline of 14 percent in 2008 and were $1,679 billion (WIR, 2009). During the first half of 2009 the rate of decline accelerated. Shrinking corporate profits, plunging stock prices and diminishing value and scope of mergers and acquisitions (M&As) were the reasons behind plummeting global FDI flows. Rapidly shriveling demand of goods and services caused business firms to cut back on their investment plans, both at home and abroad. Greenfield investment was the last to fall off. FDI into advanced industrial economies declined at a much faster rate than that into the developing ones. FDI flows to EMEs held up well and those to China and India surged. This was a rational decision by investing firms and TNCs. In troubled times, they sought footholds in resilient economies.

In the first half of 2009, FDI inflows into the advanced industrial economies recorded a dramatic decline; they were estimated to have declined between 30 percent and 50 percent. In contrast, FDI inflows into the developing economies proved to be resilient and recorded a rise of 44 percent in 2008 over their 2007 level. However, they went into a declining mode in late in 2008. This increased their share in global FDI to 43 percent, close to the record share achieved in 2004. This also demonstrates the increasing importance of this group of economies as host for FDI. Statistics reveal that FDI inflows into the developing economies began slumping almost a year after they began to slump in the advanced industrial economies. The reason behind the time lag was the recession-caused consequent slump in demand in the advanced industrial economies, which did not move in lockstep with the recession. These markets are very important destinations for goods produced in the developing economies (WIR, 2009). If recovery from the recession is weak, future trend in FDI from the advanced industrial economies to the developing ones will suffer.

6.3 Contraction in the Global Economy

According to the mid-2009 projections of the World Bank (Table 1), global economy is projected to contract by almost 3 percent during 2009. Table 1 below shows that the OECD economies would contract by more than 4 percent during 2009. A feeble recovery is to follow this bleak performance in the OECD economies. They are projected grow by 1.2 percent in 2010. Likewise, after sharp contractions in 2009, the US, Euro Area and Japan, three of the largest global economies, are projected to recover slowly. The World Bank forecasts regarding the lackluster recovery, made in June 2009, are as follows:

Table 1

Projections of Recovery from Recession (2009 and 2010)

(in percent)

	2009	2010
World Economy	-2.9	2.0
High-Income Economies	-4.2	1.3
Of which OECD Economies	-4.2	1.2
Euro Area	-4.5	0.5
Japan	-6.8	1.0
United States	-3.0	1.8
Developing Countries	1.2	4.4

Source: Statistics gleaned from Table 1.1, p. 9, *Global Development Finance: Charting a Global Recovery.* The World Bank, Washington DC. June, 2009.

Due to recession and projections of a slow recovery in the large industrial economies, the developing economies that are normally dependent on market growth in them would also face a prolonged period of slow growth. Also, financial flows from these economies to the developing economies have sharply plunged and will stagnate in short-term, or reduced to a trickle. The commodity exporters, at least in the initial stages of the recovery, will suffer due to soft prices, which will reduce their revenues.

Immigrant workers are being eased out in the labor importing countries and being forced to return to their native lands. Japan and Spain are paying them to return. Banks have been returning from global banking to national banking, which would have damaging effect on both efficiency and growth in the global banking sector (Norris, 2009). Taken as a whole, the concepts of free-market, *laissez faire* as well as financial and economic globalization are in retreat. Altman's (2009) asserted that "the Anglo-Saxon model of free-market capitalism spread across the globe" has ended does not appear to be too much of an exaggeration.

7. Sparks of an Inchoate Recovery from the Crisis

In late 2008 and early 2009 the big question was whether recession would become depression. Global economy contracted by 6.4 percent in the first quarter of 2009.[11] EMEs of Europe and members of the Commonwealth of Independent States (CIS) were the worst affected economies. However, the developing and emerging-market economies (other than the EMEs of Europe) relatively suffered less damage. Cline (2009) observed that these two groups of economies were damaged less than they were during the debt crisis of 1982, for Latin America, and the financial crisis of 1997-98, for Asia. In general the EMEs (other than those of Europe) weathered the storm better than the rest of the global economy, which includes the advanced industrial economies. Conversely, several fiscal challenges will confront the advanced industrial economies in the near future. They will essentially stem from the high costs of the bailouts and recessionary fiscal losses.

Some indications of a nascent recovery in the EMEs of Asia became evident in the second quarter of 2009. This sub-group of EMEs performed far better than the rest of the global economy in the second quarter of 2009 and was in the forefront of a subdued global economic recovery. At the end of the third quarter of 2009 and the beginning of the fourth, the global economy began exhibiting signs of a slow recovery and bottoming out of the recession. The EMEs of Asia were projected to return to 6 percent GDP growth in 2010, the best recovery performance by any subgroups of the global economy. The role of the Asian EMEs in underpinning the global recovery was widely acclaimed. The IMF opined that the global economy was being "pulled up by the strong performance of the Asian economies" (IMF, 2009b, p. 1).

The signs of recovery included improved conditions in the global financial markets, which demonstrated decisive improvement. Dow Jones index topped 10,000 on October 14, 2009, which was indicative of fairly rapid recovery in the US financial market. Also, most regional stock markets rose by approximately 50 percent from their lows around March 2009. Credit markets had improved markedly since the last quarter of 2008 and the first quarter of 2009, when the global financial system

[11] Source of statistics in this section is chapter 1, IMF (2009c).

virtually froze. In addition, interest rate spreads were declining, business and consumer confidence in some advanced industrial economies was improving and inventory levels were declining. By mid-2009, anxieties of a systemic financial collapse had receded and the pall of gloom and insecurity began to lift.

That being said, even in the last quarter of 2009, high rates of unemployment in the advanced industrial economies not only persisted, but were also not showing any signs of amelioration. In addition, housing prices were still on the decline. Bank lending necessary for growth continued to remain anemic. Demand for credit was also week as businesses and consumers had to be cautious. Capacity utilization rates were low globally. Most forecasters expected the pace of recovery to be sluggish. This observation applied particularly to the advanced industrial economies, where unemployment rates were being projected to remain high.

The subdued recovery was developing at a characteristically uneven pace. The EMEs and large developing economies were ahead on the recovery path. The EMEs (other than those in Europe) managed financial turmoil well. These economies were damaged relatively less than the rest of the global economies by the current financial crisis. One of the reasons was that in response to the previous crises of the 1990s and early 2000s, their policy framework had significantly improved, which rendered economic resilience to this group of economies. It proved beneficial to the EMEs during this financially stressful period. The EMEs of Asia were leading the recovery. They in turn were led by China (Section 7.2).

Unevenness of recovery extended to the two principal sectors of the global economy. That is, financial sector moved up to the recovery path earlier than the real sector. This applied *a fortiori* to the advanced industrial economies, where the real sector remained sluggish and was expected to remain so in 2010. The high unemployment scenario was the result of sluggish real sector recovery in the high-income industrial economies, giving rise to anxiety about the threat of a jobless recovery. In contrast, with gradual recovery commodity prices began to recover slowly. In particular, oil prices reached $77 per barrel on October 16, the highest level in a year. They continued their rise thereafter and hovered around $80 a barrel. In February 2009 it had fallen $34 a barrel.

The forces driving this recovery (discussed in section 5) were somewhat temporary in nature. For one, central banks and governments were not expected to play the roles in 2010 that they did in 2009. Although considerably improved, the financial sector in most advanced industrial economies was still far from healthy. Credit conditions were still tight and deleveraging by banks was still a possibility. If deleveraging does take place in the future, credit flows may be reined in again in the advanced industrial economies, which in turn would stall the real economy. Thus, complaisance would be premature and unwarranted. The financial sector recovery that was underway in the third and the fourth quarters of 2009 could not be regarded as one on the firm and steady footing. At this point, supportive macroeconomic policies were needed to be followed for the medium term. Global economy could then recover and be on an even keel. The next important policy measure will be to begin unwinding the exceptionally high level of public intervention that occurred during 2009.

7.1 Tenuous Recovery in the Advanced Industrial Economies

In the advanced industrial economies there were some feeble signs of recovery in the second quarter of 2009. For instance, France, Germany and Sweden, all three recorded minuscule positive second quarter GDP growth and were tentatively edging out of recession. Japan also began to show signs of a fledgling recovery, growing non-annualized 0.9 percent in the second quarter. In contrast, the third quarter growth performance in this group of economies was a trifle superior. The US posted 0.9 percent growth. This was the first quarterly growth after four quarters of contraction. Although the largest economy in the world emerging out of recession was indeed a healthy development for the global economy, countering this was the consumer spending in the US. It not only failed to pick up even in the third quarter but declined. The US recovery was *inter alia* driven by government programs like popular discounts on new motor vehicles which stimulated auto sales and production as well as an $8,000 tax credit for the first-time home buyers. The Japanese economy grew by 1.2 percent during the third quarter of 2009. Japanese exports contributed to it by jumping 6.4 percent. Also, capital spending jumped by 1.6 percent.

After a contraction of five consecutive quarters, the 16-country Eurozone recovered insipidly in the third quarter of 2009, with GDP expansion of non-annualized 0.4 percent. This weak rebound was supported by a strong revival in industrial production. It was also driven by the stimulus packages and less aggressive de-stocking. The Eurozone rebound was powered by 0.7 percent GDP growth in Germany, the largest economy in the Eurozone. Exports and investment had supported German growth, making up for a decline in consumer demand. Italy was another large European economy that performed well by growing at 0.6 percent and ending its recession. However, the French economy posted a surprisingly feeble 0.3 percent growth again. Strong industrial production had led to higher growth expectations for France (Atkins, 2009). Consumption did not grow in France at all. Austria, Belgium, the Netherlands and Portugal also emerged from recession in the third quarter. Conversely, GDP contracted in both Greece and Spain. Technically the Eurozone escaped recession in the third quarter. In contrast, GDP growth in the UK, the second largest economy in Europe, was -0.4 percent even in the third quarter of 2009 and it continued to be in a recession. The fact that the advanced industrial economies began on their path of tenuous recovery was confirmed by the fact that the 30 members of the OECD grew by 0.8 percent during the third quarter.[12]

In 2010 and 2011, recovery in the advanced industrial economies of Eurozone and the US will be supported by the rebound in world trade underpinned by increasing demand from the EMEs, particularly the large ones. Stockpiling by businesses and stabilization of housing market will have the same favorable impact on these economies. Recovery in Japan will be supported by strong growth in Asia, albeit weak domestic demand will continue to constrain growth. Consumer prices have been falling in Japan. It was partly because the economy was loaded with excess capacity after a sharp decline in exports during the crisis. Deflation may continue to plague the economy (OECD, 2009b)

7.2 Early and Strong Rebound of China

China rebounded faster from global downturn than any other large economy. It was able to lead Asia, particularly the EMEs, to a recovery. It also led the global recovery

[12] The quarterly growth statistics here come from media sources and various publications in which the announcements of the respective governments are reported.

(OECD, 2009b). Estimated annualized quarter-on-quarter GDP growth plummeted to a low of 4 percent in the fourth quarter of 2008, but picked up to 8 percent in the first quarter of 2009 (Mussa, 2009). China was helped by its limited direct exposure to the global financial crisis. Additionally, had relatively sounder fundamentals and prepared a powerful policy response to the great recession. It also made a meaningful contribution in preventing the global financial crisis from getting worse. China had launched one of the largest fiscal stimulus packages, when measured as a proportion of GDP. Its GDP growth rate picked up from 7.9 percent in the second quarter of 2009 to 8.9 percent in the third. It was well on track to hit its growth target of 8 percent for 2009. However, according to the September 2009 Consensus forecasts, economy was projected to expand 8.3 percent in 2009 and 9.4 percent in 2010, when it is projected to become the second largest global economy, not in PPP terms but at market prices.[13] This would be another notable milestone for China.

Earlier pick up of the Chinese economy was supported by a massive 4 trillion renminbi yuan ($585 billion) stimulus package. It was one of the largest stimulus packages and was 4.8 percent of Chinese GDP ($3.9 trillion). A major part of China's fiscal stimulus spending was committed to infrastructure projects. In addition, a huge surge in government-mandated bank lending followed, which amounted to 7 trillion renminbi yuan between January and June 2009. This monetary expansion resulted in new credit expansion of a huge proportion, almost 20 percent of the GDP. It made the economy vulnerable to overinvestment in several sectors; overcapacity had reached troubling proportions in steel, cement, glass, chemicals, coal, poly-silicon and wind-power equipment sectors (Roberts, 2009).

China's GDP growth during 2009 stemmed largely from the investment. In addition, there was a revival in private real estate expenditure and resilience in consumer sector. Retail sales grew by 15.1 percent in first three quarters of 2009. Thus viewed, domestic demand supported and reinforced China's recovery. During the first half of 2009, real net exports made a significant negative contribution to the rise in GDP. China made a net positive contribution to demand of goods and services produced in other countries (Mussa, 2009)

The recovery continued to broaden in the Chinese economy and with that it favorably influenced the neighboring Japan and Asia, in that order. As noted above (Section 7), together the Asian EMEs proved to be a locomotive force in slowly tugging the global economy out of recession. In the fourth quarter China began implementing its exit strategy, which entailed gradual reduction in the level of stimulus, credit expansion and infrastructure spending. Rising private investment and consumption could pick the slack.

There was a spike in China's trade and current account surpluses during the 2003-07 period. This was a remarkably strong performance. As China's exports and imports suffered during the global financial crisis, with exports declining more than imports, these surpluses shrank in 2009. Exports sector performed badly even in the fourth quarter. As the pace of global recovery is projected to be slow, a swift return to the pre-2007 trade performance is not in the cards. Although exports are likely to pick up after the recovery gains momentum, a repetition of the 2003-07 trade performance

[13] The Consensus forecast figures were cited by Wolf (2009).

may not occur even after a recovery takes hold. Global demand is unlikely to be strong over the next quinquennium. Also, in the medium-term a substantial appreciation of the renminbi yuan is inevitable. Currency appreciation will help reduce distortions in China's domestic economy as well.

8. The Group-of-Twenty: Its Role in Stabilizing the Global Economy

It was continually debated in the academic literature that the G-7 or G-8 had ceased to be a representative group of economies in the present-day globalized economy. In addition, given the geography of large payments imbalances, the role, value, helpfulness and effectiveness of G-7 or G-8 had steadily diminished. Except Japan and Russian Federation, all the countries that succeeded in accumulating large forex surpluses are the non-G-8.

In the backdrop of the global financial crisis, three successive summits of the Group-of-Twenty (G-20)[14] took place, in Washington DC (November 2008), London (April 2009) and Pittsburg (September 2009). The G-20 economies were cognizant of the need of a harmonized global policy response to the crisis. The first G-20 summit in Washington DC essentially focused on the fiscal stimuli, which played a crucial role in stabilizing the global economy. The G-20 policy makers agreed to launch concerted and coordinated fiscal stimuli. China and the US responded in the most forceful manner.

As the present crisis was essentially that of the banking and financial systems of the advanced industrial economies, in the first two G-20 meetings the members assigned a great deal of importance to strengthening financial regulation and supervision network. The objective of the G-20 summit of London was to stabilize the battered financial and banking systems in the EU and the US. At this juncture, the G-20 had achieved an unprecedented fiscal expansion as well as adoption of appropriately relaxed monetary measures, which became the turning point in addressing the worsening global recession. The G-20 countries also agreed on and initiated national and international reforms in the oversight, supervision, and regulation of financial systems. They helped initiate a process of reform of the international financial institutions (IFI), which went a long way in restoring the IMF to its pivotal position in the global financial system along with the resources it needed to carry out this role (Bradford and Linn, 2009). The G-20 leaders also committed $1 trillion to assist the developing economies through the IMF. Many of these countries did not have adequate resources to assemble fiscal stimulus packages and rescue their respective financial sectors.

A timely decision with far-reaching consequences taken during the Pittsburg G-20 summit was regarding supplanting of the old G-8 by G-20. The latter was designated the premier forum for global economic and financial cooperation; this represented a defining change in world economic order. It was an acknowledgement of the fact that global economic and financial coordination needs to be handled more broadly by a larger group of countries than the G-7 or G-8. This decision was of historic significance and denoted passing of the baton. In the Pittsburg summit members went further to "commit to sustained recovery" until a durable recovery is secured. The communiqué was substantive and emphasized the need for a regulatory system

[14] What the Group-of-Twenty (G-20) economies are is explained in Chapter 1, section 4.3.

for banks and other financial institutions that could “rein in the excesses that led to the crisis” (G-20 Communiqué, p. 1). The Pittsburg communiqué also promised to peer-review members’ economic policy, which was a first in global economic cooperation. The themes deliberated on were appropriate and courageous. Some of the notable concerns were regarding harmonization of macroeconomic policies to correct global payments imbalances with the IMF playing a central role, a meaningful shift of voting power towards the EMEs, reform of global reserve system and capital increases for the multilateral development bank (Dervis, 2009).

There is little disagreement regarding utter lack of market discipline in the large financial markets being one of the causes behind the global financial crisis. Also, national financial regulators did not have a tradition of cooperating with one another. These limitations encouraged the G-20 members to develop recommendations for strengthening national regulatory frameworks and cooperation among them. They also took initiative in strengthening the Financial Stability Board (FSB) and its mandate. Membership of the FSB was expanded to include all the G-20 members, which drew in the large EMEs and some Gulf Cooperation Council (GCC) members (Lombardi, 2009).

The G-20 is gradually establishing itself as a forum responsible for global macroeconomic as well as monetary and financial policies. China and other EMEs had an input in the Pittsburg summit and they benefited from a greater voice in the IMF. The non-G-7 members of G-20 will be a part of the new steering committee for the global economic and financial decision making process. In the past, creditor countries tended to set the rules of global monetary system. It is logical then to assume that the influence of creditor Asian economies, particularly that of China, will soon rise (Das, 2010).

9. Inevitable Structural Realignment in the Global Economy and Financial Sector

Before the global financial crisis struck, the old “international economic order was struggling to keep up with changes (that had taken place) before the crisis” (Zoellick, 2009). A global financial crisis of this magnitude, recession and the process of recovery from the crisis are all potent, persuasive and dynamic economic events, which would decisively change the post-crisis economic and financial contour of the global economy. They will bring about discernible transformations in the currency markets, international monetary policy, cross-border financial flows, multilateral trade relations, and the role played by the EMEs and the developing economies in the global economy.

One fundamental transformation that is sure to materialize is the relative shift in economic heft of countries and groups thereof. The country where the financial crisis originated, the US, has been hit hard by it. Economic heft will manifestly shift away from the US and towards the two economic groups: first, the dynamic East Asian economies and China and, second, to the Eurozone. Likewise the era of dominance of the dollar in the global currency markets as well as its favored reserve currency status will gradually come to an end (section 8.1). The importance of the euro has been on the rise. It steadily appreciated since 2002, *a fortiori* since 2006. At the end of October 2009 it had appreciated to $1.50, an all time high value. It is increasingly being treated as an alternative currency in which to hold international assets and conduct international business. How fast it will be a major international currency is an issue open to debate, but its importance as an international currency has been on the rise.

The post-crisis structural realignment of global economy is a subject matter of a large research project. However, a cursory assessment can still be attempted. China's response to the crisis was timely and proportionate, both in terms of the size of the stimulus and monetary policy. Increased domestic demand contributed to GDP growth, which had suffered a blow due to the collapse of external demand and declining exports. Between 2007 and November 2009, China's current account surplus almost halved to around 6 percent of GDP from 11 percent in 2007. China was also the first to pick up growth momentum, which assisted its neighboring regional economies (Section 7.2). It also supported the stabilization of the global economy.

China and India together accounted for 8.5 percent of the global GDP in 2008 and are not insubstantial economies. Neither suffered a recession and they continued to grow considerably more rapidly than the advanced industrial economies and discernibly contributed to the recovery and stabilization process of the global economy. This role can be logically projected for the foreseeable future. Their economic and financial significance on the global economic state will rise. A change that China and the Asian EMEs will need to accept and get used to will be regarding their export-led growth. Their future growth will need to increasingly rely on domestic demand. If the Southeast Asian economies seize the opportunities that the crisis offered, they may come out of the crisis stronger. Indonesia and Vietnam have a sizable weight in this sub-group of economies; the two performed soundly under the economic turmoil during the crisis.

Japan suffered political disturbance in the wake of the crisis. In the post-crisis period, it is likely to deepen its cooperation with other Asia-Pacific economies, while maintaining its global role. The crisis was a real test for the new Europe, born out of the revolution of 1989. European institutions may grow stronger from it. The hardest hit group from the crisis was the central and eastern European Union members. In their hour of economic distress, they were assisted by the European Commission, the European Bank of Reconstruction and Development and the European Investment Bank as well as the World Bank Group. The crisis has strengthened economic ties of the members of the European Union (EU).[15]

There will also be intra-economic changes in the systemically significant economies. Profligacy of the consumers in the US is one of the first variables to be affected by the crisis. Consumer spending in the US began declining in 2008 and savings began to build up, albeit at a snail's pace. Personal saving rate in the US zoomed to 5.7 percent in the first half of 2009, the highest since 1995 (CEA, 2009). Businesses were putting cost-trimming ahead of expansion. As this trend strengthens, US imports from the rest of the world are bound to go into a decline. According to the forecasts of the Economic Intelligence Unit (EIU, 2009b) the US current account deficit will then narrow from a high of 6 percent of GDP in 2006 to 2.9 percent in 2010; it has been projected to continue to decline to 3 percent, or less, for the 2010-13 period. Correspondingly, China's merchandise trade surplus narrowed in 2008

[15] See Zoellick (2009).

and continued on the same path in 2009. Its current account surplus is projected to decline from 10.7 percent of GDP in 2007 to 4.3 percent 2010, and thereafter will hover around 2.3 percent until 2013. The export-oriented economies of Asia will follow the same trend. Aggregate current account surplus for the region was projected to decline from 5 percent of GDP in 2007 to 1.6 percent in 2013.

The crisis is sure to alter the current trading pattern of the high-income industrial economies, which have strong trade ties with the EMEs. They have become accustomed to importing large volumes of products and services from the EMEs. They are not likely to suspend importing forthwith, but there will be a gradual reduction over the next five years. The US and several large advanced industrial economies are likely to continue running current account deficits, and Asia, particularly China, will continue to run surpluses, but the gap between the two groups of economies would substantially narrow. In addition, in its bid to rebalance the domestic and global economies, the Chinese government has been stimulating the domestic demand for some time, particularly consumption expenditure (Das, 2008). However, a structural change of this kind cannot materialize in the short-term. A logical and plausible scenario is that global economic, financial and payments imbalances will persist but at a far narrower level than during the pre-crisis period. This has implications for the dollar which would need to weaken further to reduce current account deficit more. Correspondingly, the renminbi yuan is likely to begin appreciating again. The economic downturn disrupted the steady appreciation of the renminbi yuan vis-à-vis the dollar since the mid-2005. In July 2008, it had stopped appreciating (Das, 2010). Concerns regarding slumping exports had pegged it to the dollar.

9.1 Descent of the Dollar from its High Perch

Since the end of the World War II, the dollar remained the pre-eminent currency in the global economy and the bedrock of international trade and finance. It has been the principal reserve asset of the world. It was natural because of the US economic dominance was overwhelming during this period. Although the largest, the US economy has at present lost the kind of dominance it enjoyed in the early post-World War II era. According to the 2008 statistics, the GDP of the European Monetary Union (EMU) ($13.56 trillion) is not far below that of the US ($14.29 trillion) (WB, 2009b).[16] The current global financial crisis reignited the anxieties of policy makers about one country's currency being the anchor of world monetary system. The financial crisis has ominously downgraded the status of the US economy, particularly that of its financial sector. The financial crisis *inter alia* exposed structural weaknesses in the US banking and financial system. There is no gainsaying that they were of serious order, to put it euphemistically. For the first time in the World War II period, dominance of the dollar is facing a serious challenge.

In international discussions on the pressing need for launching financial and monetary reforms, the role of the dollar serving as the main international reserve asset lately received renewed attention. Advanced industrial economies and BRICs have expressed their concern about the inordinately heavy debt burden and the level of deficit of the US government. Since 1991, the US has had a current account deficit, which jumped by 40 percent in 2001. It crossed 6 percent of the US GDP in

[16] Although total membership of the European Union (EU) is 27, in 2009, the European Monetary Union (EMU) had sixteen members.

2006, albeit it declined to $706 billion in 2008, or 5 percent of the GDP. The largest global economy cannot be regarded to be in the pink of health. That the dollar faces a secular decline has some justification. The dollar depreciated 33 percent against the other major currencies between 2002 and 2009. Its value also declined during the financial crisis. During the March-September 2009 period the dollar depreciated against a basket of leading international currencies steadily. Its trade-weighted value dropped by 11.5 percent. Against the euro, it steadily eroded. As stated above (section 8), in October it was $1.50 to a euro. There are apprehensions of inflation because of large financial commitments to stimulus packages and spiraling deficits, which is further likely to depreciate the dollar.

Over the preceding decades, the dollar's pre-eminence has been on a decline. Its position as a reserve currency has eroded considerably. Its share in global foreign exchange reserves has declined from 80 percent of the total in 1975 to around 65 percent in the first half of 2009 (Carbaugh and Hedrick, 2009). How long the dollar can continue to hold its current position as the principal reserve currency of the central banks of the world remains a moot issue. Numerous central banks have been diversifying their reserves holdings to reduce exchange rate risk in a world of financial and currency instability. The euro became an attractive option to them and it benefited from this trend. The euro area has a track record of relative economic stability. Between 1999 and 2009, the euro's share in global foreign exchange reserves rose from 18 percent in 1999 to 26 percent in the first half of 2009. Central banks in Europe primarily hold them as reserves.

The current financial crisis lent urgency to the enduring debate on the future role of the dollar in the global economy. Recently, the EMEs, in particular the BRIC economies, repeatedly broached the issue of the role played by the dollar in international trade and finance in the international fora. They have asked for a reduction in the role played by the dollar by establishing a new currency. This demand was also made by them at the first BRIC summit on June 16, 2009, held in Yekaterinburg, Russia (Kramer, 2009). In November 2009, India changed the composition of its reserves by buying 200 tonnes of gold from the IMF.

The established practice of pricing of oil in the dollar is likely to be discontinued in the foreseeable future. In October 2009, members of the Gulf Cooperation Council (GCC)[17], China, France, Japan and the Russian Federation met to end the practice of conducting oil deals in the dollars. A proposal to replace the dollar by a basket of currencies was discussed by these countries. Oil producing countries have been uncertain regarding the dollar's future value.

In the backdrop of the global financial crisis and recession, broadening the use of the Special Drawing Rights (SDRs) is increasingly being regarded a concept deserving greater deliberation and consideration from the global policy-making community. The SDRs are a quasi-currency issued by the IMF and are internationally tradable, albeit only among governments and central banks. They could also be used in future to settle international payments (UNCTAD, 2009). That said, assets denominated in SDRs are less liquid that those in dollar.

[17] The Gulf Cooperation Council (GCC) was established in 1981. Its members are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE).

One country that is particularly concern about the dollar's global status is China. Its concern is understandable because 70 percent of its $2.1 trillion foreign exchange reserves are in dollars.[18] It stands to make a significant loss if the value of the dollar abruptly declines. China needs to bring down its dollar holdings but if it does so hastily, it will cause devaluation of the dollar it wants to avoid so much. It is in China's interest to see this transition taking place gradually, say, in a decade. During and in the run up to the Group-of Twenty (G-20) meeting in London (in April 2009), China succeeded in injecting a frisson of excitement by emphasizing on the enlarged future role of the SDRs. It regarded the SDRs a viable alternative to the dollar as a global economic currency. Given the newly acquired prominence and clout of China in the global economy, the proposal was considered worthy and taken seriously by the G-20 participants. It undoubtedly had objective appeal and systemic relevance.

For all appearances, while the dollar is and will continue to be an important currency, there is a distinct possibility of follow up on this issue by the global policy making community and of eventually downgrading global importance of the dollar. Structural problems in the US economy, in particular in the banking and financial sectors, would continue erosion of the dollar as a premier reserve currency. While the SDR—or the euro, yen or renminbi yuan—is not likely to supplant the dollar in the short-term, it is well within the realm of possibilities that the dollar will share the role of a reserve currency with other currency or currencies in the foreseeable future.

Pre-eminence of the dollar as the world currency has diminished and it is certain to leave its high perch in the global capital and currency markets, while the relative significance of the other currencies particularly that of the euro has been growing (Helleiner and Kirshner, 2009). In the future, the yen and renminbi yuan may well emerge as the other important global currencies. The renminbi yuan needs to become a convertible currency for this purpose.

9.2 New Global Equilibrium

In a financially globalized economy, financial and payments imbalances may be the consequence of financial integration among the economies that are at different stages of financial market development. Under these circumstances countries with more advanced financial markets tend to accumulate foreign liabilities in a gradual and long-lasting manner (Mendoza, *et al* 2009). This line of logic is reflected in the global economic and payments imbalances that had developed since the late 1990s. They encompassed the mounting current account deficits in the US and large foreign assets positions in many EMEs.[19] Expanding financial globalization leading to rapid trans-border capital flows, vigorous export growth and favorable terms of trade for commodity exports enabled many developing countries to build up large foreign asset positions. This trend was reinforced by high saving rates in the Asian EMEs. This sub-group of economies was also determined to self-insure its economies against any future crises by building up large foreign exchange reserves—a lesson they had learned from the Asian crisis of 1997-98.

[18] In the mid-1990s China's foreign exchange reserves, in absolute and relative terms, began to rise. In mid-July 2009, China's foreign exchange reserve level topped $2.1 trillion mark, over 40 percent of GDP. It seems difficult to believe that in 2003 China's reserves were $300 billion.

[19] Present period is not unique in this regard. The US experienced large current account deficits in the late 1960s, late 1970s and the mid-1980s.

Gradually China became the largest creditor nation and the US largest debtor. The symbiotic relationship between the lending EMEs and the developing economies and the US, the borrowing economy, had the semblance of an ephemeral, if somewhat fragile, equilibrium. At best it could last for a short-term because the US current account deficit could neither be a permanent feature of the largest global economy nor could it be met from external sources for a long period.

Financial globalization and trans-border capital flows were among the first victims of the outbreak of the global financial crisis. The capital exporting EMEs forthwith turned to domestic assets. Their aversion to exporting capital during a crisis period was logical and understandable. Countries that were running trade surpluses came under financial pressure due to sharp contraction of multilateral trade and collapse of commodity prices.

The global financial crisis evoked a *prima facie* unforeseen and unexpected response among the global investing community. Although the epicenter of the on-going crisis was Wall Street, paradoxically during the crisis period the global investing community perceived the dollar as the safe-haven currency. The risk averse global and the US investors perceived the US Treasury securities as a safe-haven investment. Their crisis strategy was to shift to the US Treasury securities and ignore the other investment modes like equity, corporate bonds, emerging market bonds, money market funds, bank deposits and any other kinds of assets that involved credit risk. No doubt this was a short-term reaction to the on-going crisis. As the global economy and financial markets recover and risk aversion diminishes, global investing community is likely to turn to risky assets.

The post-crisis global equilibrium cannot entail complete disappearance of the imbalances, positively not in the short-term. Neither attractiveness of the US assets is likely to be evaporated nor is the dollar likely to become a currency to spurn in the global financial markets. At the same time, it is equally certain that both of them will lose their pre-crisis flavored role. Global currency system will be less dollar-centric in the future. Economic imperatives of this transformation will be immense.

During the present financial crisis, US current account deficit declined from 6.61 percent of the GDP in the last quarter of 2006 to 2.9 percent in the first quarter of 2009 and 2.8 percent in the second quarter (USDC, 2009). A wholesome turn of events indeed! Sharp decline in oil prices, slow GDP growth and falling imports were largely responsible for the decline of current account deficit. In future, as the US economy recovers current account deficit may rise with increase in private consumption and fiscal expansion. However, probability of the deficit to quickly leap to the pre-crisis level is not strong. With that, US borrowings from the surplus countries are sure to decline. Also, the EMEs may reduce their rate of expansion of the foreign exchange reserves because their utility for self-insurance purpose would decline with the establishment of contingent credit facilities of the IMF. In addition, enhanced safety nets in the EMEs, particularly those of Asia, may reduce their domestic saving rates and their external surpluses. These developments could push the global economy closer towards equilibrium (de la Torre *et al* 2009). That said, this penchant towards equilibrium need not be a permanent feature of the global economy.

9.3 Vision of a Post-Crisis Global Economic Landscape

Although few estimates have been made, size of the post-crisis global economy will surely be substantially smaller than what it was in the first half of 2007. A stimulus-powered tentative recovery that began taking shape in the third quarter of 2009 would continue in 2010, but the landscape of the global economy and finance will fundamentally alter. Also, return to pre-crisis growth trajectory for the global economy may well be unlikely because GDP growth will be constrained by numerous small and large factors, in particular by large debt overhangs in many systemically important economies. At the macroeconomic level, investment rates would suffer in the crisis-affected economies. At the microeconomic level, firms with weak balance sheets will continue to disregard investment opportunities in the foreseeable future.

Disruptions to production processes in many economies were large and of crucial order. Many of them may be beyond restoration. Low capacity utilization during such crises often turns into a permanent loss of production capacity. Many large economies would suffer such crisis-driven losses in production capacity. The crisis critically battered the banking and financial sector in many economies, particularly in the advanced industrial economies. Weaknesses and limitations in this vitally important sector may continue during the early post-crisis period. This sector is being justly blamed for adventurism and recklessness; it would certainly emerge heavily regulated from the crisis. To this end, good deal of efforts was underway in international fora like the G-20, IMF and FSB (Section 8).

Well-timed fiscal and monetary stimulus plans were prepared and implemented by all the systemically significant economies. Although they were essential for setting off a recovery, there is a downside of the stimulus packages. They tend to make an economy dependent on them. Once the support of the monetary and fiscal stimuli is phased out, sustainability of growth becomes questionable. As the global recovery takes hold, the stronger economies that feel secure about it will soon normalize their interest rates. Conversely, those that recovered weakly and feel insecure will not be able to restore their monetary policy. They will be forced to maintain their interest rates low to revive and sustain growth.

On the demand side, consumers in countries like the US that had supported large global demand, may not play their pre-crisis period role in the near future. Hindsight reveals that they had committed excesses and were persistently given to profligacy (Section 9). The post-crisis period would be one of readjustment and debt repayment for them. The new trend may well be the reversal of the past proclivities. Consumers in the economies like the US may well emphasize redressing the over-consumption of the past and improve upon their dismal saving performance. This trend in the US economy was underway since the early 2009.

10. A Corporate Perspective of Financial Crisis and Approaching Recovery

According a global survey conducted by *McKinsey Quarterly,* in September 2009, hunkering down period for the corporate world was coming to an end.[20] Corporate chieftains who reported during the last quarter of 2008 reported that they were focused intensely on slashing costs, capital investment and headcounts. To cope

[20] This survey was based on 1,677 responses from corporate CEOs representing all the regions of the global economy and a large number of manufacturing and services sector industries. It covered business firms of varying sizes and functional specialties.

with the financial crisis and recession, they turned into short-term oriented managers. Their planning and management horizon extended for weeks, or at most a month, never a year. Product development and long-term planning activities were completely abandoned. Their expectations were that of sharply plummeting sales and profits.

The results of the September (2009) survey were radically, even diametrically, different. More respondents expected their companies' sales and profits to rise than fall in the short-term. These expectations rose consistently in tandem with the improving performance in the global stock markets. They also manifested optimism about long-term business prospects. Corporate optimism was markedly higher in the US than in the eurozone. For many companies, product development and long-term planning acquired high priorities that these imperative corporate objectives merited. These respondents were expecting that the global business environment will be a "new normal", which would be less congenial than that existed during the pre-crisis period.

A majority of respondents recommended that their governments continue the support their respective economies received when the global financial crisis was at its worst. Only 20 percent expected a rapid recovery, although a much larger proportion expected a long and slow one. A high proportion (31 percent) of them expected financial globalization to resume in the medium-term, after a disconcerting period of deglobalization. Half of them (49 percent) expected more integrated global financial markets, more extensive global operations and multilateral trade within five years. Almost a third (31 percent) foresaw significant changes in their industries and economies, in particular larger role by their governments. Three-quarters of them predicted that their companies would be on stronger footing within next five years than they were during the pre-crisis period. One long-term impact of the global financial crisis, according to many, would be increased innovation and consolidation in their respective industries.

11. Summary and Conclusions

Three decades of commendable progress in financial globalization was brusquely stifled by the current financial crisis and recession. Its background was *inter alia* laid by the macroeconomic, financial and payments imbalances that steadily grew in the global economy over some ten years before the outbreak of the crisis. Other contributing causal factors included lowering of lending standards in the mortgage and corporate buy-out markets, over two decades of deregulation in a large number of financial markets, failure of regulatory bodies and supervising agencies to understand the potential risks, excessive use of novel and untested financial instruments, short-term mentality of banks and other financial institutions and incompetence and venality of bankers and financers running them, failure of credit rating agencies to play their intended role and in effect fueling the housing bubble and systemic mis-pricing of assets and subsidization of risk-taking by governments. Some even believed that shortcomings and mistakes in the financial system were not to be blamed for the global financial crisis but it was more of a problem of capitalism *per se*.

Freezing of credit flows during the crisis affected the real economy. It spread globally, causing a spike in unemployment rates and failure of business firms. In addition, spreads on inter-bank loans and what banks expected pay to central banks jumped to unprecedented levels. There was a general loss of confidence in the financial system. The crisis caused a sizable loss in the global economic welfare. It occurred through asset market collapse and global output and employment losses. Both direct and indirect losses in the global economy were huge. Also, the budget deficits and real value of government debt tended to explode. It the medium term global financial crisis may take an increasing toll on education, health and welfare expenditures even after the global economy has stabilized.

Finance ministries and central banks in the systemically important economies of the world moved briskly, purposefully, resolutely and in a collaborative manner to avert a Great Depression like prolonged and severe crisis. Several of them designed and launched fiscal and monetary stimulus plans with alacrity. In this context, the Group-of-Twenty (G-20) summit in London on April 2, 2009 and the successive G-20 summits proved to be meaningful and fairly successful.

Financial crisis stalled financial globalization in its tracks; it proved to be an effective trend breaker. With the onset of recession, firms, investors and financial institutions in the advanced industrial economies began a large-scale repatriation of their capital. Deglobalization in the form of stalling or reversing of trans-border capital flows began and multilateral trade contracted at an alarming rate. Trans-border FDI flows also suffered seriously. After contraction in 2009, the OECD economies are projected to recover at a subdued pace in 2010. This in turn would affect the performance and recovery in the developing economies. The EMEs in general were showing symptoms of recovery earlier than other economies. In particular, Asian EMEs began to show inchoate signs of recovery in the second quarter of 2009. They were leading the recovery from the global financial crisis. Financial sector in the advanced industrial economies was recovering at a more rapid rate than the real sector, albeit unemployment continued to remain high and was persistently showing signs of worsening.

Global economy contracted in the first quarter of 2009. However, the EMEs weathered the storm better. Some indications of a nascent recovery in the EMEs of Asia became evident in the second quarter of 2009. This group of EMEs was the first to give an indication of coming out of the recovery and pulling the others out. At the end of the third quarter of 2009 and the beginning of the fourth, symptoms of a subdued global recovery in 2010 became more evident than in the past. The financial crisis, recession and the process of recovery from the crisis would change the post-crisis global economic and financial scenario to a considerable extent.

References

Altman, R.C.2009. "Globalization in Retreat". *Foreign Affairs.* Vol. 88. No. 4. pp. 1-6.

Atkins, R.2009. "Eurozone Escapes Recession after Five Quarters". *The Financial Times.* November 13. p. 16.

Bernanke, B.S. 2009. "Reflections on a Year of Crisis". Paper presented at the Federal Reserve Bank of Kansas City's *Annual Economic Symposium on Financial Stability and Macroeconomic Stability* at Jackson Hole, Wyoming, on August 21-22.

Blanchard, O. 2009. "The Perfect Storm". *Finance and Development.* Vol. 46. No. 2. pp. 37-39.

Bradford, C. and J. Linn.2009. "Welcome to the New Era of G-20 Global Leadership" in (ed.) K. Dervis. *G-20- Summit: Recovering from the Crisis.* Washington DC, Brookings Institution. pp. 16-18.

Calomiris, C.W.2008. "The Sub-Prime Turmoil: What's Old, What's New" in *Maintaining Stability in A Changing Financial System.* Kansas City, MO. The Federal Reserve Bank of Kansas City. pp. 19-110.

Carbaugh, R.J. and D.W. Hedrick. 2009. "Will the Dollar be Dethroned as the Main Reserve Currency?" *Global Economy Journal.* Vol. 9. No. 3. Article 1. pp. 1-14.

Chandy, L., G. Gertz and J. Linn.2009. "Tracking the Global Financial Crisis". Washington DC. The Brookings Institution. May.

Council of Economic Advisers (CEA). 2009. "First Quarterly Report" Washington DC. Executive Office of the President of the United States. September 10.

Claessens, S., M. Ayhan Kose and M. E. Terrones. 2008. "What Happens During Recessions, Crunches and Busts?" Washington DC. International Monetary Fund. Working Paper No. WP/08/274.

Cline, W.R. 2009. "The Global Financial Crisis and Developing Strategy for Emerging Market Economies," Paper presented at the Annual Bank Conference on Development Economics, June 23, in Seoul, the Republic of Korea.

Cline, W. 2006. "The US External Deficits and the Developing Economies". Washington DC. The Center for Global Development. Working Paper No. 86. March.

Das, Dilip K. 2010. "The Renminbi Yuan and its Accelerating Global Clout". *Journal of Asian Business Studies.* San Francisco. Vol. 5. No. 1. Spring. (forthcoming)

Das, Dilip K. 2008. *The Chinese Economic Renaissance: Apocalypse or Cornucopia.* Houndmills, Hampshire, UK. Palgrave Macmillan Ltd.

de la Torre, A., S. Schmukler and L. Serven.2009. "Back to Global Imbalances?" Washington DC, The World Bank. July 13.

Dervis, K. 2009. "The G-20, the Istanbul Decisions and the Way Forward". Washington DC. The Brookings Institution. November 17. Available on the Internet at http://www.brookings.edu/opinions/2009/1008_g20_istanbul_dervis.aspx?p=1.

The Economic Intelligence Unit (EIU). 2009a. "The Risk of Trade protectionism". Available on the Internet at http://viewswire.eiu.com/index.asp?layout=VWPrintVW3&article_id=1714520356&printer=printer&rf=0. Posted on Many 19.

The Economic Intelligence Unit (EIU). 2009b. "World Economy: Balancing Act". London. August 31.

The Economist, 2009a."From Slump to Jump". August, 1. p.16.

The Economist, 2009b. "Rearranging the Towers of Gold". September 12. pp. 75-77.

Fox, J.2009. *A History of Risk, Reward and Delusion on Wall Street.* New York. Harper Collins.

Greenlaw, D., J, Hatzius, A.K. Kashyap and H.S. Shin. 2008. "Leveraged Losses: Lessons from the Mortgage Market Meltdown". Chicago. University of Chicago. Graduate School of Business. Monetary Policy Forum Report No. 2.

Greenspan, A. 2005. "International Imbalances". Speech given to the Advancing Enterprise Conference, London, UK. on December 2.

G-20 Communiqué. 2009. "Leaders' Statement: The Pittsburg Summit". Pittsburg. September 45. Available on the Internet at http://www.pittsburghsummit.gov/documents/organization/129853.pdf.

Helleiner, E. and J. Kirshner. 2009. *The Future of the Dollar.* Ithaca. New York. Cornell University Press.

The International Monetary Fund (IMF). 2009a.*Global Financial Stability Report.* Washington DC. April.

The International Monetary Fund (IMF). 2009b. *World Economic Outlook.* Washington DC. October.

Keynes, J.M. 1936. *The General Theory of Employment, Interest and Money.* Cambridge. UK. Cambridge University Press for Royal Economic Society.

Kramer, A.E. 2009. "Emerging Economies Meet in Russia". *The New York Times.* June 17. p. 3.

Krugman, P.2009a. "The Dark Age of Macroeconomics" *The New York Times.* January 27. Available on the Internet at http://krugman.blogs.nytimes.com/2009/01/27/a-dark-age-of-macroeconomics-wonkish/

Krugman, P.2009b. “How Did Economists Get it So Wrong?” *The New York Times.* September 6. p14.

Krugman, P.2009c. “Averting the Worst”. *The New York Times.* August 9.

Lin, J.Y. 2009. “Learning from the Past to reinvent the Future”. Opening remarks at the Annual Bank Conference on Development Economics, June 23, in Seoul, the Republic of Korea.

Lipsky, J. 2009. “Preparing for a Post-Crisis World”. *Finance and Development.* Vol. 46. No. 2. pp. 29-31.

Lombardi, D.2009. “Washington Roundtable on the Global Economic Agenda”. Washington DC. The Brookings Institution. Issues Paper. October.

McDonald, L.G. and P. Robinson. 2009. *A Colossal Failure of Commonsense: The Inside Story of the Collapse of Lehman Brothers.* New York. Crown Business.

McKinsey Global Institute (MGI). 2009. “The New Power Brokers”. San Francisco. July.

McKinsey Quarterly. 2009. “The Crisis—One Year on: September 2009”. Available on the Internet at http:www.mckinseyquarterly.com/article_print.aspx?L2=10&ar=2437. September.

Mendoza, E.G., V. Quadrini and J. V. Rios-Rull. 2009. “Financial Integration, Financial Development and Global Imbalances”. *Journal of Political Economy.* Vol. 117. No. 2. pp. 60-89.

Mihn, S. “Dr. Doom”. *The New York Times.* August 15, 2008. p. 3.

McKinsey Global Institute (MGI). 2009. *Global Capital Markets: Entering a New Era.* San Francisco. September.

Mussa, M. 2009. “Global Economic Prospects as of September 2009”. Paper presented at the sixteenth semiannual meeting on Global Economic Prospects, organized by the Peterson Institute of International Economics in Washington DC, on September 17.

National Bureau of Economic Research (NBER). (2008). “Determination of December 2007 Peak in Economic Activity. Business Cycle dating Committee. Cambridge. MA. Available on the Interne at http://www.nber.org/dec2008.pdf. Posted on December 11.

Norris, F.2009. “A Retreat from Global Banking”. *The New York Times.* July 24. p. 2.

Organization for Economic Cooperation and Development (OECD). 2009a. *OECD Employment Outlook 2009.* Paris. September.

Organization for Economic Cooperation and Development (OECD). 2009b. *OECD Economic Outlook*. No. 86. Paris. November 19.

Reinhart, C. M. and K. S. Rogoff. 2009a. *This Time is Different: Eight Centuries of Financial Folly.* Princeton. NJ. Princeton University Press.

Reinhart, C. M. and K. S. Rogoff.2009b. "The Aftermath of Financial Crises". *American Economic Review.* Vol. 99. No. 2. pp. 466-72.

Roberts, D.2009. "China's Third Quarter GDP 8.9%: Is it Sustainable?" *Business Week International.* October 22. p. 86.

Roubini, N. 2009. "The Great Preventer". *The New York Times.* July 26. p.18.

SaKong, I. 2009. "The Global Financial Crisis: Causes and Policy". Paper presented at the Annual Bank Conference on Development Economics, on June 23. Seoul, Republic of Korea.

Shin, H.S. 2009a. "Securitization and Financial Stability". *The Economic Journal.* No. 119. pp. 309-332. March.

Shin, H.S. 2009b. "Financial Intermediation and Post-Crisis Financial System". Paper presented at the Eight BIS Annual Conference held at Basel, Switzerland, during June 25-26.

Stiglitz, J.E.2010. *Freefall.* New York. W.W. Norton & Company.

Stiglitz, J.E. 2009. "Explaining the Financial Crisis". Lecture given under the Emerging Thinking on Global Issues Lecture Series at the United Nations University, the UN Headquarters, New York, on 24 February. Available on the Internet at http://www.google.ca/search?hl=en&source=hp&q=joseph+stiglitz+UNU+lecture+february+2009&meta=&aq=f&oq=

Summers, L. H.2008. "The Future of Market Capitalism". Keynote address at the Global Business Summit, held at the Harvard Business School, Cambridge, MA, on October 14.

United Nations Conference on Trade and Development (UNCTAD). 2009. *Trade and Development Report 2009.* Geneva and New York. September 7.

United States Department of Commerce (USDC). 2009. "US Current Account Deficit Decreases in Second Quarter 2009". Washington DC. September 16. Available on the Internet at http://www.bea.gov/newsreleases/international/transactions/trans_highlights.pdf.

The World Bank (WB). 2009a. *Global Development Finance: Charting a Global Recovery,* Washington DC. June 22.

Wolf, M. 2009. "Why China do More to Rebalance its Economy". *The Financial Times.* September 22. p. 12.

The World Bank (WB). 2009b. *World Development Indicator.* Washington DC. July.

World Investment Report 2009 (WIR). 2009. Geneva ad New York. United Nations Conference on Trade and Development. September 17.

World Trade Organization (WTO). 2009a. "World Trade 2008, Prospects for 2009*".* Geneva. Switzerland. WTO Press Release No. 554. March 23.

World Trade Organization (WTO). 2009b. *World Trade News.* No. 1979*.* Geneva. Switzerland. July 22.

Zoellick, R. B.2009. "After the Crisis?" Speech delivered at the Paul H. Nitze School of Advanced International Studies of the Johns Hopkins University, Washington DC, on September 28.