3 MANIFESTATION OF THE CRISIS

3.1 As discussed in the previous chapter, the systemic risks posed by the immensely complex financial system were overshadowed by the benign macroeconomic outcomes observed for a sustained period of time before the crisis. The complex nature of new financial instruments and the inability to assess counterparty risks in financial markets in an environment of rapid growth in credit and booming asset prices made the financial system vulnerable. Due to the rapid global integration and deep and complex interconnections between financial institutions, the crisis which emerged in the US sub-prime housing market manifested itself across assets, markets, and economies. During the initial stages of the crisis, the impact was manifested in mounting losses on the exposures of banks and financial institutions to the sub-prime mortgages and structured finance products. These losses were exacerbated by illiquidity in the markets for those instruments, which led to substantial reductions in their mark-to-market valuations.

3.2 With the collapse of Lehman Brothers, the crisis entered a turbulent new phase in September 2008, after which the crisis rapidly developed into a crisis of confidence and engulfed the whole financial system in the US. Subsequently, it spread to other developed economies, resulting in a number of European bank failures, declines in various stock indices with consequent large reductions in the market value of equities and commodities, failure of key businesses, declines in consumer wealth and a significant decline in economic activity. Moreover, the deleveraging of financial institutions, as assets were sold to pay back obligations that could not be refinanced in frozen credit markets, further accelerated the liquidity crisis. In this phase, bank losses and write-downs became more closely linked and the impact was felt in terms of a surge in borrower defaults on the back of worsening macroeconomic performance.

3.3 Global trade and financial integration had given the US financial market crisis a global form as the increasingly integrated global trading and financial system magnified and accelerated the transmission process. There had been rapid transmission of shocks from the US and Europe to the rest of the world. The impact of the crisis was felt in almost all the economies of the world in varying degrees. The crisis spread to EMEs through all four channels – trade, finance, commodity and confidence channels. In the EMEs, the slump in export demand and tighter trade credit caused deceleration in aggregate demand; reversal of capital flows led to equity market losses and currency depreciations; global liquidity tightening resulted in lower external credit flows; and market rigidities and erosion of confidence led to widening of credit spreads.

3.4 The crisis that originated in the financial sector was transmitted to the real sector through several channels. The depth and spread of the crisis can be gauged from the successive revisions in the estimates of write-downs, decline in trade and, finally, the contraction in economic activity. The financial sector deleveraging, in conjunction with weak credit markets, falling production and rapidly shrinking global trade, led to a situation of a more prolonged recession, especially with the growth in EMEs showing significant moderation. In the financial sector, the estimates for global write-downs of loans and securities held by banks over 2007-10 amounted to US$ 2.3 trillion (WEO, April 2010). On the trade front, according to the IMF (WEO, April 2010), world trade volume (goods and services) has declined by 10.7 per cent during 2009 as against 2.8 per cent growth witnessed in 2008. In the real economy, the final impact of the crisis was reflected in deteriorating global growth outlook as can be observed from the successive revisions in the growth projections for 2009 from 3.8 per cent in April 2008 to (-) 1.1 per cent in

October 2009 which was revised further to (-)0.6 per cent in April 2010.

3.5 However, there are incipient signs of recovery in the global economy, while financial conditions are stabilising. According to the IMF, emerging and developing economies are further ahead on the road to recovery, led by resurgence in Asia. Already there are signs of strong revival in capital flows in line with improved macroeconomic conditions in these economies, sound policy framework and rebound in the risk appetite of global investors and financial market sentiments. The quick and strong policy responses across advanced and emerging economies played an important role in limiting the stress in the global economy as compared to earlier crises (see Chapter 2).

3.6 Against this backdrop, this chapter analyses the impact of the crisis on various sectors of the economy, such as financial markets, financial institutions, international trade, international capital flows, remittances and the real economy in a global context. Section I discusses the impact of the crisis on financial markets, while Section II covers the impact on the financial system. The impact on the external sector covering trade, services, current account deficit and capital flows is described in Section III. The impact on the real economy is discussed in Section IV, while some concluding observations are given in Section V.

I. IMPACT ON FINANCIAL MARKETS

3.7 Global financial markets have witnessed rapid changes during the past decade in terms of evolution of new products and instruments and increase in turnover volumes. Certain types of financial innovations turned increasingly complex and their usage increased dramatically in recent years, generating speculative bubbles. These products included adjustable rate mortgages (ARM), mortgage backed securities (MBS), collateralised debt obligations (CDO) and credit default swaps (CDS). Interestingly, these complex products were assigned safe ratings by credit rating agencies. Also, the strong demand for these instruments in an environment of easy liquidity and strong credit growth drove down lending standards. Eventually this speculative bubble proved unsustainable and manifested in financial market turmoil in the US, which in a year's time reached unprecedented heights.

3.8 The crisis moved rapidly from the US sub-prime market to the financial markets of Europe and other advanced economies. After the onset of the financial crisis, a number of features became common across the financial markets of the most affected economies, particularly in the US and Europe. These were a broad re-pricing of risk, severe shortages of market liquidity in many security and commercial paper markets, a shortage of funding liquidity in the interbank market, and, for some European financial institutions, a shortage of US dollar funding. Although the crisis started spreading across financial institutions, markets and countries from August 2007, the closing of the large US investment bank, Lehman Brothers, in September 2008 aggravated panic in the financial markets. The collapse of Lehman Brothers distorted the financial intermediation process – it gave rise to rapid increase in the cost of intermediation between financial organisations as well as counterparty risks.

3.9 Initially, the EMEs were much less affected by the recent crisis than during previous crisis episodes. Some spillovers were evident in financial markets, particularly associated with the rise in global risk aversion. However, as the financial market upheaval in developed economies persisted, particularly after the Lehman failure in September 2008, EME financial markets came under severe strain with increased volatility. Post-September 2008, as global investors scaled back their holdings of emerging market assets amid continued financial system deleveraging, Asian equities and external funding conditions became severely affected. Asian stock markets collapsed even more sharply than the mature markets and sovereign credit spreads widened significantly. Heightened financial volatility and a sharp reversal in risk appetite together with elevated funding costs narrowed external funding sources for Asian borrowers. This was accompanied by a sharp drop in Asian offshore bond issuance, massive capital outflows and unwinding of carry trade. As a result, the region's currencies depreciated sharply. The impact of the crisis on various segments of the financial markets in advanced economies and EMEs is discussed in detail in the following sections.

Impact on Interbank/ Money Market

3.10 One of the first financial market segments to be affected by the crisis was the interbank market. The first symptoms of the crisis appeared in August 2007, when serious disruptions took place in the interbank market, putting pressures on liquidity. As uncertainty reigned over the extent of subprime-related losses and their concentration, banks became concerned about counterparty risk. Banks increased their demand for liquid funds and became reluctant to lend to one another. This resulted in severe tightening of funding conditions in the interbank credit markets. The illiquidity and increase in perceived credit risk caused spreads on interbank rates to widen. Later this crisis spread to the money markets, taking the form of abnormal levels of spreads, the shortening of maturities, and the contraction, or even closure, of some market segments. Through contagion, these tensions also affected non-financial corporations and the financing of the economy.

Spreads in Advanced Economies

3.11 An indicator of the severity of liquidity pressure in the interbank market is the spread between the interest rate in the London interbank offered rate (LIBOR) and the overnight indexed swap (OIS) rate of corresponding maturity. In principle, this spread provides a measure of the risk premium, which includes both credit and liquidity factors. This spread hardened from early August 2007 but reached unprecedented highs of 361 basis points in the US, 244 basis points in the UK and 199 basis points in the Euro area in the post-Lehman period (Table 3.1). The interbank market in Japan, however, was relatively less affected during the crisis with its spread peaking at 80 basis points at the height of the crisis.

3.12 In the post-Lehman period, this sharp rise in spread reflected heightened concerns about liquidity risks, particularly for US dollar term funding as also concerns about an increase in the credit risk of the banking sector, following the collapse or near-collapse of some large financial institutions. Similar trends were noted in the financial markets in Europe. Strains were particularly evident for foreign exchange swaps, where rising financial sector credit spread and the rising global demand for US dollar funds raised the implied cost of dollars to historically high levels above LIBOR. With the viability of key players at stake and perceptions of counterparty risk rising, the benchmark US investment grade CDX credit default swap index spread jumped by 42 basis points and US high-yield spreads rose by 118 basis points on September 15, 2008 alone. The resulting turmoil quickly spread through the intensely integrated global financial system leading to widening of credit spreads in other major markets (Chart III.1).

Table 3.1: Movement in Interbank Spreads

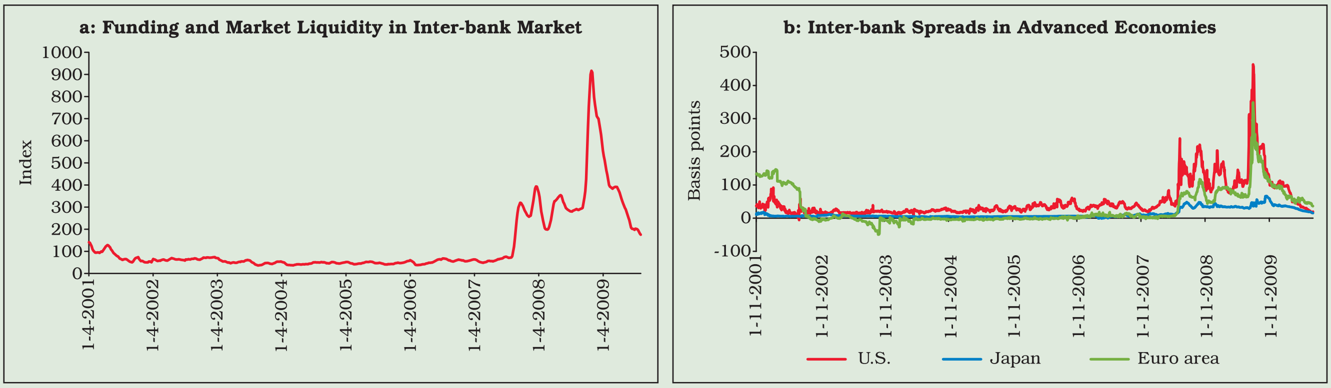
(basis points)

Indicator	Pre-Crisis End-March 2007	LIBOR-OIS peak level	End-Dec 2008	End-March 2009	End-June 2009
1	2	3	4	5	6
U.S. 3-month LIBOR-OIS	8	361	123	99	37
Euro 3-month LIBOR-OIS	6	199	160	82	50
Japan 3-month LIBOR-OIS	16	80	73	49	37
UK 3-month LIBOR-OIS	11	244	165	120	78

Source: IMF, Global Financial Stability Report, (GFSR), October 2009.

3.13 The funding problem in the interbank market quickly spilled over into the markets for commercial paper (CP) and bank certificates of deposit (CDs), where money market funds are a key investor group. Commercial paper markets suffered due to redemptions/ reallocations and illiquid secondary markets for these securities. Unsecured financial paper suffered the largest outflows: total outstanding CP volumes in the United States plummeted by more than US$ 325 billion between September 10, 2008 and October 22, 2008, from a total of about US$ 1.76 trillion. Foreign banks and those US institutions without their own retail deposit base thus lost access to an important source of funds at a time when they needed to support or

Chart III.1: Funding Liquidity and Inter-bank Spreads



take onto their balance sheets the money market funds that they sponsored. In response, the demand for US dollar interbank funds surged, causing short-term credit and money markets to seize up.

3.14 Responding to such tightness in the market, the Federal Reserve acted to relieve money market tensions with various credit facilities, which were extended and enhanced on July 30, 2008. The impact of these efforts, however, was partly offset by increased uncertainty following the default of large financial companies. In the euro area, the spreads between deposit rates and OIS rates were influenced by strong demand from European banks for US dollar liquidity, because funds borrowed in Euros had to be swapped for US dollars to support euro area banks' investment positions that were denominated in this currency. The European Central Bank (ECB) provided ample liquidity in its regular weekly operations in order to allow banks to meet their reserve requirements during maintenance periods. In addition, the ECB renewed its supplementary longer-term refinancing operations for maturities of three and six months.

3.15 Quantitative and credit easing policies, extraordinary liquidity measures and government guaranteed funding programs have helped to improve the functioning of short-term money markets. The money market conditions have continued to improve in the early months of 2010, accompanied by a decline in market and liquidity risks as asset prices have continued to recover across a range of asset classes (IMF, GFSR, April 2010).

Spreads in Asian Economies

3.16 The liquidity strains in major international interbank markets spilled over to several Asian interbank markets—particularly in the key Asian financial centres of Hong Kong, Singapore and South Korea, where short-term interest rates increased significantly in the second half of 2008. The rise in local currency interbank market rates prompted the monetary authorities in those countries to inject liquidity to normalise market operations. The domestic liquidity pressures in Asian money markets reflect several factors, including arbitrage across foreign and domestic currency markets, rising uncertainty about the economic outlook and increased risk aversion. Overall, domestic interbank markets in Asia, however, did not seize up as severely as their counterparts in developed countries. With authorities' support, domestic interbank markets in all three of these economies saw a return to normality.

3.17 The creation of a number of new central bank facilities and the willingness on the part of central banks to provide necessary liquidity appeared to alleviate concerns among banks about the availability of short-term liquidity. However, money market spreads increased for maturities longer than three months, suggesting growing counterparty credit risk concerns. Such cross-currency activity and the high correlation between changes in equivalent spreads of other major currencies indicate that global money markets have become increasingly interlinked as a result of the market turmoil.

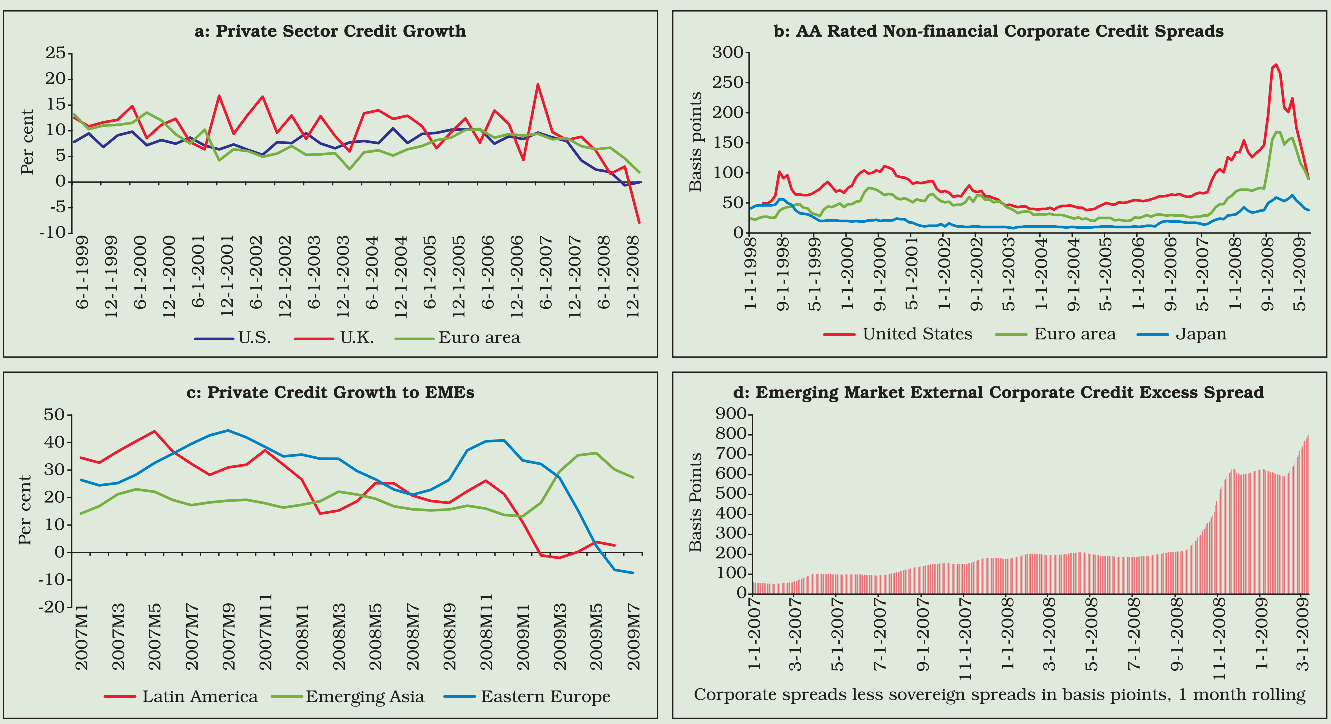
Impact on Credit Market

3.18 Declining credit growth, particularly in the advanced economies, worked as a catalyst to aggravate and spread the impact of the crisis from one market to another. Unlike the money market, credit flows, however, had been impacted by the crisis with a lag as credit flows were robust during the early stages of the crisis. However, to a large extent this reflected special circumstances. First, during the initial stages of the crisis, there was market and supervisory pressure on banks to consolidate previously off-balance sheet exposures to securitisation vehicles. This tended to swell balance sheets even without any fresh extension of credit. Second, borrowers pre-emptively raised funds in anticipation of credit tightening by drawing down credit lines that had been granted before the crisis, often at very favourable terms.

Slowdown in Credit Growth

3.19 A sharp slowdown in credit growth to the private sector was noted during the post-Lehman phase in many of the advanced economies, where banks sought to reduce leverage and rebuild capital bases (Chart III.2). The overall deceleration in lending to the private sector was broad based across the various money-holding sectors, although the level of adjustment varied from sector to sector. Lending standards tightened across all types of loans, although more sharply in the case of household credit, including mortgages. Nominal housing credit (excluding home equity loans) contracted at an annual rate of 1–2 per cent from the second quarter of 2008 to the first quarter of 2009 in the US, and it stopped growing in the euro area by March 2009. On account of tightening of lending standards, even households with good credit histories faced difficulties in obtaining mortgage loans or home equity lines of credit. Consumer credit growth also slowed significantly in many advanced countries, the exception being the US, where it grew at an annual rate of 9 per cent in the first quarter of 2009. Banks reduced credit card limits and increased refusals of automobile loan applications. Although business credit continued to expand in many countries, it was mainly driven by an increase in the use of existing

Chart III.2: Impact on the Credit Market



Source: International Monetary Fund.

credit lines rather than by new lending. In addition to the supply-side credit constraints, decline in credit growth to some extent also reflected a slowdown in demand as the major economies entered into recession with firms and households refocusing towards capital preservation as well as towards managing excess capacity and high levels of debt.

3.20 Credit growth continued to remain sluggish in the advanced economies during the early months of 2010, notwithstanding the improved private sector credit risks. Constraints on bank capital and sluggish non-financial credit growth continued to impair the supply of credit in those economies. The outlook for credit growth in the advanced economies remain sluggish and uneven, as banks continue to delever and private demand remains weak.

3.21 Within EMEs**,** the limited exposures of Asian banks to sub-prime and CDO assets, coupled with well-capitalised balance sheets allowed Asian interbank markets to remain relatively calm. There was no noticeable reduction in the growth of private domestic credit in most countries in the region during the initial phase of the crisis (Table 3.2). However, as the crisis deepened, credit growth in many countries weakened. Credit growth continued to remain sluggist in many of the emerging Asian economies during the second half of 2009. Credit to the household sector increased by 7.8 per cent in Singapore, 11.5 per cent in Indonesia, 2.4 per cent in Korea, 2.7 per cent in Taiwan and 5.7 per cent in Malaysia between June-December 2009. Credit growth to the corporate sector remained lower than the household sector for all these economies. (Regional Economic Outlook: Asia and Pacific, April 2010). Credit growth started accelerating in many of the emerging Asian economies in the recent months, while in emerging Europe, credit continues to contract though at a decelerating pace (IMF, GFSR, April 2010).

Widening of Credit Spreads

3.22 Credit default swap (CDS) indices in the US had reached historical highs across all categories, for both the financial and the non-financial sectors. At the same time, issuance of asset-backed securities (ABSs) and collateralised debt obligations (CDOs) remained sluggish. The US government's plans, the Troubled Asset Relief Program (TARP), which aimed at restoring confidence in the ABS market by authorising the US Treasury to take troubled assets off the balance sheets of financial institutions, followed by capital injections to banks, helped to reduce the perceived risk of further defaults, resulting in a tightening of banks' CDS spreads (ECB, 2009) (Table 3.3). Nevertheless, CDS premia for global large and complex banking groups (LCBGs) remained at relatively high levels, reflecting market uncertainty about the implementation of the programme, its influence on particular institutions and concerns over the impact of higher funding costs in the banking sector.

Table 3.2: Growth of Private Domestic Credit in Select Asian Economies

(year-on-year, per cent)

	2006	2007	2008Q1	2008Q2	2008Q3	2008Q4
1	2	3	4	5	6	7
China	12.1	18.0	19.1	16.9	14.8	13.2
Hong Kong	4.3	7.6	9.6	14.6	18.3	0.6a
India	28.1	22.8	22.4	24.2	24.8	27.8a
Indonesia	13.9	18.9	27.4	31.5	34.2	36.5
Korea	10.8	14.3	14.3	16.0	16.2	16.4b
Malaysia	8.6	9.0	10.9	10.8	9.7	9.5a
Philippines	1.2	5.9	8.4	8.9	16.9	16.5
Singapore	3.6	10.2	18.5	20.5	20.7	17.5
Thailand	6.4	3.3	5.4	6.8	9.5	9.7

a. November 2008. b. October 2008.
Source: ADB Outlook, 2009.

Table 3.3: Credit Market Spreads

(basis points)

	Pre-Crisis 30/06/2007	Time of Lehman Collapse 12/09/2008	A Year Later 31/08/2009
1	2	3	4
Residential Mortgage ABS			
United Kingdom	10	215	190
United States	26	875	1328
Commercial Mortgage ABS			
Europe	20	330	975
United States	30	290	650
Consumer ABS			
United Kingdom	12	255	465
United States	0-10	130-200	55-90

Source: IMF, GFSR, October 2009.

3.23 In sum, in view of soaring demand for liquid funds in the wake of the contraction in the money market mutual fund sector, global inter-bank markets came under pressure, squeezing banks' access to short-term funding. Money markets, which were already strained, failed to recuperate, despite massive central bank liquidity injections. As a result, interbank rates spiked to historic highs. The movements in other major markets, such as those for euro and sterling funds, also showed similar signs, *albeit* moderately. Thus, the turmoil transcended from credit and money markets to the global financial system more broadly. The contagion also spilled over to the emerging markets, which saw broad-based asset price declines amidst depressed levels of risk appetite. While policy intervention on an unprecedented scale helped to stabilise the money market conditions, credit growth, however, continued to remain sluggish, particularly in the advanced economies, even in the recent months.

Impact on Stock Market

3.24 The stock market is another segment of the financial sector that has borne much of the heat of the global financial crisis. During the recent financial crisis, equity markets all over the world witnessed high volatility and sharp declines in prices. However, in contrast to other markets, the impact of the crisis was more pronounced on the EME stock markets compared to their matured counterparts.

Advanced Economies

3.25 From the beginning of the year until mid-March 2008, equity prices in the euro area, the United States and Japan followed a declining trend. This trend was partly reversed when JPMorgan Chase took over Bear Stearns in March 2008. The Bear Stearns rescue package was favourably perceived by market participants, who changed their risk perceptions, thereby contributing to sustaining equity markets. Against this background, from mid-March to the beginning of June 2008 the Dow Jones EURO STOXX increased by almost 10 per cent, the Standard & Poor's 500 by around 8.5 per cent, and the Nikkei 225 by 22.5 per cent. Stock price fluctuations, however, became pronounced from September 2008, reflecting uncertainties generated in global financial markets following the collapse of Lehman Brothers and the failure of many other significant financial institutions. Growing concerns about the health of loss-making financial institutions and the deteriorating economic outlook and its impact on company earnings put downward pressure on major stock indices during the last quarter of 2008. Moreover, declining actual and expected earnings growth also contributed to the negative performance of stock markets in the US and the euro area.

3.26 Along with sharp declines in prices, the stock markets of the matured economies have also experienced high volatility since September 2008. In September 2008, volatility in the S&P 500 spiked to levels not seen since the 1987 stock market crash. Overall, at the end of 2008 equity prices in the euro area, the United States and Japan, as measured by the Dow Jones EURO STOXX, the Standard & Poor's 500, and the Nikkei 225 indices, respectively, were lower by around 46 per cent, 39 per cent and 42 per cent, respectively, as compared with their levels at end-2007.

Emerging Market Economies

3.27 The severe impact of the crisis was felt in the EME stock markets, mainly in terms of a collapse in stock prices. There were significant sell-offs by FIIs in most of the emerging Asian equity markets from October 2007. Equity flows to the EMEs declined substantially during 2008, with the decline being more pronounced during the last two quarters of the year. Equity flows to EMEs declined sharply from US$ 207.8 billion in 2007 to US$ 54.2 billion in 2008. Within equity flows, while inflows under FDI remain relatively resilient during the crisis, portfolio flows were the worst sufferers. Equity flows, however, have bounced back strongly during the second quarter of 2009 (Table 3.4).

3.28 The fall in equity prices in EMEs was particularly strong from the middle of 2008 in contrast to matured economies, where the fall began in the middle of 2007. Within Asian EMEs, the stock market

Table 3.4: Emerging Market Equity Issuance

(US $ billion)

Country	2007	2008	2009	2008		2009			
				Q3	Q4	Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9	10
Asia									
China	48.3	12.8	39.9	1.6	1.3	6.3	9.7	8.7	15.2
India	21.7	6.0	16.6	0.2	0.0	0.0	3.8	8.4	4.4
Indonesia	3.0	2.3	1.6	0.4	0.0	0.0	0.9	0.1	0.7
Malaysia	1.8	0.7	4.0	0.0	0.0	0.1	0.4	0.5	3.0
Philippines	2.2	0.2	0.3	0.0	0.0	0.0	0.0	0.3	0.0
Thailand	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Europe									
Hungary	0.2	0.0	1.2	0.0	0.0	0.0	0.0	1.2	0.0
Poland	0.5	1.2	2.8	0.0	0.6	0.0	0.2	0.4	2.2
Russia	29.6	2.9	1.0	0.0	0.0	0.0	0.2	0.5	0.3
Latin America									
Argentina	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	39.2	10.4	18.2	2.3	0.0	1.0	4.9	3.0	9.3
Chile	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	2.1	2.1	1.6	0.0	0.0	0.0	0.0	1.6	0.0

Source: IMF, GFSR, October 2009, April 2010.

valuation declined by 35 per cent in Korea, 33 per cent in India, and 36 per cent in China between June and December 2008, reflecting the wide-ranging effect of the world financial crisis (Table 3.5). The fall in equity prices took place amid heightened volatility and some EMEs even temporarily halted trading on their stock exchanges.

3.29 Overall, emerging market equity valuations lost about 50 per cent between May 2008 and end-November 2008. The Emerging Market Bond Index Global (EMBIG) spread widened by more than 400 basis points, and yields on long-term domestic bonds declined by 60 basis points. Risk aversion, repatriation of foreign capital and, in some cases, falls in commodity prices have weighed down on equity prices in EMEs (Table 3.6). Such effects have also weighed down on a range of EME currencies against the US dollar.

3.30 Amidst the decline in equity prices, there was a significant decline in global stock market turnover in 2008, though the decline was more pronounced in the case of emerging market economies compared to the advanced economies. Moreover, the decline was sharper during the last two quarters of 2008 than in the earlier quarters.

3.31 In line with the decline in turnover, the market capitalisation of major stock exchanges,

Table 3.5 : Stock Market Changes - Select Countries

(per cent)

Country	June-December 2008	December 2008-December 2009
1	2	3
Emerging Asia		
China	-36	76
Hong Kong	-37	49
India	-33	80
South Korea	-35	49
Latin America		
Argentina	-49	115
Brazil	-44	82
Mexico	-24	46
Advanced Economies		
Japan	-37	20
Euro area	-33	24
USA (S&P 500)	-34	25

Source: The Economist, various issues.

Table 3.6: Performance of Emerging Equity Prices

(August 29, 2008 to March 16, 2009)

Country	CDS Spread (Basis Points)	Changes in Equity Prices (Per cent)
1	2	3
EM Asia average	205	-18.7
EM Europe average	524	-47.6
Latin America average	563	-27.6
Africa/Middle East average	217	-43.0

Source: IMF, Global Financial Stability Report, April 2009.

Table 3.7: Cross-Country Stock Market Capitalisation

(US $ billion)

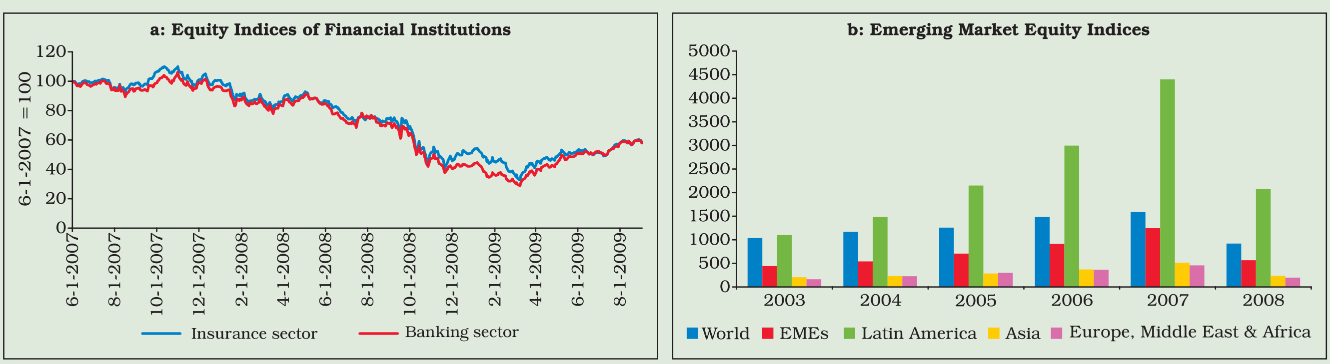
Country	1990	2000	2005	2006	2007	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
1	2	3	4	5	6	7	8	9	10	11	12	13
Americas												
US	311	3,597	3,604	3,865	4,014	3,175	2,904	2,249	2,168	2,590	3,026	3,239
Mexico	41	125	239	348	398	414	329	234	197	265	308	352
Asia - Pacific												
Australia	108	373	804	1,096	1,298	1,361	926	684	665	888	1,188	1,262
India	NA	NA	553	819	1,819	1,020	885	647	610	992	1,187	1,307
Malaysia	48	113	181	236	325	270	217	189	181	231	261	286
Sri Lanka	1	1	6	8	8	7	6	4	5	7	8	10
Hong Kong	83	623	1,055	1,715	2,654	2,096	1,615	1,329	1,307	1,825	2,059	2,305
Indonesia	8	27	81	139	212	195	155	99	100	156	201	215
Japan	2,929	3,157	4,573	4,614	4,331	4,043	3,334	3,116	2,611	3,204	3,413	3,306
Korea	110	148	718	834	1,123	898	656	471	507	622	807	835
Philippines	7	25	40	68	103	70	70	52	55	68	79	86
China	NA	NA	286	918	3,694	2,106	1,776	1,425	1,863	2,329	2,250	2,705
Singapore	34	155	257	384	539	485	349	265	249	368	445	481
Thailand	21	29	124	140	197	181	139	103	98	140	172	177
Europe - Africa - Middle East												
Spain	111	504	960	1,323	1,781	1,715	1,222	948	831	1,089	1,322	1,435
Italy	149	768	798	1,027	1,073	867	663	522	418	532	680	656
Hungary	NA	12	33	42	46	41	32	18	14	21	29	30
Turkey	19	70	162	162	287	192	188	118	110	165	216	234
South Africa	137	131	549	711	828	748	535	483	445	608	709	799
London	850	2,612	3,058	3,794	3,852	3,309	2,565	1,868	1,676	2,198	2,614	2,796
Poland	NA	31	94	152	212	182	146	91	69	93	123	151
Austria	26	30	126	199	236	198	118	76	72	91	119	114

Source: World Federation of Exchanges.

which started declining from the first half of 2008, continued the same trend till the first quarter of 2009. However, with the improvement of the general health of the global stock markets, there are indications that market capitalisation began to recover from the second quarter of 2009. Despite substantial recovery, stock market capitalisation remained lower than the 2007 level, for most of the emerging economies at the end of 2009 (Table 3.7).

3.32 From a sectoral perspective, both in the euro area and in the United States, stock prices of the financial industry suffered the heaviest losses between December 2007 and December 2008, declining by about 57 per cent and 51 per cent, respectively (Chart III.3). Stock prices of the non-financial sector also fell significantly, decreasing by around 41 per cent in the euro area and 36 per cent in the United States . There appears to have been greater initial contagion effects

Chart III.3: Movements in Equity Markets



Source: International Monetary Fund.

across financial stocks than total stocks in EMEs, perhaps reflecting the reliance of some of their financial institutions on external funding. A marked decline in the stock market performance of banks and finance companies in emerging East Asia relative to the overall stock market index reflected fears that banks in emerging East Asia could incur substantial losses in the aftermath of the crisis as economic growth slows. In general, most indexes of listed banks and finance companies on the Asian stock markets have performed below overall market indexes since August 2007.

3.33 In early 2009 the deteriorating global economic outlook as well as renewed concerns about the health of the financial system led to further declines in matured economy stock prices. Between the end of 2008 and February 27, 2009, the Dow Jones EURO STOXX and the Standard & Poor's 500 indices declined by around 17 per cent and 19 per cent, respectively. In the second half of 2009, however, the matured economies' stock prices posted some recovery with major stock indices in Japan, the euro area and the US gaining in the range of 10-15 per cent between December 2008 and October 2009. The Dow Jones Industrial Average crossed the 10,000 mark for the first time in a year on October 14, 2009 on the back of indications about US economic recovery. Between December 31, 2009 and June 16, 2010, however, the stock indices of Japan and Euro area declined by 5 per cent and 7 per cent, respectively, partly due to the uncertainty in the euro area growth prospects.

3.34 In contrast, the EME stock markets rebounded strongly in the first half of 2009, with the MSCI (All Country) Asia ex-Japan Index rising 68 per cent over its November 2008 trough, showing some return of risk appetite. During the year 2009 till October, the composite stock market index of China increased 66.4 per cent, perhaps reflecting the effects of China's huge fiscal stimulus package. Despite the rebound across emerging East Asian equity markets, they remained below their levels at the beginning of 2008. Moreover, notwithstanding stock market recoveries, financial share prices have performed less favourably than overall market indices. India's BSE crossed the 17,000 mark after a gap of 16 months (for the first time since May 2008) on September 30, 2009. As per the latest available trend, some of the emerging market stock indices recorded a decline over December 2009. For example, stock indices of China, Hong Kong and Brazil declined by 22 per cent, 8 per cent and 6 per cent, respectively, between end-December 2009 and June 11, 2010, while the others recorded marginal gains.

Corporate Bond Market

3.35 Corporate bond issuance from the EMEs declined sharply during the financial crisis amidst heightening of spreads, from the second half of 2008. In contrast, the corporate bond markets of advanced economies exhibited relative resilience during the crisis.

Advanced Economies

3.36 In the advanced economies, disruptions to non-financial corporate bond markets had been less severe than those seen in the credit or housing market during the recent financial crisis. However, there had been episodes of volatility in issuance and widening of spreads during periods of increased uncertainty in the global financial markets (Chart III.4). Overall, US corporate bond issuance has been much less affected than the US mortgage market, though there are reports that lower-rated firms have faced some difficulties in raising funds in bond markets during the crisis.

Emerging Market Economies

3.37 In recent years, cross-border corporate bond issuance in the form of Initial Public Offerings (IPOs) from some EMEs such as China, Brazil and Russia has rivalled developed economies in terms of their scale. Since the onset of the financial turmoil, international corporate bond issuance from EMEs fell sharply on account of both demand and supply factors (Table 3.8 and Chart III.4). On the demand side, firms might have decided to delay issuance in the hope of a return of more normal conditions in the coming months. Second, firms may have had access to other funds and, therefore, were reluctant

Table 3.8: Emerging Market Bond Issuance-Select Countries

(US $ billion)

Region	2007	2008	2009
1	2	3	4
Latin America			
Argentina	3.4	0.1	0.5
Brazil	9.9	6.7	10.1
Chile	0.3	0.1	3.0
Mexico	6.3	4.5	15.5
Emerging Europe			
Hungary	4.1	5.3	3.0
Poland	4.1	3.8	10.2
Russia	30.2	22.1	10.8
Asia			
China	2.1	2.1	3.3
India	7.5	1.4	2.2
Indonesia	1.8	4.2	5.5
Malaysia	0.9	0.4	0.1
Philippines	1.0	0.4	5.4
Thailand	0.8	0.5	-

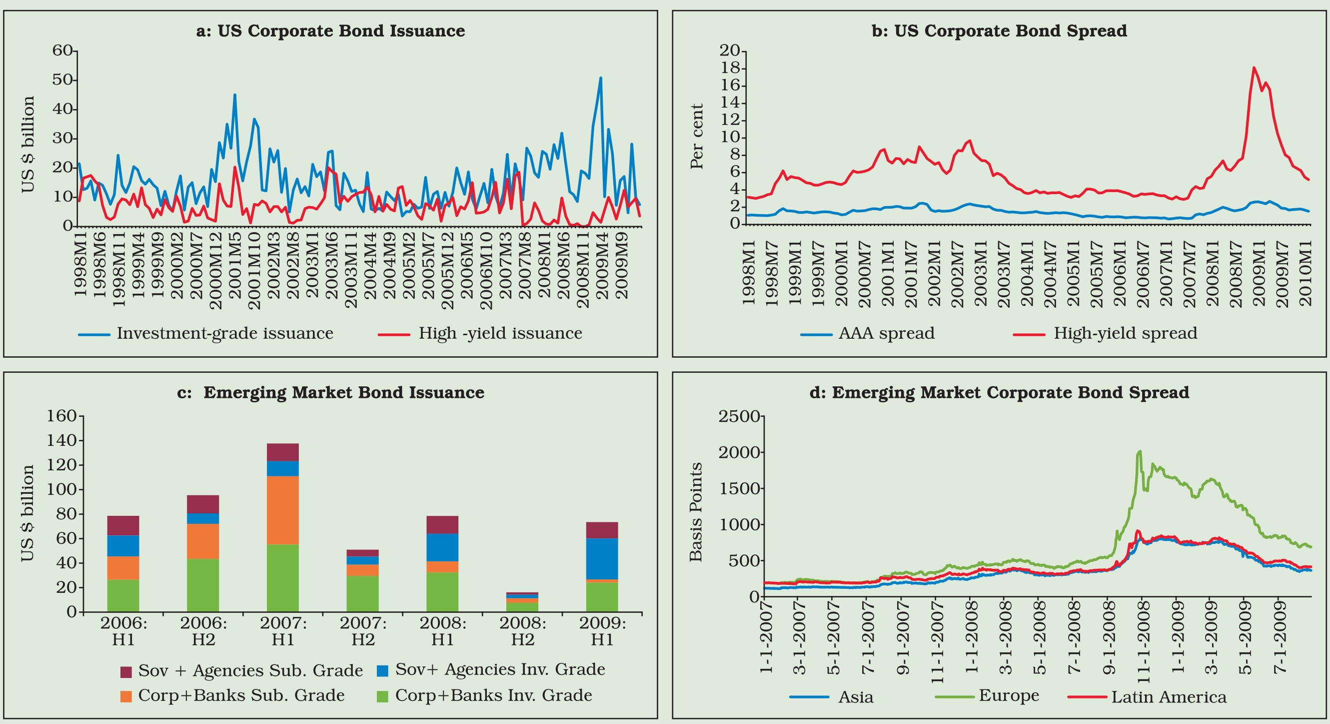
Source : IMF, GFSR, April 2010.

to issue bonds into a relatively illiquid market. On the supply side, there may have been some reluctance to lend, as there was a desire by lenders to hoard liquidity in the face of uncertainty. In such a situation, lower-rated firms became most vulnerable to the global reassessment of risk, which often rely on raising funds in external markets where investors are generally more willing to bear the risk.

3.38 Emerging market bond spreads reached historical highs during the recent financial crisis, touching their peaks following the collapse of Lehman Brothers in September 2008 and continued to remain at elevated levels in the first and second quarters of 2009. The spreads, however, narrowed down substantially during the third and fourth quarters of 2009, with the pick up in the corporate bond isssuance from the emerging market economies (Table 3.9).

3.39 During the second half of 2009 the corporate bond markets functioned more normally, which is critical for countries like the United States that rely heavily on non-bank market financing. Corporate credit and asset-backed spreads had tightened significantly and issuance had risen as firms seek alternatives to scarce bank credit. High-end issuance had also increased though still restricted to higher-quality credit, and spreads remained historically wide (IMF, GFSR Update, July 2009). In line with tentative signs of improvement in economic conditions,

Chart III.4: Impact on Corporate Bond Market



Source: International Monetary Fund.

Table 3.9: Emerging Market Bond Spreads – Select Countries

(basis points)

Region	2007	2008	2009	2008				2009			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9	10	11	12
Latin America											
Argentina	410	1704	660	581	614	953	1704	1894	1062	784	660
Brazil	220	429	189	283	227	333	429	424	282	234	189
Chile	151	343	95	176	177	223	343	286	161	139	95
Mexico	172	434	192	193	194	275	434	441	280	234	192
Emerging Europe											
Hungary	84	504	186	163	134	174	504	540	373	220	186
Poland	67	314	124	112	115	169	314	319	219	148	124
Russia	157	805	203	208	197	388	805	630	418	299	203
Asia											
China	120	228	64	154	137	191	228	210	122	87	64
Indonesia	275	762	230	329	381	490	762	742	433	295	230
Malaysia	119	370	136	144	153	194	370	344	167	174	136
Philippines	207	546	206	273	303	324	546	432	324	265	206

Source: IMF, GFSR, October 2009, April 2010.

corporate bond issuance increased for most of the emerging market economies of Latin America and Asia in 2009, though some of the economies of emerging Europe, like Hungary and Russia have experienced some moderation (Table 3.8).

Impact on Government Bond Markets

3.40 Government bond markets all over the world were characterised by large swings in yields during the crisis period, driven mainly by direct and indirect consequences of the intensified financial crisis. During the recent crisis, due to declines in confidence levels and increases in counterparty risks, investors sought their way out mainly in the government instruments which at a certain point had a negative yield.

Advanced Economies

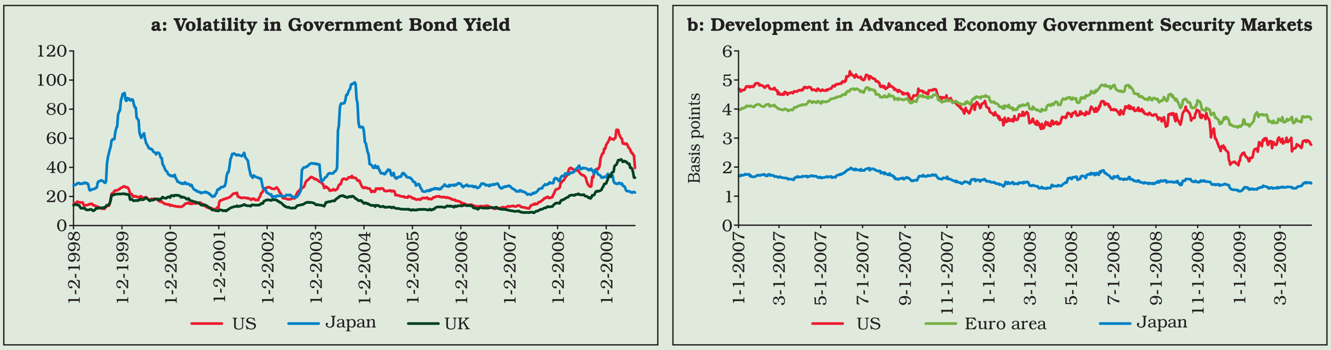
3.41 Amid high day-to-day volatility, long-term government bond yields in the euro area and the United States declined markedly, largely reflecting investors' ongoing preference for highly liquid and safe securities, significant reductions in monetary policy rates, and eventually sharp downward revisions in the market's outlook for economic activity and inflation.

3.42 As the crisis deepened, with continued decline in yields in government securities, a number of measures were announced both in the US and the euro area that aimed at supporting the financial system, strengthening consumer confidence, sustaining economic activity and ensuring credit availability for households and the corporate sector. Despite these measures, the declining trends in long-term government bond yields continued as investors shifted from stocks and other risky assets to sovereign bonds. In the US, the decline in bond yields was more pronounced than in Europe as US government bonds were viewed, on average, as being more liquid than euro area government bonds. At the end of 2008, euro area and US ten-year government bond yields stood at around 3.6 per cent and 2.2 per cent, respectively, which were 75 and 184 basis points lower than the levels prevailing a year ago (Chart III.5).

Emerging Market Economies

3.43 Within EMEs, generally, CDS spreads tended to rise earlier in countries with some external vulnerabilities or where governments rely on external debt financing or have lost some market confidence (Table 3.10). In the EMEs, until August 2008, sovereign debt bond spreads generally rose proportionately with CDS spreads, implying that repricing of risk was an important factor driving the rise in bond spreads over this period.

Chart III.5: Volatility in Government Bond Yields



Note: Volatility is calculated as rolling 100 days annualised standard deviation of changes in yield on 10-year government bond.
Source: International Monetary Fund.

Table 3.10: Sovereign External Borrowings in Emerging Europe

Country	Loans in foreign currency (per cent of total loans)	Increase in CDS Spreads (basis points)
1	2	3
Czech Republic	9.1	276
Hungary	61.9	451
Poland	34.0	320
Latvia	88.4	756
Estonia	85.3	588
Bulgaria	56.3	502
Lithuania	64.0	670

Source: IMF, WEO April 2009.

3.44 Since September 2008, however, spreads have risen sharply in the EMEs, reflecting a rise in global risk aversion that partly stemmed from concerns that slowing growth and financial turmoil in developed economies would increasingly spill over into EMEs. However, in contrast to developed economies, risk spreads for many EMEs remained below levels previously reached during periods of financial crisis in these economies.

Later on

3.45 Sovereign yield curves steepened considerably as conventional monetary policy easing anchored short-term rates, while the longer end of the curve rose sharply, reflecting in part improved recovery prospects, and reduced risk of deflation. With public debt levels expected to rise significantly in many mature market economies, increased focus on fiscal sustainability may have been reflected in sovereign credit default swap spreads remaining well above their pre-crisis levels (GFSR, July 2009 update, IMF). There has been a decline in sovereign debt spreads which has been driven almost entirely by improved global risk appetite and core market liquidity, whereas domestic economic fundamentals continued to deteriorate in many countries through the second quarter of 2009. More recently, some fundamentals have started to turn around, such as the external balance and official reserves, as well as growth prospects.

3.46 Bond yield curves shifted upward and also steepened in most of the emerging East Asian markets in the first half of 2009. The upward movement and steepening of the yield curves could be due to several factors, including (i) additional market liquidity as governments issued new debt to finance fiscal stimulus; (ii) expectations that the new liquidity could add to future inflationary pressures; and (iii) improved investor expectations about economic recovery. In China and Korea, where economic growth has been strong, there has been a significant upward shift and a slight steepening in the bond yield curves. In Malaysia and Thailand, concerns about the size of fiscal deficits may have caused the yield curves to steepen significantly as well as pushing them upward.

Recent Developments

3.47 Sovereign credit risk premiums have more recently widened across mature economies with fiscal vulnerabilities. Sovereign bond markets of some European economies came under renewed stress following the debt crisis in Greece. The rising investor concerns were mirrored in the Greek bonds and credit default swap markets. The possible loss of the ECB funding source pushed up CDS premia and yield spreads in Greek sovereign bonds. Yield spreads widened when the acute fiscal problems surfaced in Portugal and Spain. The spreads of Greek long-term sovereign bonds over German bonds rose to more than 650 basis points on April 27, 2010. In May, 2010, the EU and the IMF reached an agreement to assist Greece out of the crisis. The measures have been well received by the global financial markets so far, as reflected in terms of various indicators of the credit, government securities, and equity markets.

Impact on Foreign Exchange Market

Advanced Economies

3.48 Development in the forex market during the current financial crisis is a by-product of the developments in other financial markets such as money and credit markets which have tightened since August 2007. In the period immediately following the onset of the crisis, some pressures were noted in the foreign exchange swap markets, movements in which are generally guided by covered interest parity conditions. However, after the onset of the financial turmoil, there was a divergence between actual US dollar LIBOR rates and the implied US dollar rate from the LIBOR of the euro, pound and yen converted by the relevant foreign exchange swap, suggesting pressures in obtaining US dollar funding. Over time, spillovers emerged in the longer-term cross-currency basis swap markets as well (these are generally used for foreign currency obligations of one year or more), as it was perceived that dollar funding requirements were likely to persist. With the deepening of the crisis, US dollar funding once again became scarce in markets outside of the US, particularly in Europe, as reflected in the significant widening of the spread. To alleviate the demand for dollars from overseas, the Federal Reserve had significantly expanded its swap operations with other major central banks.

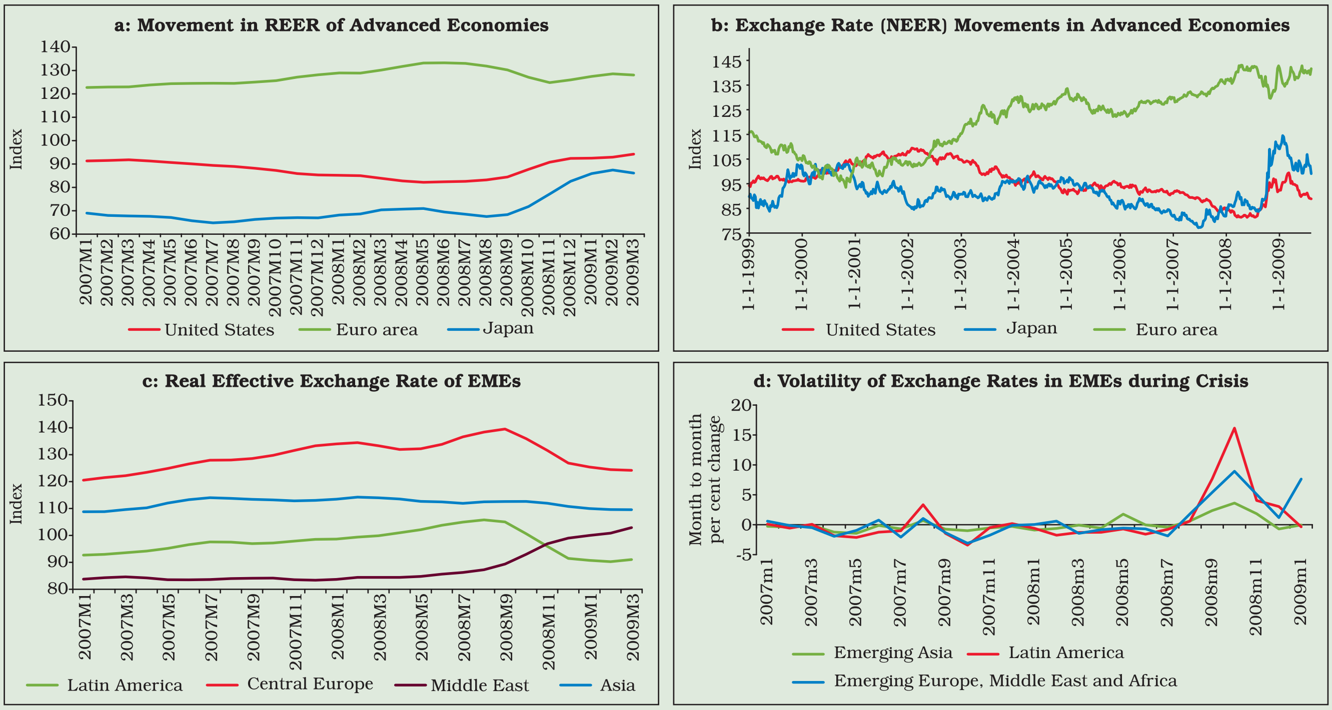
3.49 The increase in volatilities in the foreign exchange markets, in line with other markets, reduced the attractiveness of carry trade positions during the financial turmoil. Until early September 2008, the volatility of the currencies of the G-7 had been greater than that of EME currencies. Carry trades involve investors borrowing in a low-yielding currency and using the proceeds to invest in a high-yielding one. The strategy implicitly relies on expectations that exchange rate movements will not fully compensate for the interest differential. However, volatility in markets raises the risk and reduces the rewards of carry trades. Carry trade positions have been partially unwound since the onset of the financial turmoil, and may have been a factor in some share market movements or currency movements for the destination countries, which generally have relatively high nominal interest rates – for example, Brazil, Colombia, Hungary, Iceland, Indonesia, Turkey and South Africa. On the other side of the transactions, appreciation pressures have been seen at times in some funding currencies (which are primarily developed economy currencies), especially the Japanese yen (IMF, GFSR, April 2009).

3.50 Among the advanced economies, the Japanese yen in real effective terms exhibited an appreciating trend, while the euro and the pound sterling depreciated during the initial period of the crisis (Chart III.6). Sharp appreciation of the real effective value of the yen since late 2007 has depressed Japan’s exports. In contrast, the tradable sector in the UK has benefited from a substantial reduction in the effective value of the sterling. A real depreciation of the euro also helped euro area exports in 2008, but the exchange rate appreciated during the first quarter of 2009. In the United States, however, the dollar’s appreciation during the second half of 2008 and the first quarter of 2009 implied that the exchange rate, on balance, has become more neutral in the evolution of trade over the past year. In nominal terms, both the euro and the pound sterling depreciated strongly against the US dollar betweeen March 2008 and March 2009, while the Japanese Yen appreciated against the US dollar during the same period. All these currencies, however, experienced nominal appreciation against dollar between March 2009 and February 2010.

Emerging Market Economies

3.51 Developments in the foreign exchange markets of the EMEs broadly reflected the

Chart III.6: Movement in Exchange Rates



Source: International Monetary Fund.

developments in their equity markets. Capital outflows during 2008 and early part of 2009 significantly weakened currencies in some countries, notably India, Korea, New Zealand, and Vietnam. Several countries have responded by intervening to support their currencies, in contrast to the past several years when most Asian countries were concerned about the rapid appreciation of their currencies (Table 3.11).

Table 3.11: Exchange Rates: Appreciation (+)/Depreciation (-) of Currencies against the US dollar

(per cent)

Currency	end-March 2007 over end-March 2006	end-March 2008 over end-March 2007	end-August 08 over end-March 2008	end-March 2009 over end-August 2008	end-March 2009 over end-March 2008	end-Feb. 2010 over end-March 2009
1	2	3	4	5	6	7
Euro	10.7	19.0	-7.4	-9.3	-16.0	1.4
Pound Sterling	13.7	2.0	-9.1	-21.4	-28.6	6.1
Japanese Yen	-0.2	17.5	-8.2	11.2	2.0	9.9
Chinese Yuan	3.8	10.1	2.8	-0.1	2.6	0.1
Russian Ruble	6.7	10.6	-4.3	-27.7	-30.8	13.6
Turkish Lira	-2.9	5.3	11.0	-29.3	-21.6	8.4
Indian Rupee	2.3	9.0	-8.7	-14.1	-21.5	10.2
Indonesian Rupiah	-0.5	-1.1	0.7	-20.9	-20.4	24.0
Malaysian Ringgit	6.6	8.5	-5.9	-7.1	-12.6	7.0
South Korea Won	3.3	-5.0	-9.1	-21.3	-28.4	19.4
Thai Baht	11.0	11.2	-7.8	-3.8	-11.3	7.3
Argentine Peso	-0.6	-2.2	4.7	-18.6	-14.9	-4.4
Brazilian Real	5.9	17.1	7.4	-29.4	-24.2	-27.6
Mexican Peso	-1.2	3.6	5.5	-29.2	-25.3	11.5
South African Rand	-14.7	-10.1	5.1	-18.8	-14.7	23.1

3.52 The real effective exchange rates of Asian, Latin American and Central European currencies appreciated during the financial crisis till August 2008. Subsequently, real effective exchange rates (REER) have depreciated in line with the nominal depreciation in the exchange rate of these currencies against the US dollar (Table 3.12). The depreciations were in part the consequence of the strengthening of the US dollar with respect to the most important currencies of the world, a decline in the worldwide demand for Asian and Latin American exports, and strong negative pressures in the financial markets of the region. For the Middle East countries, however, the REER remained largely flat till October 2008 and their currencies have appreciated thereafter.

Later on

3.53 With the exception of Argentina and Brazil, the currencies of almost all the emerging market economies have reversed their decline and strengthened against the US dollar since the second quarter of 2009. In emerging Asia, the Indonesian rupiah, the Korean won, the Indian rupee and the Malaysian ringgit appreciated by 24.0 per cent, 19.4 per cent, 10.2 per cent, and 7.0 per cent, respectively, against the US dollar between end-March 2009 and end February 2010. Moreover, most Asian countries have strengthened their external positions – they are running current account surpluses, maintaining large foreign reserves, and diversifying exports to withstand the recession-induced unprecedented fall

Table 3.12: Movement of Real Effective Exchange Rates of Select Emerging Countries

(Base: 2005=100)

Period	India	China	Brazil	Russia	S.Korea	Thailand	Mexico	Indonesia	Singapore
1	2	3	4	5	6	7	8	9	10
2006-07	98	102	112	112	107	111	99	117	102
2007-08	106	106	125	118	103	115	98	113	103
2008-09	98	118	122	122	79	113	92	107	108
2009-10	97	117	134	118	79	112	87	114	108
2008									
August 2008	102	115	140	125	89	112	103	116	107
September 2008	99	119	128	126	82	112	100	117	107
October 2008	96	123	111	127	72	113	87	112	108
November 2008	97	124	111	132	70	112	87	99	110
December 2008	94	121	104	125	71	109	86	101	110
2009									
January 2009	95	121	110	113	72	110	83	103	109
February 2009	95	126	111	105	69	111	79	99	109
March 2009	91	125	112	114	69	112	80	100	108
April 2009	93	122	116	108	75	112	86	105	107
May 2009	94	120	122	117	78	112	86	109	108
June 2009	95	116	128	119	77	113	85	110	107
July 2009	95	116	129	115	77	112	85	111	108
August 2009	95	117	134	112	77	112	86	112	108
September 09	94	117	135	115	78	111	83	112	107
October 09	96	115	140	117	79	111	84	115	108
November 09	98	113	141	120	80	111	85	115	108
December 09	99	115	140	118	80	111	88	116	108
2010									
January 2010	102	114	140	121	83	113	89	120	109
February 2010	102	118	138	122	82	114	89	120	108
March 2010	105	116	142	131	84	116	92	121	109
April 2010	107	116	145	123	86	117	94	123	111
May 2010	108	120	144	131	83	119	90	123	112

Note : Data are on trade-based weights derived from manufacturing trade flows, and capture both direct bilateral trade and third-market competition by double-weighting.

Source : Bank for International Settlements and Reserve Bank of India.

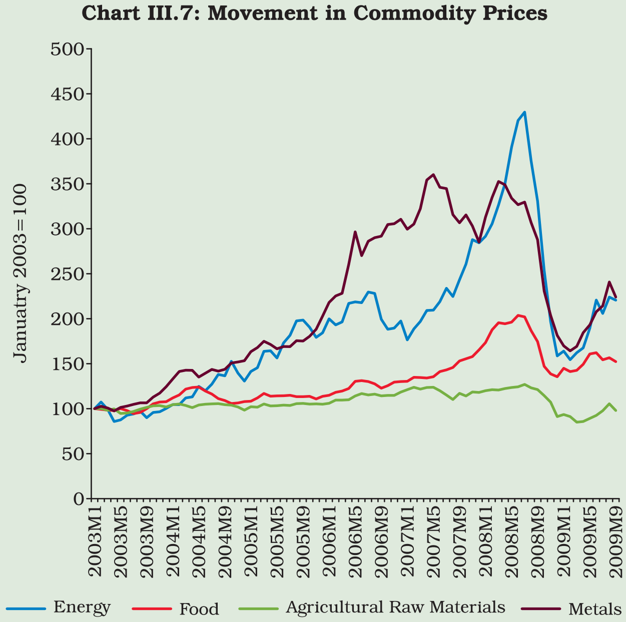
in their exports. There is clear evidence of recovery in capital flows to the EMEs, particularly, China and India. This has resulted in a appreciation of the currencies of most of the emerging market economies in the real effective terms since the beginning of 2010. With further reform in renminbi exchange rate regime announced on June 19, 2010, the exchange rate of many EMEs appreciated.

Impact on Commodity Market

Pre-Lehman: Rising Commodity Prices

3.54 The impact of the financial crisis on the commodity market has been indirect through changes in demand and supply of various commodities at various stages of the crisis. During the initial stages of the financial turmoil, commodity prices were pushed higher as investors sought to hedge against a depreciating US dollar and higher inflation. With the deepening of the financial crisis, as uncertainties and risk aversion in financial markets increased, investors switched to commodity markets. This reinforced a build-up of the commodity price bubble up to July-August 2008. The price of oil nearly tripled from US$ 50 in early 2007 to over US$ 140 in July 2008. Brent crude oil prices peaked on July 11, 2008 at US$ 147.5 per barrel. The case was similar with many other commodities which recorded multi-year peaks during the first half of 2008 (Chart III.7).

Chart III.7: Movement in Commodity Prices



Post-Lehman: Declining Commodity Prices

3.55 The deepening of the financial turmoil since the collapse of Lehman Brothers in September 2008 and deteriorating global economic prospects ended the commodity price boom. The magnitude and volatility of price changes rose to unprecedented levels in the case of certain commodities. By the end of 2008, the IMF primary commodity price index had declined by almost 55 per cent from its peak in July 2008. Brent crude prices declined to around US$ 40 per barrel on account of lower demand due to the economic slowdown. OPEC'S decision to cut supply by a sizable portion failed to prevent prices from falling, amid expectations of an expansion in OPEC production capacities in 2009 and 2010 when new fields are expected to come online (ECB Annual Report, 2008). For the year as a whole, however, the average price of Brent crude oil was US$ 98 per barrel during 2008, which was 35 per cent above the average of the previous year.

3.56 Like oil, the prices of non-energy commodities were volatile throughout 2008. During the second half of 2008, as energy prices started to decline, non-energy commodity prices followed. Metal prices, which started to decline in 2007, dropped more sharply in the second half of 2008 and in early 2009. Food prices have also fallen, although not as dramatically as oil prices because of their relatively weak link to global growth.

3.57 After bottoming out in February 2009, commodity prices recorded sharp recovery thereafter. By the end of 2009, the IMF commodity price index had risen more than 40 per cent from its trough, mainly due to large increase in the petroleum and metal prices (Table 3.13). Petroleum prices strengthened with improved global economic and financial conditions. The sharp price rebound in metal was mainly driven by stronger than expected recovery in the emerging economies (China in particular), as well as sustained cut in production.

Impact on Housing Market

Advanced Economies

3.58 The decline in US home prices was the most important trigger for the market turmoil which has

Table 3.13: Movement in Global Commodity Prices

(Real commodity price indices monthly average 1990-99=100)

	December 2009	Peak March 2008	Trough February 2009	Average 2000-09
1	2	3	4	5
Commodity Price Index	172.1	230.6	123.2	133.6
Nonfuel	106.2	131.4	85.2	89.0
Food	97.4	122.7	88.9	82.6
Beverages	120.1	110.7	99.6	77.6
Industrial Inputs	114.2	143.7	79.4	97.6
Agricultural Raw Materials	73.8	77.7	58.9	75.2
Metal	162.3	222.3	103.9	124.3
Fuel	271.9	380.9	180.7	201.1
Crude Oil	283.5	392.6	161.5	203.3

Source : IMF, WEO, April 2010.

persistently affected many mature economy financial systems since August 2007. In most euro area countries, the deceleration in property price inflation, which characterised 2007, continued in 2008 with prices (including commercial property prices) even falling in some countries. On the positive side, the deceleration in the growth of loans to the household sector and a decline in house price inflation contributed to a moderation of the risks. However, a less favourable outlook for the labour market and for households' disposable income points to a possible emergence of risk in the ability of households to service their debts (Box III.1).

Emerging Market Economies

3.59 Housing prices in emerging Asia have not experienced the sharp decline witnessed in the US or EU (Chart III.8). The declines in emerging Asian housing prices have been moderate and are nowhere near as pronounced as those seen in the region's equity markets. Intuitively, property prices are determined by local conditions and there is much less scope for contagious effects from industrialised countries, in particular the US.

3.60 To sum up, almost all segments of the global financial markets experienced tremors of the financial crisis, though to varying degrees. The interbank market was one of the first financial market segments to be affected by the crisis. The interbank markets of the mature economies suffered from a severe liquidity crisis as banks became reluctant to lend to one another for fear of counterparty risks. Later, the crisis spread to the money markets taking the form of abnormal level of spreads, shortening of maturities, and contraction, or even closure, of some market segments. The sharp slowdown in credit growth worked as a channel for transmitting the crisis from financial institutions to the real economy, particularly in the advanced economies where banks seek to reduce leverage and rebuild capital bases. Global stock markets, particularly the emerging stock markets, have borne much of the heat of the crisis as equity markets all over the world witnessed high volatility and sharp declines in prices, turnover volumes and market capitalisation. During the second half of 2009, however, there have been some signs of recovery in the health of global stock markets. Commodity markets have also witnessed significant corrections since the second half of 2008 following the adverse impact of the crisis. Government bond markets all over the world witnessed large swings in yields driven mainly by the direct and indirect consequences of the intensified financial crisis. Corporate bond markets of advanced economies exhibited relative resilience during the current financial crisis even though corporate bond issuance from the EMEs declined significantly amid heightening of spreads, since the second half of 2008.

3.61 Policy interventions on an unprecedented scale, encompassing quantitative and credit easing policies, extraordinary liquidity measures and government guaranteed funding programs have helped restore normalcy in the functioning of short-term money market, equity and corporate bond markets and the foreign exchange market. Credit growth on the other hand, continued to remain sluggish in most of the advanced economies and some of the emerging market economies reflecting both supply and demand side weaknesses. While commodity prices started gaining strength with the global economic recovery, sovereign bond markets have come under pressure in some of the mature market economies, with weak fiscal fundamentals.

Box III.1
Impact of Declining Asset Prices on Household Wealth

Over the past few years, a combination of factors, like the asset price boom, robust economic growth, rapid financial innovation and low interest rates generated speculative bubbles in the matured economies, which encouraged banks, other financial institutions, households and firms to leverage their balance sheets by increasing their borrowings. Therefore, during the financial crisis, once asset prices started to decline, high debt burdens turned out to be unsustainable, especially as subdued activity began to limit economic growth. This led to a sharp deterioration in household wealth, among others which, in turn, emerged as a key factor leading to the sharp downturn in economic growth.

In the aftermath of the sub-prime crisis, the wealth effect of asset prices and its relevance in conditioning consumer behaviour and decisions relating to consumption and saving have assumed major policy significance. Within asset prices, the decline in equity prices and nominal house prices had the most pronounced impact on household wealth. Declining house prices impact household wealth from both directions. While declining asset prices have a direct negative impact on household wealth, falling house prices imply a reduction in the implicit rental cost of housing, offsetting some of the negative wealth effects. Moreover, lower prices make houses more affordable for prospective homeowners, reducing their need to save for a given down payment. However, during the current financial crisis, in general, these positive effects could not offset the negative impact of declining asset prices on household wealth.

Overall, from the second quarter of 2007 to the fourth quarter of 2008, US households lost around 20 per cent (about US$ 13 trillion) of their net worth; as a percentage of disposable income; this loss was greater than the wealth accumulated over the previous five years. Wealth losses in the euro area have also become more widespread across assets and countries. Decline in household wealth, particularly in the matured market economies due to erosion of asset prices, had direct implication for consumption expenditure. The economic literature suggests that consumption expenditure of households depends on a number of factors, including real interest rate, income uncertainty, growth rate of non-property income, liquid assets, illiquid financial assets, and housing wealth (Muellbauer 2008). The impact of wealth contraction on consumer expenditure is likely to vary across countries depending on institutional arrangements. Although researchers disagree on the estimates of the wealth effect on consumption, the impact of housing wealth is generally assumed to be significant – ranging in several studies between 3 and 7 cents per dollar in Australia, Canada, the United States and the United Kingdom. It is assumed to be relatively small for the euro area. Equity extraction from housing wealth was significant in Australia, Canada, the United Kingdom and the United States during the upswing, so household spending is likely to be more affected in these countries than in others. Some estimates suggest that in the United States about 1.75 per cent of consumption annually was financed through home equity withdrawals during 2001–05, or 3 per cent if withdrawals used to repay non-mortgage debts are included. In the United Kingdom, home equity withdrawal has reversed, plummeting from over 7 per cent of post-tax income in 2003 to –1 per cent in 2008. By contrast, equity extraction played a relatively minor role in household spending in the euro area as a whole because of both a low home ownership ratio and, in some countries, a less developed mortgage market.

With consumption deteriorating faster than income, household saving rates increased in several advanced economies, particularly in those where they had been low. The United States recorded a sharp rise in savings of almost 4 percentage points of disposable income (to 4.2 per cent) between the last quarter of 2007 and the first quarter of 2009. Australia and the United Kingdom also saw a jump in household savings, from almost zero and a negative saving rate in the first quarter of 2008 to 8.5 per cent and 4.8 per cent, respectively, in the fourth quarter. The propensity to save of euro area households also increased markedly, with the saving rate rising by 1 percentage point (to 15.1 per cent) in the final quarter of 2008. In addition, the steep decline in the value of pension fund assets may force individuals nearing retirement, who have defined contribution pension schemes in which benefits are linked to the market value of assets, to increase saving or defer retirement. In the case of defined benefit plans, the large funding gaps could harm the financial position of the corporations sponsoring them and reduce their ability to provide guaranteed benefits or maintain existing employment.

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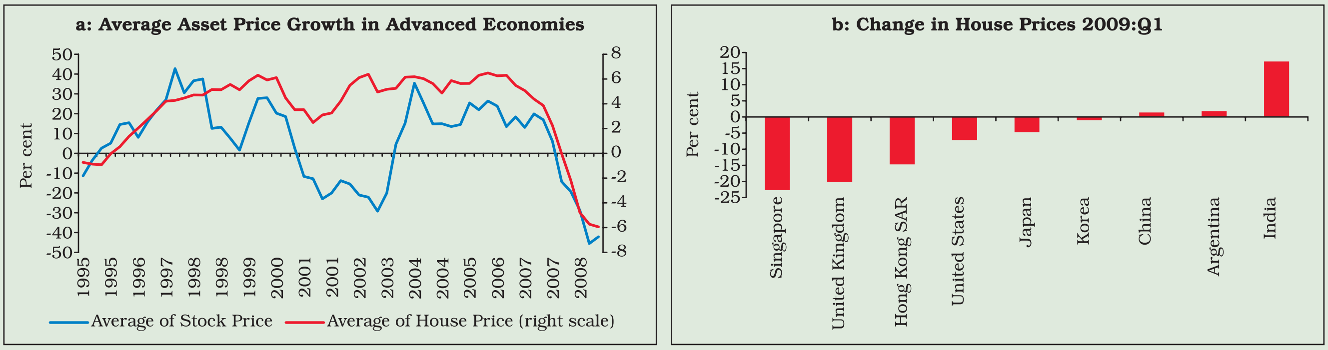
3. Muellbauer, John. 2008. "Housing, Credit and Consumer Expenditure." *CEPR Discussion Paper* No. 6782. April.

Chart III.8: Movement in House Prices



Note: Year-on-year inflation adjusted percentage change.
Source: International Monetary Fund.

II. IMPACT ON FINANCIAL SYSTEM

3.62 As discussed in the previous chapter, the flawed institutions and practices of the New Financial Architecture – characterised by a globally integrated system of giant bank conglomerates and the ‘shadow banking system’ comprising investment banks, hedge funds and bank-created Special Investment Vehicles – were possible factors behind the recent financial crisis. Naturally, therefore, the recent financial crisis had the most severe impact on financial institutions, particularly of the advanced economies. The crisis has brought to the forefront the major weaknesses inherent in the US financial system and the regulatory framework that did not recognise the systemic risks posed by the ‘shadow banking system’ and the build-up of housing and credit bubbles. Over time, the ‘shadow banking’ institutions became almost as important as commercial banks in providing credit to the US economy, but were not subject to the same regulatory controls. On the other hand, these entities were vulnerable because they borrowed short term in liquid markets to purchase long-term, illiquid and risky assets. Moreover, these institutions as well as certain regulated banks had also assumed significant debt burdens and did not have a financial cushion sufficient to absorb large loan defaults or MBS losses. All these factors together made the US financial system increasingly fragile and vulnerable to crisis.

3.63 At the onset of the crisis, as the US real estate bubble burst, rapid devaluation of mortgage-related assets led to massive write-downs on financial institution balance sheets, eroding their capital base. Disruption in the credit markets subjected them to rapid deleveraging and sell-off of their long-term assets at depressed prices. This gave rise to mounting losses on the balance sheet of the financial institutions. The collapse of two Bear Stearns funds in June 2007 marked the onset of the sub-prime crisis. The crisis, however, turned worse in September 2008 when, within a few days, Lehman Brothers filed for bankruptcy, Merrill Lynch was bought by Bank of America, and American International Group (AIG) received a rescue package from the US Federal Reserve (US Fed). This was accompanied by the failure of a number of significant financial institutions. These developments resulted in unprecedented policy interventions including large bailouts by the US government and central banks, which led to dramatic changes in the US financial landscape.

3.64 The pressure built up in the US financial system spread rapidly to Europe. In Europe, one of the first victims of the crisis was the British bank, Northern Rock, which had to request security from the Bank of England. This led to investor panic and a bank run in mid-September 2008. In Europe, apart from the UK, the crisis was also transmitted rapidly to the euro area, which had deep financial linkages with the US. Many banks as well as other financial institutions in the euro area, such as insurance companies and asset managers, had large exposures to US assets. Many of them were over-leveraged and depended on benign conditions for liquidity to continue flowing. As a result, with the onset of the crisis in the second half of 2007, financial institutions including large and complex banking groups (LCBGs) in the euro area started getting affected. For LCBGs, financing became more expensive and difficult to access, thereby adding pressures on these institutions to reduce the size of their balance sheets (ECB Financial Stability Report, December 2008). As early as September 2007, companies and non-banking financial institutions accelerated their withdrawal even from the short-term financing of banks, and the banks were increasingly losing confidence in extending loans to one another, leading to a rapid rise in the costs of financing. As a result, credit to the real sector almost stopped and many of the institutions were only able to make overnight borrowings.

3.65 With limited direct exposures to riskier assets and derivatives, financial sectors in most EMEs were not impacted severely, although a decline in investor confidence led to fears of bank vulnerabilities in the case of some EMEs. This prompted authorities in those EMEs to take measures such as implementing deposit guarantees and making liquidity available to domestic banks to reassure depositors and counterparties. The banking system in emerging Europe was more vulnerable as it relied significantly on funding from external banks and from bond issuance. In these countries, lower-rated banks were exposed the most to drying up of external finance.

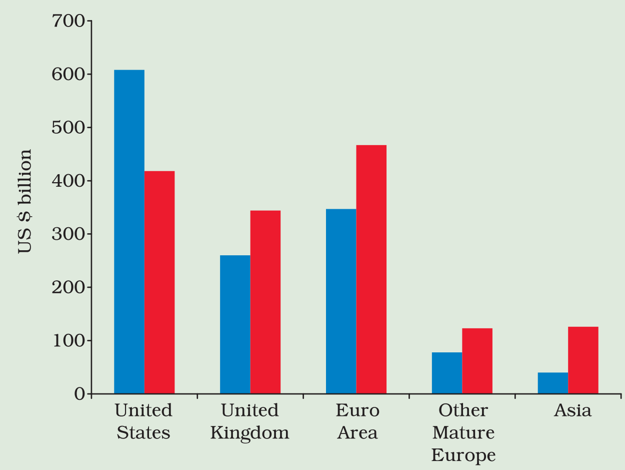
Impact on Banks

3.66 The report of the London Summit, 2009 identified three distinct phases through which the banking industry has been affected by the current financial crisis. In the first phase, market participants realised that they had underestimated the risks associated with a number of structured loans. Demand for these products fell sharply, driving down their prices. As no bank knew which other bank was more exposed to these assets, they became wary of lending to each other. In the second phase of the crisis, banks started announcing losses made on structured loans and other impaired assets. These losses, combined with deteriorating macroeconomic conditions in the advanced economies, turned uncertainty about the value of impaired assets into concerns about the solvency of a number of banks. In the third phase, the failure of the large US investment bank, Lehman Brothers, triggered a sharp intensification of the crisis. Banks stopped trusting each other and their customers stopped trusting their banks. There was loss of confidence in the international financial system. Starting with the UK's recapitalisation plan in October 2008, a large number of governments adopted policies that restored trust in the banking system. In this phase, however, bank losses were more closely connected to borrowers' defaults owing to deteriorating macroeconomic performance Bank losses in Asia were the least, reflecting limited direct exposures to impaired assets and relatively sound macroeconomic fundamentals (Chart III.9).

Commercial Banks

3.67 During the current crisis, the pro-cyclicality in banking, *i.e.*, lowering of lending standards in an upturn and tightening of lending standards in a downturn, was exposed. The profitability of banks plunged in 2008 owing to the realisation of losses on mark-to-market (securities) portfolios, the

Chart III.9: Realized and Expected Writedowns of Loss Provision for Banks



Realized writedowns or loss provisions: 2007:Q2-2009:Q2

Expected additional writedowns or loss provisions: 2009:Q2-2010:Q4

Source: International Monetary Fund.

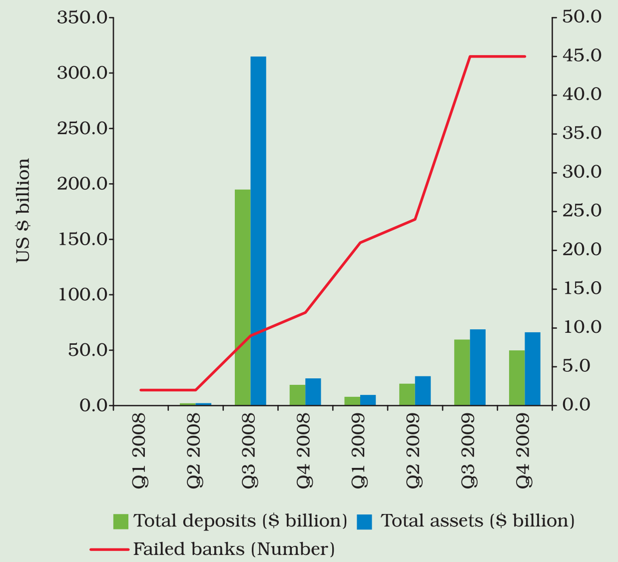
progressive deterioration of loan books as the economic slump deepened, and increases in operating costs. Although the decline in bank profits was a global phenomenon, the way banks have been affected by the crisis has differed somewhat according to the circumstances in their respective home markets (Table 3.14).

Advanced Economies

3.68 The pre-tax profits of US banks more than halved in 2008 compared with the previous year. There was a surge in US bank failures in 2008 during which a total of 25 deposit-taking institutions failed; their combined assets were US$ 372 billion, about 10 times higher than during the previous peak in bank failures in 1993 (Chart III.10). The failure of Washington Mutual alone accounted for US$ 307 billion of the total and was the largest US bank failure in history. The bank was eventually absorbed by JPMorgan Chase, another large bank, with the assistance of the supervisory authorities. Besides the failed banks, the number of institutions on the US deposit insurer's list of problem banks swelled to 252 with total assets of around US$ 159 billion. Further large bank failures were averted as weakened institutions were acquired by others with healthier balance sheets.

3.69 In Europe, profits plummeted across the board with banks in the UK, Switzerland and the Netherlands registering net losses from their exposure to structured finance investments. The slowdown in real estate markets posed large challenges to banks in Spain, Ireland and the UK. Certain German banks were also affected by real estate exposures, *albeit* mainly indirectly through securities positions and exposures to commercial property. In Germany, the crisis led to the restructuring of the domestic banking sector as it acted as a catalyst for a number of bank mergers (ECB Annual Report, 2008). French and Italian

Chart III.10: Bank Failures in the United States



Source: Federal Deposit Insurance Corporation

Table 3.14: Profitability of Major Banks as a Percentage of Total Average Assets

	Pre-tax profits			Loan loss provisions			Operating costs		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
1	2	3	4	5	6	7	8	9	10
Australia	1.5	1.4	1.0	0.1	0.1	0.3	1.6	1.4	1.5
Canada	1.2	1.1	0.5	0.1	0.1	0.2	2.4	2.3	2.0
France	0.7	0.4	0.1	0.1	0.1	0.2	1.2	1.2	1.2
Germany	0.4	0.3	-0.4	0.1	0.1	0.2	1.0	0.9	1.2
Italy	1.1	0.9	0.3	0.3	0.3	0.4	2.2	2.0	2.3
Japan	0.5	0.3	0.1	0.0	0.1	0.2	0.5	0.6	0.7
Netherlands	0.5	0.3	-0.8	0.1	0.1	0.3	1.1	1.0	1.3
Spain	1.4	1.4	1.1	0.3	0.4	0.5	1.8	1.8	1.9
Sweden	1.0	0.9	0.7	-0.0	0.0	0.1	1.0	1.0	1.00
Switzerland	0.8	0.4	-1.9	0	0.0	0.1	1.5	1.8	2.6
UK	0.9	0.7	-0.1	0.3	0.2	0.4	1.6	1.4	1.3
US	1.7	1.0	0.4	0.2	0.5	1.1	3.0	3.3	3.4

Source: Bank for International Settlement (2009), 79th Annual Report, 2008-09.

banks were less affected by losses on structured finance investments given their stronger focus on the domestic retail market. A number of European lenders averted outright bankruptcy through direct support from the public sector. As a manifestation of the global financial crisis, the market capitalisation of the euro area's large and complex bank groups (LCBGs) collectively dropped by almost Euro 200 billion between mid-September and late November 2008, bringing the cumulative decline since the turmoil erupted to around Euro 450 billion, which is more than half the aggregate market value of these banks immediately prior to August 2007.

3.70 Having put the loan problems of the previous decade behind them, Japanese banks were thought to be in a position to gain from the weaknesses of their international competitors. In the initial months of 2008, the Japanese banking industry showed relative resilience to the financial crisis mainly because of smaller exposures to sub-prime and structured products. However, with the progress of the crisis, the profitability of Japanese banks turned poor, partly because of their structurally narrow net interest margins. Consequently, their capital base weakened. Moreover, any plans for international expansion were put on hold in the second half of 2008 when the domestic economy fell into recession and losses intensified.

3.71 In sum, during the initial phase of the crisis, banks mostly faced funding pressures and mark-to-market losses. As the macroeconomic situation worsened from September 2008, financial institutions faced increasing pressure on earnings and mounting losses on their credit risk exposures (Table 3.15). Bank losses witnessed a shifting pattern in line with the evolution of the crisis. Initially bank losses/write-downs were closely linked to traded portfolios of structured finance products and securitised exposures to the sub-prime mortgage

Table 3.15 : Banking Indicators – Select Countries

Region	Banks' Provision to Non-Performing Loans (per cent)				Bank Return on Assets (per cent)			
	2007	2008	2009	Latest	2007	2008	2009	Latest
1	2	3	4	5	6	7	8	9
Latin America								
Argentina	129.6	131.4	123.0	November	1.5	1.6	2.4	November
Brazil	181.9	189.0	156.0	October	2.9	1.5	1.2	October
Chile	210.2	179.9	177.5	December	1.1	1.2	1.2	December
Mexico	168.9	161.2	163.8	September	2.7	1.5	1.2	September
Emerging Europe								
Hungary	64.8	58.9	51.2	September	1.2	0.8	1.1	September
Poland	-	61.3	50.2	September	1.7	1.6	1.2	September
Russia	144.0	118.4	94.8	December	3.0	1.8	0.7	December
Asia								
China	39.2	116.4	155.0	December	0.9	1.0	1.1	June
Hong Kong SAR	78.4	71.5	68.3	September	1.9	1.8	1.6	September
India	56.1	52.6	-	March	0.9	1.0	1.0	March
Indonesia	104.5	118.6	127.4	April	2.8	2.3	2.6	September
Korea	205.2	146.3	125.2	September	1.1	0.5	-	December
Malaysia	77.3	89.0	93.3	November	1.5	1.5	1.2	September
Philippines	81.5	86.0	91.4	September	1.3	0.8	1.1	September
Singapore	115.6	109.1	91.0	September	1.3	1.0	1.1	September
Thailand	86.5	97.9	-	December	0.1	1.0	-	December
Advanced Economies								
Australia	181.8	74.8	68.0	September	1.0	0.7	0.6	June
Canada	42.1	34.7	59.1	September	0.8	0.4	0.4	September
Japan	78.3	83.2	83.2	September	0.3	-0.2	0.2	September
United States	91.7	75.3	58.1	December	0.8	0.0	0.1	December

Source: IMF, GFSR, April 2010.

market. Losses were exacerbated by illiquidity in the markets for those instruments, which led to substantial reductions in their mark-to-market valuations. While there was considerable uncertainty about the magnitude of the losses and their distribution across the system, they were perceived as being contained within a certain class of assets. At a later stage, bank losses/write-downs became more directly linked to a surge in borrower defaults and to anticipated defaults, as evidenced by the increase in the amount and relative importance of provisioning expenses on account of slowdown in economic activity. Loan loss provisions as a fraction of bank assets were higher in 2008 than in previous years. Compared with 2007, the rate at least doubled for Australian, French, Swiss and US banks and jumped even higher in the case of German, Dutch and Swedish lenders.

Emerging Market Economies

3.72 Although the banking sector of most EMEs remained sound, a decline in investors' confidence led to fears of bank vulnerability in some of the EMEs. Moreover, the significant presence of foreign banks within many EMEs, particularly in Europe and Latin America, raised a further potential source of contagion during periods of financial stress. Banks in emerging Europe relied heavily on external financing, with the foreign banking sector being an important conduit for funds. Banks in Asia remained relatively resilient.

3.73 The relative resilience of emerging Asia's banking and financial systems during the current financial crisis reflects a number of factors: (i) the Asian financial system was bank-dominated and banks generally had not invested in the illiquid assets, which were at the heart of the current financial crisis; (ii) Asian financial institutions had limited exposure to US sub-prime mortgages and structured credit products mainly on account of the more cautious risk management and the strengthening of the regulatory structure that resulted both from Japan's banking crisis in the late 1990s and the 1997 financial crisis in emerging Asia (Table 3.16); (iii) relatively strong bank balance sheets with a return to profitability, as impaired loans from the 1997/98 Asian financial crisis have been worked off; (iv) improvements in risk and liquidity management; (v) strengthening of supervisory and regulatory systems; and (vi) moves by banks into new and profitable domestic business lines, such as consumer lending. The move into consumer lending implies an absence of the strong search for yield that led many banks and other financial institutions in industrialised countries to take on too much leverage and risk (Asian Development Bank, 2009).

Table 3.16: Select Asian Banks with Exposure to Lehman Brothers

Bank	Economy	Exposure (US $ million)
1	2	3
Citibank (Hong Kong, China branch)	Hong Kong, China	275
Mega Financial	Taipei, China	200
Industrial and Commercial Bank of China	China	152
Banco de Oro	Philippines	134
Bank of China	China	129
Bangkok Bank	Thailand	101
Bank of Nova Scotia (Singapore branch)	Singapore	93
Development Bank of the Philippines	Philippines	90
Shin Kong Fin	Taipei, China	80
Metropolitan Bank and Trust Company	Philippines	71

Source: ADB Outlook 2009.

3.74 Asian banks had limited exposures to US sub-prime mortgages and a very small percentage of the write-downs reported globally since the sub-prime debacle originated in Asia, the bulk of which were concentrated in Japan and to a lesser extent in China. Meanwhile, Asian banks have raised large amounts to boost their capital positions. The new capital not only replenished depleted amounts, but also cushioned against potential losses arising from future problematic loans.

3.75 Banks across the Asian region also held generally comfortable domestic currency liquidity cushions. During the current global crisis, a lower loan-to-deposit ratio (less than 1) in the case of many countries implied an absence of liquidity risk arising from foreign liabilities (Table 3.17). Loan-to-deposit ratios across the region, with the exception of Korea, have been rather conservative

Table 3.17: Bank Ratios

(as of Q2 of 2008)

	Ratio of Loans to Domestic Deposits	Ratio of Loans to Total Liabilities	Ratio of Foreign Liabilities to Domestic Deposits
1	2	3	4
China	0.72	0.71	0.01
India	0.95	0.94	-
Hong Kong	0.54	0.30	0.80
Korea	1.40	1.15	0.22
Singapore	0.85	0.51	0.68
Taipei, China	0.79	0.71	0.10
Indonesia	0.78	0.73	0.06
Malaysia	1.08	0.94	0.13
Philippines	0.57	0.50	0.14
Thailand	1.05	1.00	0.07
Vietnam	1.04	0.96	0.09

Source: ADB Economics Working Paper Series No.139.

and many banking systems report high ratios of short-term assets to liabilities. These cushions reflect the increased attention to liquidity management since the 1997-98 crisis along with relatively subdued levels of lending to the corporate sector in recent years. Various indicators suggest the overall soundness of the region's banking systems in terms of profitability and operational efficiency. Some pressures on domestic currency liquidity were, however, seen in a number of countries during the later stage of the crisis.

3.76 In view of the emphasis on strengthening capital requirements in recent years, the risk-weighted capital adequacy ratios (CRAR) were comfortable and continued to provide a strong capital cushion to the banks in emerging Asia and Latin America (Table 3.18). This was true even in Korea where the banking system was relatively more vulnerable given the greater reliance on external borrowing. During 2008, the ratio of non-performing loans to total loans generally decreased in the Asian economies, while it increased in advanced countries perhaps reflecting the impact of the crisis. Within

Table 3.18: Banking Indicators – Select Countries

Region	Risk-Weighted Capital Adequacy Ratio (per cent of risk-weighted assets)				Non-Performing Loans (per cent of Commercial Bank Loans)			
	2007	2008	2009	Latest	2007	2008	2009	Latest
1	2	3	4	5	6	7	8	9
Latin America								
Argentina	16.9	16.8	18.6	November	2.7	2.7	3.1	November
Brazil	18.7	18.3	18.2	October	3.0	3.1	4.5	October
Chile	12.2	12.5	14.3	December	0.8	1.0	1.4	December
Mexico	15.9	15.3	15.9	September	2.7	3.2	3.4	September
Emerging Europe								
Hungary	10.4	11.1	13.1	September	2.3	3.0	5.9	September
Poland	12.0	10.8	13.1	September	5.2	4.4	7.0	September
Russia	15.5	16.8	20.9	November	2.5	3.8	9.6	December
Asia								
China	8.4	12.0	10.0	November	6.2	2.4	1.6	December
Hong Kong SAR	13.4	14.8	16.6	September	0.8	1.2	1.5	September
India	12.3	13.0	13.2	March	2.5	2.4	2.4	March
Indonesia	19.3	16.8	17.5	October	4.1	3.2	3.8	September
Korea	12.3	12.3	14.2	September	0.7	1.1	1.5	September
Malaysia	13.2	12.7	14.6	November	6.5	4.8	3.8	November
Philippines	15.7	15.5	15.8	September	5.8	4.5	4.6	September
Singapore	13.5	14.7	16.5	September	1.5	1.7	2.3	September
Thailand	14.8	13.8	—-	December	7.9	5.7	—-	December
Advanced Economies								
Australia	10.2	11.4	11.7	September	0.2	0.8	1.1	September
Canada	12.1	12.2	14.5	September	0.7	1.1	1.2	September
Japan	12.3	12.4	14.3	September	1.4	1.6	1.8	September
United States	12.8	12.8	14.3	December	1.4	2.9	5.4	December

Source: IMF, GFSR, April 2010.

Asia, in countries like Hong Kong, Korea, Indonesia and the Philippines, the ratio of non-performing loans to total loans was comparatively higher in 2009; the same trend was seen in emerging Europe.

3.77 Like emerging Europe, some Latin American EMEs had a large presence of foreign banks. Mexico had a concentrated exposure with around 40 per cent of its banking assets held by just two foreign banks. However, in contrast to emerging Europe, many of these foreign banks were locally funded, highly profitable and contributed to overall group income. Moreover, commercial banks in Latin America did not invest to any significant degree in 'toxic' financial instruments, but they had been hit by the sharp contraction in external credit. The institutions in Latin America were not exposed significantly to external risks as they focused mainly on domestic markets, which resulted in not incurring risks similar to financial institutions in the advanced countries and in emerging Europe. Latin America had also been helped by the relatively small size of the national financial systems and strong supervision and prudential regulations (ADB, 2009).

Later on

3.78 Bank failures in the US continued in 2009 and 2010, even as the US economy showed tentative signs of recovery. As per the records of Federal Deposit Insurance Corporation (FDIC), there are reports of 83 bank failures in the US in the first half of 2010. Notwithstanding the bank failures, confidence in the US banking system has been bolstered by better-than-expected earnings, a successful stress testing exercise, the commitment by the US government to stand behind the largest banks, and a series of bank capital raising. However, the loss ratios continue to remain high. In Europe, universal banks have also benefited from better earnings and capital increases. Given largely domestically-focused business and relatively strong economic activities, the profitability of emerging Asia's banking systems generally remained high and Asian banking and financial systems weathered the financial turmoil relatively well. Despite generally good profits and low non-performing loan ratios, increased signs of stress in the financial sector emerged in a number of Asian economies, largely due to falling income from fees and commissions amid the economic deceleration. Overall, however, the emerging Asian banks continued to remain in good health till date.

3.79 In the recent months, some of the European banks having exposure to euro area countries facing market pressures (Greece, Ireland, Portugal and Spain) have come under renewed stress. French and German banks were particularly exposed to the residents of those four countries, with a combined exposure of US$ 958 billion at the end of 2009. Banks headquartered in the United Kingdom, on the other hand, had large exposures to Ireland (US$ 230 billion). Government debt, however, accounted for a smaller part of euro area banks' exposure to those countries than claims on the private sector.

Investment Banks

3.80 The crisis has impacted the banking industry as a whole, but investment banking seems to have taken a more severe blow than commercial banks. During the boom phase in 2004-07, the top five US investment banks (Lehman Brothers, Bear Stearns, Merrill Lynch, Goldman Sachs and Morgan Stanley) significantly increased their financial leverage, which increased their vulnerability to a financial shock. These five institutions incurred over US$ 4.1 trillion in debt for fiscal year 2007, which constituted about 30 per cent of US nominal GDP. The crisis left deep scars on these institutions. The magnitude of their losses reached very high levels as all lines of business were affected. Securities underwriting declined during 2008 as primary market issuance slowed and associated revenues fell. In comparison, the merger and acquisition advisory business held up better, although it also slowed in the first quarter of 2009. More generally, investment banking operations were reduced across the board.

3.81 During the crisis, large holdings of high-risk structured securities and unhedged exposures in the securitisation pipeline were marked down dramatically. The illiquidity of asset and funding markets proved particularly challenging for the investment banks, which could no longer rely on an increasing volume of transactions to generate revenue growth or on cheap and readily available short-term financing to support high levels of leverage. As a result, firms' balance sheets shrank in size and employment in these institutions declined radically. Staff strength at Bear Stearns and Lehman Brothers were cut by more than half as their operations were taken over by other institutions. Decline in staff strength at other firms broadly mirrored the size of their realised losses. The net revenue for the largest investment banking operations was estimated to have fallen by more than 90 per cent in the third quarter of 2008 compared with the same period a year earlier, as market activity seized up.

3.82 As a result of the deep impact of the crisis, Lehman Brothers was liquidated, Bear Stearns and Merrill Lynch were sold at low prices, and Goldman Sachs and Morgan Stanley turned into commercial banks, subjecting themselves to more stringent regulation. With the exception of Lehman Brothers, all these institutions required or received government support. On the other hand, Fannie Mae and Freddie Mac, the two US government-sponsored enterprises, owned or guaranteed nearly US$ 5 trillion in mortgage obligations at the time they were placed into conservatorship by the US government in September 2008. These seven entities were highly leveraged and it is estimated that they together had US$ 9 trillion in debt or guarantee obligations reflecting an enormous concentration of risk, yet were not subject to the same regulation as depository banks.

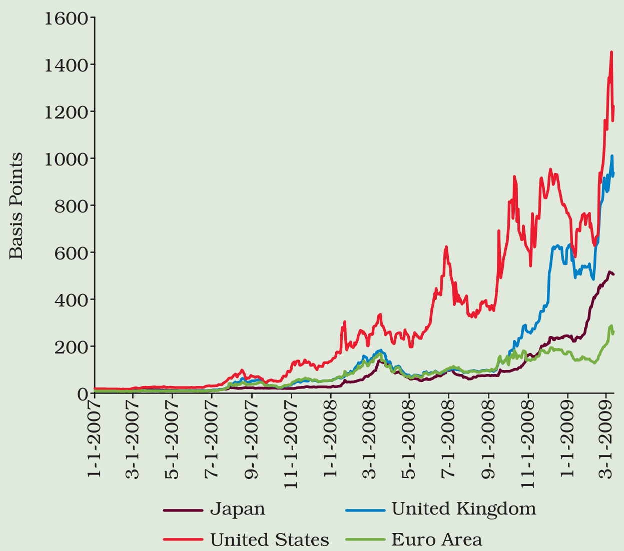
Insurance Funds

3.83 During the crisis, insurance companies faced adverse conditions on both sides of their balance sheet due to lower long-term interest rates and asset price declines. The impact of the asset market slump was reflected primarily in the performance of financial asset portfolios of the insurance companies. Insurance companies suffered losses as prices fell across a broad array of asset classes. For life insurance companies, the decline in the level of long-term yields also meant an increase in liabilities on long-maturity policies.

3.84 The market capitalisation of insurance companies came under similar pressures as banks due to exposure to risky assets (notably, mortgage-related securities and commercial real estate loans) and as a result of weakening macroeconomic conditions. For the majority of insurance companies, the main effect of the crisis has been on their financial performance rather than on premium income. The firms affected most by the crisis were those involved in the provision of credit risk insurance. Monoline insurers (more formally known as Finance Guaranty Insurers), which specialise in the provision of credit guarantees, have been a conduit for contagion across markets during the crisis. The protection that they offer is dependent on their maintaining a high credit rating (usually AAA). However, as losses mounted, credit ratings of most monolines were downgraded, which placed pressure on the ratings of all the debt that they had insured, reflecting the higher probability that investors will face losses. As the creditworthiness of borrowers declined, concerns about the ability of monoline insurers to honour their guarantees mounted and led to significant mark-to-market losses for banks that had purchased insurance.

3.85 Some global insurers continued to report large losses during the second half of 2008, in particular due to their insurance underwriting of credit and structured credit products. The US insurer, AIG, suffered heavy losses during the second and third quarters of 2008. These troubles led to rating downgrades in September 2008, which forced the insurer to post collateral payments on derivatives trades. AIG was unable to raise enough capital to satisfy demands for collateral quickly enough, which resulted in the Federal Reserve Bank of New York offering AIG a two-year loan of up to US$ 85 billion to give the ailing insurer the opportunity to sell some of its assets in an orderly fashion. In return, the US government received an equity interest of 79.9 per cent in AIG. The near-collapse of AIG was directly linked to the underwriting of credit risk. Its write-downs surged along with soaring CDS spreads (Chart III.11). The size of its liabilities and the central role its credit

Chart III.11: Insurance Sector Credit Default Swap Spread



Source: IMF, Global Financial Stability Report, April 2009.

derivatives operation played as counterparty in the over-the-counter market repeatedly necessitated extraordinary official intervention to provide substantial financial support.

Hedge Funds

3.86 Hedge funds, along with institutional investors, are considered to be a major channel of financial transmission from advanced to emerging market economies and they have been instrumental in the development of local markets. Hedge funds, in particular, have been important for providing liquidity to financial markets in EMEs and facilitating genuine hedging activities. Although hedge funds had not played a central role in shaping the dynamics of the crisis, they were also been severely affected by the financial crisis. Hedge funds performed very poorly during 2008 with almost all investment strategies showing negative results as returns in asset markets plummeted and the cost of funding soared. As counterparties pressed for increased transaction margins and investors withdrew funds on an unprecedented scale, the industry contracted sharply. Estimates of assets under management shrank by more than one-third in the course of the second half of 2008, with bad performance and customer withdrawals playing an equal role in the decline. A number of funds closed. Many fund managers attempted to preserve capital by restricting withdrawals, thereby lengthening investors' effective lock-in period.

3.87 Outflows of foreign capital from emerging equity markets and subsequent depreciation of their currencies were attributed to unwinding of positions by some global hedge funds (Table 3.19). Interestingly, Asia-focused hedge funds have been among the worst performers worldwide, with their returns consistently below those of other emerging market funds (Finance and Development, IMF, December 2008).

3.88 On the positive side, the crisis is likely to accelerate the trend towards greater institutionalisation and transparency within the hedge fund industry. It is already evident that to avoid the fate of smaller funds that were liquidated as a result of investor withdrawals, many larger funds have oriented their marketing towards institutional investors. Such a shift demands greater transparency about the investment strategy and greater scrutiny of risk management processes. Responding to the challenges of the investment environment, some of the larger funds introduced lower fee schedules and processes that pay closer attention to the needs of large institutional clients. Finally, a number of official recommendations for the reform of the prudential framework imply tighter oversight of the industry. Such reforms include the registration of all hedge funds, more demanding reporting requirements for the larger funds and

Table 3.19: Emerging Market Hedge Funds

(US $ billion)

Year	Net asset flows	Estimated assets
1	2	3
2002	-5.7	23.7
2003	3.4	34.2
2004	4.7	46.3
2005	5.3	55.1
2006	8.0	81.8
2007	9.1	116.7
2008 Q1	0.6	111.1
2008 Q2	1.0	122.7
2008 Q3	-2.6	90.4
2008 Q4	-6.7	67.0

Source: IMF estimates: GFSR April 2009.

direct supervision of those whose operations have implications for systemic stability.

3.89 To sum up, financial institutions were the worst sufferers of the financial crisis. With the onset of the crisis, commercial banks suffered from a decline in profitability and large mark-to-market losses, which later gave rise to bank failures in the US and other mature economies in Europe. The banking system of the emerging market economies, on the other hand, reflected relative resilience during the crisis on account of their limited exposure to the affected asset classes and the regulatory and supervisory measures taken to strengthen their balance sheets in the aftermath of the East Asian crisis. The crisis almost sidelined the investment banking industry, which was instrumental in triggering the crisis. The crisis also heavily impacted the financial performance of monocline insurers and hedge funds and, in the case of the latter, the crisis accelerated the trend towards greater institutionalisation and transparency.

III. IMPACT ON THE EXTERNAL SECTOR

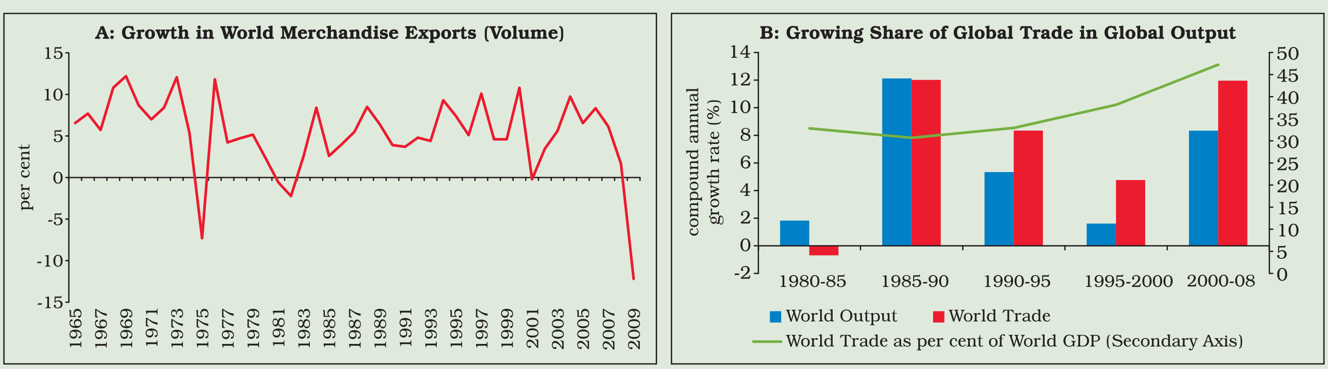
International Trade

Trade Openness

3.90 The volatilities in the financial markets along with the slowdown in economic activities in the advanced economies were transmitted to the EMEs through both trade and financial channels on account of the increased global integration witnessed in recent years. Over the past quarter-century, the growth in world trade at about 6 per cent was almost double the rate of world output. As a result, the share of world trade in world GDP increased and stood at over 53 per cent in 2008 (Chart III.12). Apart from trade liberalisation, this can also be attributed to rapid developments in financial markets which led to financialisation of global trade. But the same developments also widened the scope for economic turmoil when global conditions deteriorated. For instance, trade finance which is now being increasingly used for financing trade was severely affected during the crisis as the financial markets tumbled.

3.91 The rising importance of trade in the global economy masks the underlying regional variations. For example, Asian exports grew at an average rate of above 10 per cent and those of Latin America and the Caribbean by about 7 per cent, which are higher than the world average of 6 per cent during the past quarter-century. This led to increasing openness of these economies as reflected in the share of their trade in GDP (Table 3.20). The share of international trade in developing countries' output grew from 35 per cent in 1980 to 57 per cent in 2007. The sharp increase in trade not only created new markets for producers in the developing world but also lowered prices for consumers. The growing integration of developing economies with the global economy and the increasing importance of their firms and households in international finance over the past decade have brought enormous economic and financial benefits. But rising trade integration

Chart III.12: International Trade – Trends and Significance



Note: Trade and output data are in value terms.

Table 3.20: Trade Openness – Select Countries

(per cent of GDP)

Region	2001	2002	2003	2004	2005	2006	2007	2008
1	2	3	4	5	6	7	8	9
Latin America								
Argentina	17.0	34.9	33.7	36.8	37.3	37.2	37.8	38.5
Brazil	20.5	21.3	22.0	24.0	21.8	21.0	21.1	23.6
Chile	50.6	50.5	53.5	58.0	60.7	64.4	68.2	73.2
Mexico	48.6	47.0	47.9	50.7	51.4	53.1	54.0	55.1
Emerging Europe								
Czech Republic	113.0	105.2	109.4	123.2	123.2	131.5	137.6	131.7
Poland	47.8	50.8	58.9	66.9	64.3	70.8	72.4	71.8
Russia	50.8	50.9	49.1	47.4	48.3	47.3	44.7	45.5
Asia								
China	37.6	41.8	50.7	58.4	62.2	64.8	62.8	58.0
Hong Kong SAR	234.2	247.7	287.0	319.4	330.1	341.8	343.7	349.9
India	21.5	22.6	23.8	27.5	32.1	35.3	34.5	41.7
Indonesia	57.3	48.5	44.1	47.2	54.7	48.7	47.1	49.9
Korea	57.4	54.2	57.9	66.2	64.5	66.8	69.4	92.7
Malaysia	169.8	167.2	167.2	181.2	181.5	181.5	169.5	N.A
Philippines	96.7	96.8	96.1	95.8	89.4	84.9	74.6	65.3
Singapore	298.8	297.5	315.4	335.3	353.9	364.4	333.7	N.A
Thailand	101.8	97.0	101.7	111.1	122.1	116.9	111.6	121.7
Advanced Economies								
Australia	34.1	32.8	29.6	30.0	31.9	34.4	33.2	37.9
Canada	69.6	66.9	61.2	61.4	60.0	58.2	56.4	57.5
Japan	17.0	17.8	18.7	20.5	22.9	26.4	28.6	29.6
United States	18.2	17.5	17.8	19.3	20.4	21.5	22.1	23.5

Note: Trade openness is measured by the ratio of exports plus imports to GDP.
Source: 1. International Financial Statistics, IMF.
2. World Economic Outlook Database, IMF.

also widened channels through which a slowdown in economic activity in advanced economies could spread to the EMEs.

3.92 During the recent financial crisis, the evolution of international trade has mirrored that of economic activity. International trade flows, which had grown robustly in recent decades mainly on account of waves of liberalisation, suddenly abated by the end of 2008 and then strongly contracted in some areas, further propagating the effects of the crisis across countries. According to the IMF's estimates, world trade (goods and services) contracted by 10.7 per cent in 2009 after recording a subdued growth of 2.8 per cent in 2008 (Table 3.21). World trade volumes fell on three other occasions after 1965 (0.2 per cent in 2001, 2.0 per cent in 1982, and 7.0 per cent in 1975), but none of these episodes approached the magnitude of decline observed in 2009. The decline in world trade volume was much higher than the earlier plunge, showing the large impact of the recent financial crisis through the increased integration of

Table 3.21 : Developments in World Trade Volumes

(per cent)

Item	2007	2008	2009	2010P
1	2	3	4	5
World trade volume (goods and services)	**7.3**	**2.8**	**-10.7**	**7.0**
Imports				
Advanced economies	4.7	0.6	-12.0	5.4
Emerging and developing economies	13.8	8.5	-8.4	9.7
Exports				
Advanced economies	6.3	1.9	-11.7	6.6
Emerging and developing economies	9.8	4.0	-8.2	8.3
Commodity prices (US dollars)				
Oil	10.7	36.4	-36.3	29.5
Non-fuel (average based on world commodity export weights)	14.1	7.5	-18.7	13.9

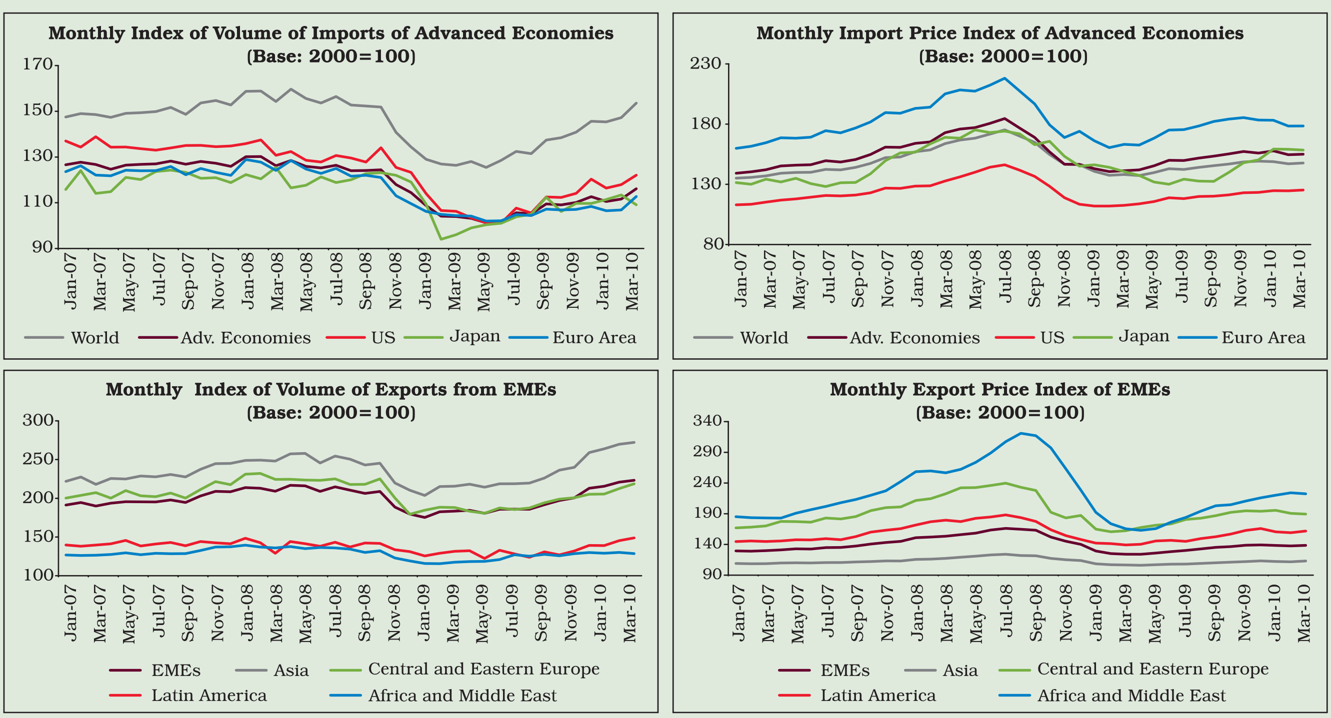
P : Projection.
Source: World Economic Outlook, April 2010, IMF.

global trade across countries. According to the World Trade Organisation (WTO), the year 2009 witnessed the sharpest decline of 12.2 per cent in world trade in more than 70 years. Currently, world trade is in a recovery phase and set to rebound in 2010 by growing at 9.5 per cent (WTO, 2010).

What Explains the Steep Fall in Trade?

3.93 The declines in trade flows since October 2008 were larger than in past slowdowns due to several factors. First, the impact of the US sub-prime crisis had its first-order impact on shortages of liquidity in the advanced economies through the loss of assets. With the loss of wealth, households in the US and in European countries responded by cutting their discretionary spending. This seems to have had a particularly pronounced effect on demand for manufactured goods. The contraction in consumption demand along with investment demand in the major economies led to a sharper fall in the imports of the advanced economies. These developments were reflected in the sudden fall in exports from EMEs, particularly those where a major portion of the exports were to crisis-hit advanced countries (Chart III.13). Second, the decline in trade growth from October 2008 was due not only to volume decline but also to sharp reductions in prices in line with the decline in demand. This decline in the EMEs' export prices was sharper than the fall in import prices of the advanced economies, which was reflected in the large decline in EME exports in value terms. Third, the sharp declines in trade flows can be attributed to the increasing presence of global supply chains in total trade; goods cross many frontiers during the production process and components in the final product are counted every time they cross a frontier (WTO, 2009). Fourth, there was a shortage of trade finance (discussed later). Fifth, the rising tendency for protective measures could contribute to trade contraction, although there is no clear evidence on this count. Sixth, the decline in spending on consumer durables in advanced countries over the second half of 2008 has sharply reduced EME exports of automobile and information technology (IT) products. In the recent downturn, the inventory-to-sales ratio of electronic goods had risen sharply in East Asia, and their exports and production had decreased.

Chart III.13: Monthly Trade Performances



Impact across Regions

3.94 The impact of declining trade was felt across all regions, although the extent varied depending on the importance of manufacturing exports in the economy (Chart III.14). Among developed countries, Germany and Japan, for instance, have been worse affected by their declining exports of manufactures than other countries. It is mainly the demand for investment and durable consumer goods that was severely affected. This is not only because the consumption of such goods can be more easily deferred than that of food and basic services, but also because their acquisition partly relies on credit, which was more difficult and costly to obtain. As a result, countries that have a high share of investment and durable consumer goods in their total output experienced a larger fall in industrial production and overall GDP growth than others. Australia and Canada were also affected by a fall in commodity prices. In Latin America, exports have fallen in all countries, but the impact of the crisis has been particularly strong in countries such as Mexico where GDP was contracting rapidly since the last quarter of 2008. Mexico relies heavily on exports of manufactures to the United States, and they had also been affected earlier and to a greater extent than other countries due to lower income from tourism and workers' remittances.

3.95 Against the backdrop of increased global integration and specialisation in manufacturing production chains, developing economies in Asia experienced a strong contraction in economic activity following the slowdown in advanced economies (Box III.2). The synchronised fall in exports intensified in the first quarter of 2009 with an average year-on-year decrease of around 25 per cent in most EMEs (Table 3.22). In other Asian countries, such as China, India and Indonesia, declining exports of manufactures have had a less dramatic effect on industrial output and GDP owing to their large and still expanding domestic markets.

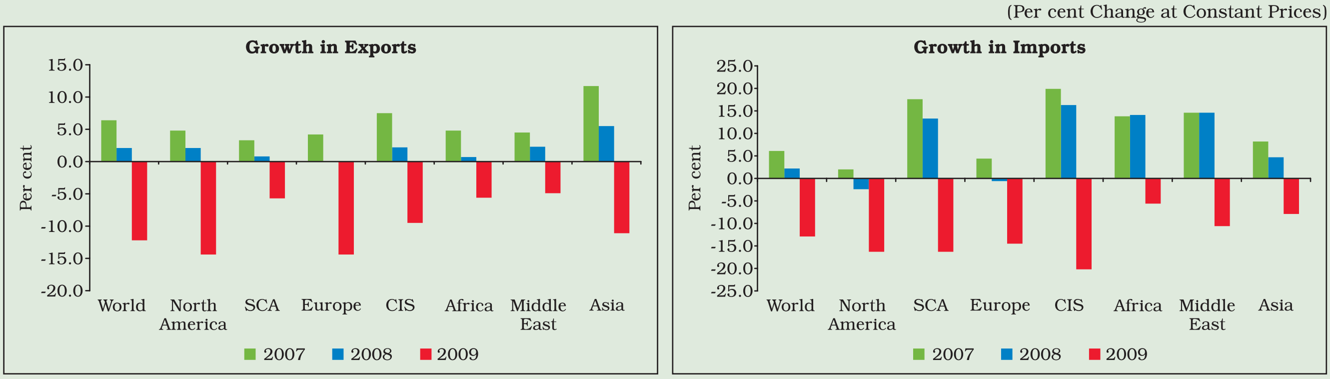
3.96 The global economy is now beginning to pull out of the recession. Emerging Asia is leading the global rebound and looks set to emerge from the global downturn both faster and stronger than any other region. This quick turnaround in Asia benefited greatly from policy stimulus, and public demand more than offset the drag from net exports. Going forward, Asia will not be able to count on strong external demand at least in the near term as global recovery is expected to be sluggish. It is essential to build the foundation of sustained growth through infrastructure and financial development and improvements in corporate incentives, rather than relying too much on export demand. Further, by developing or improving social safety nets and healthcare systems, many emerging and developing economies can boost domestic consumption.

Trade in Services

3.97 The global financial and economic crisis has also affected trade in services. The growth of world

Chart III.14: Region-wise Trade Performance

(Per cent Change at Constant Prices)



Note: SCA: South and Central America including the Caribbean

Box III.2
Why Asian Exports Were Worst Affected

East Asia has particularly benefited from trade liberalisation as reflected in the export-led industrialisation in these countries. This is perceived to have led to intra-regional spillover effects, mainly emanating from technological transfers through direct investment from Japan, and indirectly from "hollowing out" of the industrial economies. Each shift in the industrial focus of the Japanese economy, from light to heavy electronics and hi-tech industries, created market opportunities for other economies in the region such as Korea and Taiwan. Even within the electronics industries, mid-range goods gradually began to be supplied by Korea, Taiwan, Singapore, and Malaysia, and only the most sophisticated goods were produced in Japan. More recently, as Korea, Taiwan and Singapore started specialising in the heavy and hi-tech goods sectors, the light industries were picked up by Thailand, the Philippines and Indonesia.

This sequence of industrialisation, often called the "flying geese pattern", succeeded in the East Asian economies in passing on the comparative advantages in manufacturing from a leader to the followers, and then to the followers' followers. A sequential pattern of industrialisation was observed from the agricultural sector to the industrial sector with small capital requirements to heavy and petrochemical industries, and to precision and electronics industries, with latecomers repeating the changes in industrial composition. High exports growth in the Asian countries has been possible on the back of a strong domestic industrial sector which created a base for sustainable growth. The value added in the industrial sector during the high-growth phase exceeded 10 per cent (per annum) in these economies. Today, several developing economies in Asia are part of a manufacturing supply chain for exports to advanced economies. In some of these countries, like Malaysia, the Republic of Korea, Singapore, Taiwan and Thailand, exports of manufactures represent a substantial share of their GDP.

On the back of rising manufacturing exports as well as strong domestic fundamentals, the Asian region has become a strong economic driver for the world with a rising share in output, trade and reserves (Table). During the current crisis, however, the abrupt deceleration in growth in Asia was more rapid than in other regions, and in key countries even sharper than at the epicentre of the global crisis due to the greater integration of these economies. In many ways, this severe impact was unexpected. Asia is far from the epicentre of the crisis, not just geographically but also in the sense that it did not indulge in the financial practices that led to serious problems in advanced economies' banking systems. Moreover, before the crisis, the region was in sound macroeconomic shape, and thus in a strong position to resist the pressures emanating from advanced economies. Therefore, what explains the outcome contrary to expectations? The answer lies in Asia's exceptional integration with the global economy. Much of Asia relies heavily on technologically sophisticated manufacturing exports for which demand had collapsed. At the same time, Asia's financial ties with the rest of the world have deepened over the past decade, exposing the region to the forces of global deleveraging.

Table: Developing Asia: The Emerging Economic Driver of the World

Year	Share (%) in the World			
	GDP	Exports	Imports	Reserves
1	2	3	4	5
1980	7.2	4.2	4.6	8.6
1985	8.6	4.9	5.9	15.2
1990	10.1	5.3	5.8	6.9
1995	13.5	8.2	8.8	12.3
2000	15.2	9.6	8.5	15.7
2005	18.3	12.7	11.9	27.1
2010/Latest	22.9	14.5	13.3	33.8

Source: WEO database; IFS (IMF).

Countries with a larger share of advanced manufacturing in GDP experienced sharper output declines. The underlying reason is that advanced manufacturing is more cyclically sensitive than other items. Growth in Asian economies with a lower share of manufacturing, such as commodity exporters, initially held up better, although the collapse in commodity prices hit them as well. The collapse in demand has been transmitted through the integrated supply chain with dramatic effects on intra-regional trade. The current crisis vividly illustrates that Asia has not "decoupled" from the global economy. Synchronised recession in advanced economies has further complicated the matter during the current crisis as against the experience in 1998 when the decline in domestic demand was offset to some extent by demand emanating from industrial economies.

exports of transport, travel and other commercial services decelerated from 20 per cent in 2007 to 12 per cent in 2008 (Table 3.23). Based on available data, year-on-year global exports of commercial services in the fourth quarter of 2008 fell by 7–8 per cent (WTO, 2009). Exports of transport services rose 16 per cent in 2008, while travel services and other commercial services increased by 11 per cent and 12 per cent, respectively. Maritime transport services reacted rapidly to the slowdown of global demand. Data on the deployment of both dry and liquid bulk, as well as on container ships, confirm an increasing withdrawal of vessels from service. Accordingly, the crisis led to reduced port traffic. In addition, freight rates fell substantially during the final months of 2008. After reaching a peak in May 2008, the Baltic Dry Index plunged to its lowest level by the end of October 2008. The world export of commercial services

Table 3.22: Trade Performance of Select Asian Countries

(year on year per cent change)

	2007Q1	2007Q2	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2	2009Q3	2009Q4
1	2	3	4	5	6	7	8	9	10	11	12	13
Export Growth (in per cent)												
China	28.0	27.5	26.2	22.2	21.3	22.4	23.3	4.4	-19.8	-23.5	-20.6	0.1
Hong Kong	8.3	11.1	7.8	8.3	10.7	8.1	5.6	-1.8	-21.5	-12.4	-13.8	-2.0
India	15.5	23.1	17.3	37.3	37.4	57.0	39.6	-8.4	-20.2	-34.9	-24.2	6.0
Indonesia	14.5	14.6	8.7	18.4	29.2	27.9	26.9	-7.5	-29.7	-24.7	-17.9	21.6
Japan	10.4	7.2	9.3	14.5	20.5	17.6	12.9	-10.0	-40.6	-33.9	-24.5	-1.0
Korea	14.6	14.1	9.4	18.2	17.4	23.1	27.0	-9.9	-25.2	-21.1	-17.6	11.7
Malaysia	7.6	7.8	6.9	16.1	19.2	28.9	21.4	-12.9	-28.9	-33.3	-26.4	10.1
Pakistan	0.0	4.6	4.4	12.4	22.3	24.3	17.9	-7.3	-20.0	-23.9	-13.2	10.0
Philippines	9.4	4.6	2.3	9.9	2.8	5.5	4.1	-22.3	-36.8	-28.9	-21.5	5.1
Singapore	9.9	7.2	8.4	14.8	21.2	26.4	21.2	-13.9	-32.7	-30.8	-22.4	11.8
Sri Lanka	13.0	12.5	12.1	12.1	11.5	11.1	12.0	2.8	-9.3	-22.7	-13.7	-5.6
Thailand	17.3	17.8	13.3	25.8	23.1	28.2	26.1	-10.7	-20.7	-26.2	-17.7	11.9
Import Growth (in per cent)												
China	18.2	18.3	20.5	25.3	28.9	32.7	25.7	-9.1	-30.9	-20.2	-11.7	22.7
Hong Kong	8.3	12.1	8.9	10.6	11.8	9.4	6.9	-4.0	-22.4	-14.3	-9.9	3.4
India	18.9	40.3	25.3	29.2	45.9	49.0	61.2	7.4	-25.8	-30.9	-34.8	1.2
Indonesia	14.1	14.1	18.5	15.0	42.1	51.2	43.5	12.5	-35.7	-38.0	-29.5	-4.4
Japan	4.5	4.1	4.8	16.0	25.6	28.4	32.6	6.1	-29.3	-35.6	-30.6	-15.0
Korea	13.4	14.7	7.3	25.9	28.9	30.5	42.8	-9.0	-32.7	-35.6	-31.0	1.4
Malaysia	12.4	8.2	8.0	19.7	15.8	17.3	14.4	-17.3	-36.9	-31.0	-22.6	11.8
Pakistan	6.9	2.9	8.5	19.1	49.6	47.5	33.8	-6.5	-37.8	-27.3	-29.6	1.2
Philippines	7.8	-0.7	8.5	13.9	24.1	12.1	10.4	-23.9	-33.6	-26.9	-28.9	-0.8
Singapore	8.7	6.7	4.7	20.8	32.1	35.5	32.9	-9.1	-32.5	-33.6	-25.1	3.8
Sri Lanka	3.2	4.4	9.1	23.1	38.0	34.3	29.4	-0.1	-30.3	-42.2	-32.8	-10.1
Thailand	3.7	7.3	7.9	15.4	36.4	30.6	40.1	6.1	-36.9	-33.3	-28.0	0.3

Source: World Trade Organisation.

declined by 13 per cent in 2009 with transportation services contracting by 21 per cent.

3.98 Within services, tourism was severely impacted by the crisis. International tourist arrivals to EMEs declined by 2 per cent in the second half of 2008, compared with an increase of 6 per cent recorded in the first half of the year. Data for January and February 2009 indicate a roughly 8 per cent year-on-year fall. All regions have registered negative growth, with the exception of Africa, Central and South America. West Asia, South Asia and Europe have been among the worst affected regions, with declines of 28.2 per cent, 14.6 per cent and 8.4 per cent, respectively, during 2008. According to the world tourism organisation (UNWTO), international tourist arrivals, fell by an estimated 4 per cent in 2009.

Table 3.23: World Exports of Merchandise and Commercial Services

	Value (US$ billion)	Annual percentage change			
	2009	2005-09	2007	2008	2009
1	2	3	4	5	6
Merchandise	12,147	4	16	15	-23
Commercial services	3,312	7	20	12	-13
Transportation services	704	5	20	16	-21
Travel	854	6	15	11	-11
Other commercial services	1,754	10	23	12	-10

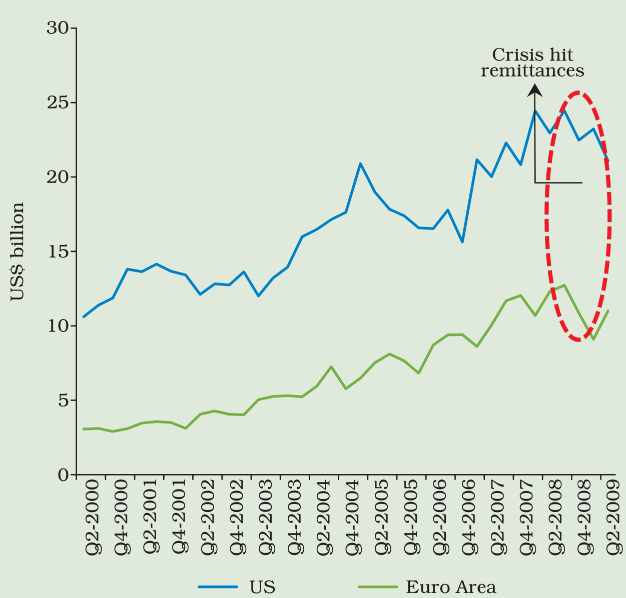
Source: WTO Secretariat.

Remittances

3.99 Remittances represent one of the largest international flows of financial resources over the past decade. For many remittance-receiving developing economies, remittances exceeded foreign direct investment, portfolio flows from financial markets and official development assistance. In some countries, total remittance receipts amount to a substantial portion of their imports and a significant share of GDP. Given the large size of aggregate remittance flows, remittances have significant macroeconomic effects on the recipient economies in terms of improving the welfare of individual households, facilitating domestic consumption, supporting investment and balance of payments.

3.100 Remittances have grown significantly over the past fifteen years particularly in Asia and Latin America, with India, Mexico and the Philippines being the largest recipients of workers' remittances. These flows have been very stable, and have acted as a counter-cyclical force in the receiving countries. However, they are highly sensitive to economic conditions in the host countries. The pace of remittances slowed sharply beginning in the third quarter of 2008 as the economic crisis gathered strength in the countries where migrants work. With many emigrants working in the US, Europe, and the Middle East, remittances started to fall in 2008, for the first time in a quarter century. Remittances outflows from the US and Europe declined during end 2008 and early 2009 (Chart III.15).

Chart III.15: Remittances Outflows



3.101 By region, East Asia and Pacific has been the largest recipient of remittances followed by South Asia and Latin America and the Caribbean (Table 3.24). There are indications that the flows of remittances to these countries slowed down in response to slower growth in the US and other advanced economies. Recorded flows to Latin America and the Caribbean have already stagnated since 2007, as the US recession, especially in the construction sector, reduced the employment and income of Latin American (especially Mexican) migrants. With further slowdown in the construction sector in the US, these countries may be particularly affected since many immigrants from these regions are employed in the construction sector. Remittances to Sub-Saharan Africa have decelerated sharply from a high growth rate of 48 per cent during 2007, partly due to significant slackening in flows to Nigeria. On the other hand, remittance flows increased to emerging Europe and central Asia (with significant migration to the Gulf region), at least earlier in the year 2008, benefiting from increases in incomes from higher oil prices. However, remittances to this region also have been severely hit during 2009.

3.102 Overall, the officially recorded remittance flows to developing countries reached US$ 317 billion in 2009, down 6 per cent from US$ 338 billion in 2008. For the first time since the 1980s, remittances to developing countries declined, *albeit* modestly, in 2009. The decline in remittance flows was the highest in Europe and Central Asia (15 per cent) and Latin America and Caribbean (10 per cent), while South Asia and East Asia and Pacific were among the least affected regions. These regional trends reveal that: (a) the more diverse the migration destinations, the more resilient are remittances; (b) the lower the barriers to labor mobility, the stronger the link between remittances and economic cycles in that corridor; and (c) exchange rate movements produce valuation effects, but they also influence the consumption-investment motive for remittances (Ratha, *et al*, World Bank, 2010). Despite a modest decline in remittance inflows, thse flows have remained more resilient compared to private debt

Table 3.24: Remittance Flows to Developing Countries, 2002-09

(US$ billions)

Country/Region	2002	2003	2004	2005	2006	2007	2008	2009e
1	2	3	4	5	6	7	8	9
All developing countries	112.6	140.4	164.4	198.9	235.4	289.4	337.8	317.2
(Per cent of GDP)	1.81	1.98	1.95	1.99	2.00	2.00	1.95	2.00
By region								
East Asia and Pacific	27.5	32.7	40.3	50.5	57.6	71.3	86.1	84.8
Europe and Central Asia	12.8	14.4	21.0	30.1	37.3	50.8	57.8	49.3
Latin America and the Caribbean	27.9	36.6	43.3	50.1	59.2	63.2	64.7	58.5
Middle East and North Africa	15.2	20.4	23.0	25.0	26.1	31.4	34.7	32.2
South Asia	24.1	30.4	28.7	33.9	42.5	54.0	73.3	72.0
Sub-Saharan Africa	5.0	6.0	8.0	9.4	12.6	18.6	21.1	20.5

e: estimate.

Source: World Bank staff estimates. Remittances are defined as the sum of worker's remittances, compensation of employees, and migrant transfers - see www.worldbank.org/prospects/migration and remittances for data definitions and the entire dataset.

and equity flows and have become even more important as a source of external financing in many developing countries.

3.103 Interestingly, migrants' remittances are concentrated in a relatively small number of recipient countries; 10 countries account for more than half of total remittances, and the three largest recipients (India, China and Mexico) for more than one-third of the total remittance inflows (Table 3.25). Remittances have a relatively large weight in many smaller and mainly low-income economies. These countries are particularly vulnerable to recession in the main immigration economies (*i.e.*, countries of the European Union, the Gulf Cooperation Council, the Russian Federation and the United States), which witnessed sharp contraction in the construction and services sectors that gave employment to the largest number of foreign workers.

3.104 The recent trend in remittances to developing countries suggests that the decline in remittances is far smaller than that for private flows to developing countries. According to the World Bank, the resilience of remittances arises from the fact that while new migration flows have declined, the stock of migrants has been relatively unaffected by the crisis. Although the aggregate decline in worldwide remittance flows as a result of the crisis was small, the situation proved more serious for some small, poor countries where remittances make up a relatively large share of GDP such as Tajikistan (50 per cent), Moldova (31 per cent), Kyrgyz Republic (28 per cent) and Lesotho (27 per cent) in 2009.

Table 3.25: Major Remittance-receiving Developing and Transition Economies in 2009

	Inflows of migrants' remittances (US$ billion)	Annual change (per cent)	Share of remittances in GDP (per cent)
1	2	3	4
Ranked by Volume			
India	47.0	-8.9	4.2
China	47.0	-3.2	1.1
Mexico	22.9	-13.1	2.4
Philippines	19.4	4.1	11.2
Bangladesh	10.4	16.0	11.4
Nigeria	9.6	-4.0	4.7
Pakistan	8.6	22.4	4.2
Poland	8.5	-20.8	2.0
Romania	8.0	-14.7	4.7
Egypt	7.8	-10.3	5.3
Ranked by Share in GDP			
Tajikistan	1.8	-28.7	49.6
Tonga	0.1	-3.7	37.7
Moldova	1.5	-21.4	31.4
Kyrgyz Republic	1.0	-17.9	27.9
Lesotho	0.5	12.0	27.3
Samoa	0.1	-2.7	25.8
Lebanon	7.0	-2.5	25.1
Guyana	0.3	-4.6	24.0
Nepal	3.0	10.4	21.6
Honduras	2.5	-10.6	20.1

Source: Authors' computations based on World Bank data.

Current Account Deficit

3.105 During 2008, the impact of the crisis on the current account of developing economies was seen in terms of reduction in current account surplus (Argentina, China, Indonesia, Philippines, Singapore and Israel) or surplus turning into deficit for countries running current account surpluses (Brazil, Chile and Korea), while the deficit of countries that had a current account deficit increased (Mexico, Hungary, Poland and India) (Table 3.26). On the other hand, for some countries the impact of the crisis was not visible in their current account as their current account surplus increased (Russia, Hong Kong and Saudi Arabia). In the course of 2009, global imbalances contracted to some extent with reduction in current account deficits/surpluses of several countries notably the US and China.This trend was supported by substantial decline in oil prices, fall in asset prices forcing increased household savings in deficit countries and steep fall in the export demand of investment goods affecting the surplus countries.

Table 3.26: Cross-country Movement of Trade Balance and Current Account Balance

(as % of GDP)

Country	Trade Balance					Current Account Balance				
	1990	2000	2007	2008	2009	1990	2000	2007	2008	2009
1	2	3	4	5	6	7	8	9	10	11
Latin America										
Argentina	6.1	0.9	5.1	4.7	6.0	3.3	-3.1	2.3	1.5	2.8
Brazil	2.1	-0.1	2.9	1.5	1.6	-0.7	-3.8	0.1	-1.7	-1.5
Chile	4.1	2.8	14.6	5.2	8.6	-1.5	-1.2	4.4	-1.5	2.2
Mexico	-0.3	-1.3	-1.0	-1.6	–	-2.8	-3.0	-0.8	-1.5	-0.6
Emerging Europe										
Czech Republic	–	-5.5	3.4	2.9	–	–	-4.7	-3.1	-3.1	-1.0
Hungary	1.6	-6.2	0.2	0.0	–	1.1	-8.5	-6.8	-7.2	0.4
Poland	5.8	-7.2	-4.0	-4.9	-1.0	1.9	-5.8	-4.8	-5.1	-1.6
Russia	–	23.2	10.1	10.8	9.1	–	18.0	6.0	6.2	3.9
Turkey	-4.7	-8.3	-7.2	-7.2	–	-1.3	-3.7	-5.8	-5.7	-2.3
Emerging Asia										
China	2.3	2.9	9.3	8.0	–	3.1	1.7	11.0	9.4	5.8
India	-1.6	-2.3	-5.3	-7.9	–	-2.5	-1.0	-1.0	-2.2	-2.1
Indonesia	4.3	15.1	7.6	4.5	6.5	-2.5	4.8	2.4	0.0	2.0
Korea	-0.9	3.2	2.7	0.6	6.7	-0.7	2.3	0.6	-0.6	5.1
Malaysia	5.7	22.2	20.0	23.1	–	-2.1	9.0	15.7	17.5	16.7
Philippines	-9.1	-7.9	-5.8	-7.7	–	-6.1	-2.9	4.9	2.2	5.3
Thailand	-7.9	9.5	10.8	6.6	–	-8.3	7.6	6.3	0.6	7.7
Other EMEs/NIEs										
Singapore	-4.4	15.1	27.4	16.4	–	8.5	11.6	27.6	19.2	19.1
Hong Kong SAR	–	-4.8	-9.5	-10.7	–	6.2	4.1	12.3	13.6	11.1
Israel	-4.7	-3.1	-3.4	-3.6	-0.1	0.3	-1.8	2.9	0.7	3.7
Saudi Arabia	19.6	26.4	39.1	44.6	–	-3.6	7.6	24.3	27.9	5.5
South Africa	5.8	3.5	-2.0	-1.6	0.2	1.4	-0.1	-7.2	-7.1	-4.0
Advanced Economies										
Australia	0.1	-1.2	-1.9	-0.5	–	-4.8	-3.8	-6.1	-4.4	-4.1
Austria	-4.2	-2.1	0.5	-0.1	-0.8	0.7	-0.7	3.1	3.5	1.4
Canada	1.6	6.2	4.2	4.2	0.9	-3.4	2.7	1.0	0.5	-2.7
France	-1.1	-0.2	-2.2	-3.0	–	-0.8	1.6	-1.0	-2.3	-1.5
Germany	4.4	2.9	8.1	7.2	–	2.9	-1.7	7.6	6.7	4.8
Japan	2.3	2.5	2.4	0.8	–	1.5	2.6	4.8	3.2	2.8
United Kingdom	-3.2	-3.4	-6.4	-6.5	-5.8	-3.8	-2.6	-2.7	-1.5	-1.3
United States	-1.9	-4.5	-5.9	-5.8	-3.6	-1.4	-4.2	-5.2	-4.9	-2.9

–: Not Available.

Source : World Economic Outlook, April 2009; International Financial Statistics, IMF.

3.106 Although the crisis originated in the financial sector of advanced economies, it had implications for the current account position of many developing countries through the trade channel. In this context, the much debated issue of the sustainable size of current account deficit has again attracted attention from a country-specific perspective. The issue becomes more pertinent in the light of severe reversal of capital flows in EMEs, which necessitated a re-look at the conventional rules derived on the basis of historical experiences. It was historically argued that CAD/GDP ratio above 5 per cent was a cause for alarm (Summers, 1996), especially if the deficit is financed by short-term debt (Milesi-Ferreti and Razin, 1996). The Chilean crisis in the early 1980s was associated with CAD/GDP ratio exceeding 14 per cent. The external crisis in Mexico in the early 1990s also witnessed a high CAD/GDP ratio averaging 7 per cent. Indonesia, Malaysia, the Philippines and Thailand also witnessed persistently large current account deficits during the East Asian crisis of the mid-1990s. Similarly, the payments crisis in Brazil in 2001 reinforced the view that the size of the current account deficit does matter. The levels of current account deficits from the viewpoint of sustainability drew more focused attention in the policy debates during the East Asian crisis. In fact, large current account deficits were considered an important factor in the East Asian crisis (Corsetti, Pesenti and Roubini, 1998; Radelet and Sachs, 2000).

Impact on Global Capital Flows

3.107 Apart from trade, the sub-prime crisis spread through the financial channel, especially through capital flows. Trade flows and capital flows generally interact with each other during normal times, while during a crisis the one that is impacted first by the crisis influences its counterpart, magnifying the overall impact. The flow of capital between nations, in principle, brings benefits to both capital-importing and capital-exporting countries. But historical evidence, reinforced by the recent global financial crisis, clearly shows that it can also create new exposures and bring new risks.

3.108 Capital flows to developing and emerging market economies were very large before the crisis, especially during 2002-2007 (Table 3.27). According to the IMF's World Economic Outlook, 2009, net private capital flows to 143 emerging markets and five small open economies rose from US$ 90 billion in 2002 to around US$ 600 billion in 2007. Although the structure of flows has become more stable, capital flows continue to be very volatile and this has major macroeconomic implications for recipient countries. Almost one-quarter of the total domestic capital formation of the developing countries was funded by foreign capital in the years immediately preceding the crisis.

3.109 It is noteworthy that the expansion of capital flows has been much greater than that of international trade flows (Goldstein, Mathieson and Lane, 1991; Montiel, 1993). This reflects the combined effect of several factors such as greater financial liberalisation, rise of institutional investors such as mutual funds and pension funds, growing financial innovations and financial market developments, intermediation in derivative products and improvement in information technology. The process has been reinforced by the ongoing abolition of impediments and capital controls and the widespread liberalisation of financial markets in developing countries since the 1990s. In the process, capital flows to developing countries witnessed compositional shifts with the dominance of private (bond and equity) flows in recent periods, as opposed to official flows in the past. While specialised investors such as hedge funds and

Table 3.27: Capital Flows in EMEs: Various Episodes Compared*

(US$ billion)

	Inflows	Outflows	Forex reserves change	Current account balance
1	2	3	4	5
1993-1996	280	110	90	-85
1997-2001	269	193	89	21
2002-2007	951	818	584	429

* All EMEs as defined in the IMF World Economic Outlook plus Hong Kong SAR, Korea, Israel, Singapore and Taiwan (China); annual average.

Sources: IMF, Balance of Payments Statistics; Central Bank of China (Taiwan).

mutual funds accounted for the bulk of portfolio inflows up to the mid-1990s, subsequently it was the pension funds, insurance companies and other institutional investors who increased their presence in emerging markets. International bank lending to developing countries also increased sharply during the 1990s, and was most pronounced in Asia (prior to the Asian Crisis), followed by Eastern Europe and Latin America.

3.110 The pace, magnitude, direction and composition of international capital flows have crucial implications for the recipient countries. The surge in private capital inflows to developing economies in the 1990s (*i.e.*, up to the Asian financial crisis in 1997-98) and in the 2000s has coincided with a period of low international interest rates in the advanced economies and domestic policy reforms in the developing world. This led to a debate in the literature on whether the surge was driven primarily by domestic or external factors. The literature usually distinguishes between two sets of factors affecting capital movements. The first are country-specific 'pull' factors relating to improved policies that increase the long-run expected return or reduce the perceived risk on real domestic investment, while the second ones are global or 'push' factors such as easy liquidity and the search for yields in the US and other advanced economies.

3.111 Historically, most emerging market crises of the 1980s and 1990s were associated with reversals in gross private capital inflows that reflected a loss of confidence in emerging market policies. Developments in capital flows during the current crisis are, however, somewhat different. With the notable exception of some Central and Eastern European countries, many emerging market economies adopted sound policies before the crisis and thus were more resilient to reversals in capital flows, at least initially. But as the crisis deepened, some developments in capital flows followed a pattern similar to that of past crises, because the nature of capital flows to the developing economies has undergone dramatic changes over time. While in the past official flows dominated capital flows to the developing economies, at present the bulk of capital flows come from private (bond and equity) sources. Thus, even though most developing countries maintain better policies and have stronger institutions than they did during previous crises, many of them are nevertheless vulnerable to external disruptions. Emerging market equities and investments have always been sensitive to the global economic cycle, but the recent crisis has severely impacted the developing countries. Net private capital flows to emerging and developing economies went through a sharp reversal during 2008 with many of the EMEs facing much tighter limits on external financing, as global deleveraging and increasing risk aversion have curtailed investor interest in these markets. On average, the levels of net private inflows to EMEs during crisis years, *i.e.,* 2008 and 2009, were around 55 per cent lower than those during 2007 (Table 3.28 and Chart III.16). Although every region was impacted by the crisis, in aggregate terms, emerging Europe and Asia were the hardest hit, while Latin America was relatively less affected. Countries with larger current account and fiscal deficits, and sectors with significant foreign exchange exposures on their balance sheets were more affected by the tightening of external financing conditions and withdrawals of capital.

3.112 Total capital flows to developing countries declined from around US$ 1.2 trillion during 2007

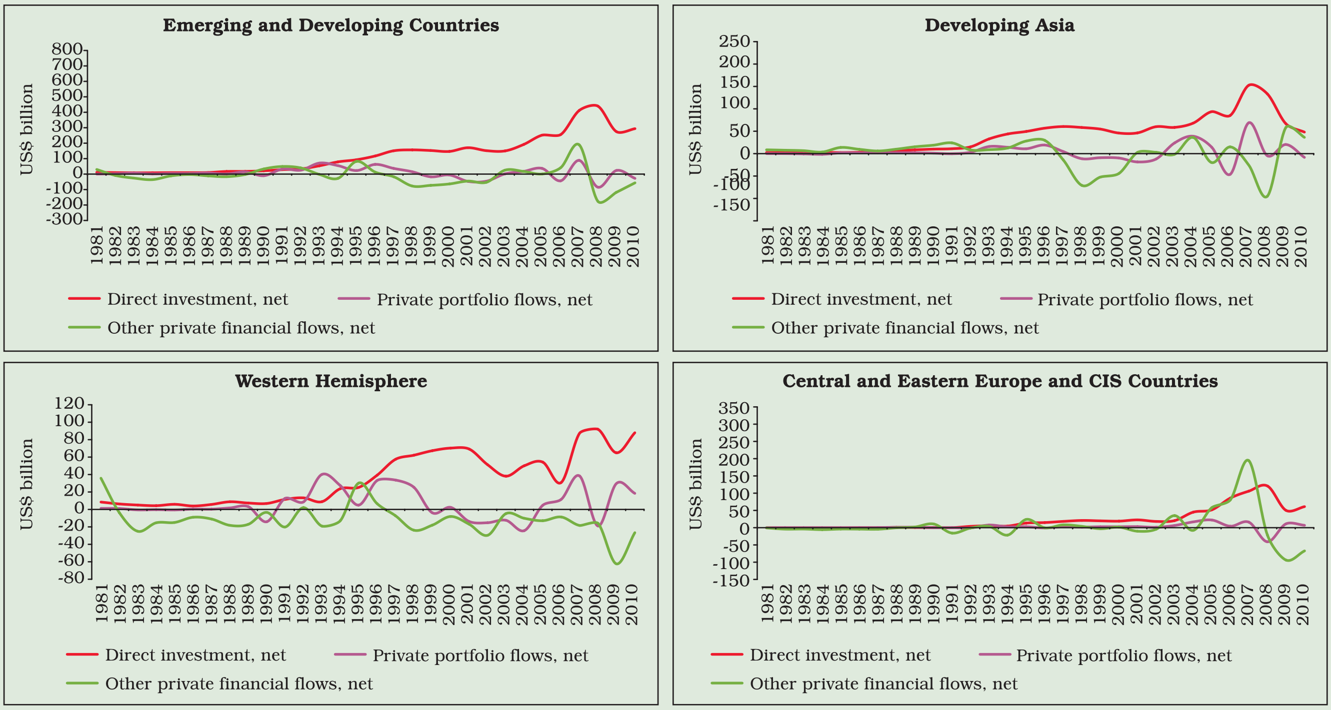
Table 3.28: Net Capital Inflows to EMEs by Region

(US$ billion)

	2007	2008	2009e	2010f	2011f
1	2	3	4	5	6
A. Private Flows	**1252**	**588**	**531**	**709**	**746**
Latin America	229	130	157	190	183
Emerging Europe	446	263	44	179	212
Africa/Middle East	155	88	48	66	81
Emerging Asia	422	107	283	272	270
B. Official Flows	**43**	**61.4**	**62.4**	**55.2**	**35.3**
Latin America	6	14	23	15	17
Emerging Europe	4	21	26	20	0
Africa/Middle East	4	4	3	5	4
Emerging Asia	29	23	10	15	14
C. Total Flows (A+B)	**1295**	**650**	**593**	**764**	**782**

e: estimate. f: forecast.
Source: Capital Flows to Emerging Market Economies (Various Issues), Institute of International Finance.

Chart III.16: Net Capital Flows to Emerging and Developing Countries



to US$ 780 billion during 2008 mainly on account of sharp declines in portfolio equity and debt flows (Table 3.29). On the other hand, FDI flows continued to grow, *albeit* at a decelerated pace. In Europe and Central Asia, the trend of rapid increase in debt flows during recent years reversed significantly during 2008, making it one of most vulnerable regions during the current crisis.

3.113 Capital inflows to EMEs slowed down, while capital outflows increased during the crisis, partly on account of growing financial integration. Driven by ample liquidity and a desire to diversify their assets, investors and multinational companies in developing countries have acquired assets and invested in debt markets abroad, in both developed and developing countries. Net equity outflows reached US$ 244 billion (1.5 per cent of GDP) in 2008, up from US$ 190 billion (1.4 per cent of GDP) in 2007. As part of deleveraging and also to meet domestic redemption pressures, advanced countries sharply cut their investments in emerging markets. While FDI investment remained relatively stable, porfolio and other investments (including througn banking channel) witnessed sharp reversals (Table 3.30).

3.114 The private capital flows to emerging economies have resumed with the post-crisis recovery in the world economy. The major factors include brighter growth prospects for emerging economies relative to mature economies; short-term interest rates remaining close to zero for an extended period in most mature markets; and near-term financial risks remaining most evident in mature markets. However, the uncertainty about the evolving global economic scenario, as demonstrated during the recent bout of instability in the Euro zone, holds the key to the direction and quantum of financial flows to EMEs.

Foreign Direct Investment

3.115 Within private capital flows to EMEs, foreign direct investment (FDI) witnessed an almost seven-fold jump between 1990 and 2000, while portfolio debt flows declined and equity flows were subdued during this period. In contrast, since the beginning of the current decade, it is portfolio flows, especially debt flows, that have witnessed a sharp jump. During the recent crisis, net FDI flows to EMEs remained steady compared to other kinds of capital flows,

Table 3.29: Net External Capital Flows to Developing Countries

(US$ billion)

Region	1970	1980	1990	2000	2005	2006	2007	2008
1	2	3	4	5	6	7	8	9
Total Capital Flows	**9.3**	**102.7**	**87.8**	**167.3**	**501.5**	**659.0**	**1221.6**	**780.3**
All developing countries								
FDI	2.9	10.1	23.5	158.9	281.1	363.2	528.4	593.6
Portfolio equity	0.0	0.1	3.4	14.4	68.9	105.8	135.3	-57.1
Debt	6.4	92.5	60.9	-6.0	151.5	190.0	557.8	243.8
East Asia & Pacific								
FDI	0.4	1.5	10.5	45.2	104.4	105.7	177.0	187.1
Portfolio equity	–	0.1	0.4	6.6	25.7	56.2	35.1	-8.1
Debt	1.0	11.9	18.6	-17.3	54.0	32.1	79.6	-0.4
Europe & Central Asia								
FDI	0.1	0.7	2.6	18.7	61.6	113.8	156.8	173.6
Portfolio equity	–	0.0	0.1	1.4	8.0	10.2	26.5	-14.6
Debt	0.5	12.6	3.7	20.4	85.8	156.0	302.5	153.8
Latin America & Caribbean								
FDI	1.3	6.2	8.1	79.5	71.9	72.0	109.4	125.0
Portfolio equity	0.0	0.0	2.5	-0.6	12.2	11.3	29.6	-9.7
Debt	2.8	45.6	19.9	-8.5	0.2	-14.1	92.2	58.0
Middle East & North Africa								
FDI	0.2	1.4	0.5	4.5	13.8	24.9	25.0	26.1
Portfolio equity	–	0.0	0.0	0.3	2.4	1.0	-2.1	0.4
Debt	0.4	6.8	3.4	-2.3	0.1	-13.8	3.3	-7.9
South Asia								
FDI	0.1	0.2	0.5	4.4	10.9	26.0	32.3	48.7
Portfolio equity	–	0.0	0.0	2.5	12.4	10.4	36.1	-15.8
Debt	0.8	5.7	8.3	3.5	4.7	24.9	65.9	29.8
Sub-Saharan Africa								
FDI	0.8	0.2	1.2	6.7	18.5	20.7	27.9	33.1
Portfolio equity	0.0	0.0	0.4	4.2	8.1	16.8	10.2	-9.3
Debt	0.9	10.0	7.0	-1.8	6.7	5.0	14.5	10.5
Memo:								
Middle income								
FDI	2.3	10.1	22.4	154.5	273.6	351.5	507.5	567.2
Portfolio equity	0.0	0.1	3.4	14.4	68.7	104.4	129.0	-56.5
Debt	5.1	81.2	55.7	-7.9	146.0	183.0	546.8	234.5

–: Not Available.

Source: Global Development Finance, World Bank (2009).

reflecting the longer-term view of FDI investors on EME growth potentials and the soundness of the financial system unlike most portfolio investors and lenders. Although there has been deceleration in growth rates, many EMEs have performed better than the advanced economies, which were officially into recession during the second half of 2008.

3.116 FDI inflows to China and India, in fact, increased during 2008 despite the deepening of the global financial crisis (Table 3.31). There was also an increase in FDI outflows from these economies possibly to take advantage of the attractive investment opportunities thrown up by the equity market corrections in the advanced economies during the crisis. On the other hand, in the case of many advanced economies, such as the UK, Canada, France and Germany, FDI inflows decelerated while they increased in the US and Japan, reflecting unwinding of overseas positions by investors due to risk aversion and repatriation of the proceeds back home. At the same time, FDI outflows from countries such as Japan and Canada increased while it decreased in the case of the US and the UK. This contrasting pattern in inflows and outflows from advanced economies during the

Table 3.30: Outflows from Major Advanced Economies

(US$ billion)

	2000	2005	2006	2007	2008	2009	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2	2009Q3	2009Q4
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Direct Investment														
Euro Area	413	454	543	658	481	433	216	48	158	60	133	119	89	93
Japan	32	45	50	73	131	75	29	18	21	63	19	17	24	15
UK	246	81	86	276	163	17	44	54	31	33	17	3	-8	5
US	159	36	245	399	332	221	97	107	61	67	47	51	75	48
Portfolio Investment														
Euro Area	385	515	650	600	24	113	145	203	-106	-218	-92	83	65	56
Japan	83	196	71	123	190	160	96	23	5	66	90	46	24	-1
UK	97	273	257	180	-200	241	-37	3	5	-171	58	58	88	37
US	128	258	499	396	-117	549	62	31	-101	-109	88	153	174	134
Other Investment														
Euro Area	166	738	999	1,301	168	-689	440	-123	146	-295	-301	-200	-130	-58
Japan*	-103	-124	-57	72	-411	-537	-22	-96	-16	-277	-187	-100	-125	-125
UK	374	926	708	1,484	-1,000	-500	519	-764	40	-796	-247	-86	-108	-58
US	273	267	544	677	-219	-585	100	-243	18	-94	-224	-242	-23	-97
Total														
Euro Area	965	1,668	2,136	2,485	583	-144	801	127	198	-454	-260	1	24	91
Japan	12	118	64	269	-91	-302	103	-56	10	-148	-78	-37	-76	-111
UK	718	1,280	1,051	1,939	-1,004	-242	526	-706	77	-933	-172	-26	-28	-16
US	560	561	1,288	1,472	-5	185	259	-105	-23	-135	-89	-38	227	85

*: includes investment in financial derivatives abroad.

Source: International Financial Statistics, June 2010, IMF.

current financial crisis implies the differing risk perceptions of investors and the nature of global deleveraging.

3.117 According to the World Bank's Global Development Finance (2009), investors repatriated larger shares of their earnings from direct investments in many large developing countries during the first three quarters of 2008. Further, some large troubled financial institutions had disinvested their assets in developed and developing countries to raise capital for their core business management. The value of such sales doubled to US$ 11 billion in 2008 from US$ 5 billion in 2007 and this trend continued in 2009.

3.118 Recent reports indicate that FDI inflows were lower in a number of countries in 2009. An important factor behind the decline in FDI inflows is the slowdown in cross-border mergers and acquisitions (M&As) in developing countries. M&A flows have been one of the main drivers of FDI inflows in developing countries in recent years, accounting for around 30 per cent of FDI. In the first quarter of 2009, M&A activity declined to US$ 16 billion in inflows, compared with more than US$ 30 billion in the previous two years. Lower acquisitions by developed country multinationals, reflecting lower earnings and less financing available for investment, accounted for much of this decline.

Foreign Portfolio Investment

3.119 In contrast to FDI flows, portfolio flows to the developing and emerging market economies witnessed a massive reversal during the second half of 2008, reflecting the process of global deleveraging and risk aversion on the part of global investors. Disruptions in emerging market portfolio flows became more widespread following the collapse of Lehman Brothers in mid-September 2008. The reversal in portfolio equity inflows, notably in Asia, led to weakening of emerging market currencies, widening of spreads on international sovereign bonds and a sharp rise in domestic bond yields in many EMEs. On the other hand, portfolio outflows from many developed economies fell significantly and turned negative, implying liquidation of positions held abroad and repatriation of money back to home

Table 3.31: Cross-country Movement of FDI Flows

(US$ billion)

Country	FDI Inflows							FDI Outflows						
	1990	2000	2005	2006	2007	2008	2009	1990	2000	2005	2006	2007	2008	2009
1	2	3	4	5	6	7	8	9	10	11	12	13	11	12
Latin America														
Argentina	1.8	10.4	5.3	5.5	6.5	9.7	4.9	0.0	0.9	1.3	2.4	1.5	1.4	0.7
Brazil	1.0	32.8	15.1	18.8	34.6	45.1	25.9	0.7	2.3	2.5	28.2	7.1	20.5	-10.1
Chile	0.7	4.9	7.0	7.3	12.5	15.2	12.7	0.0	4.0	2.2	2.7	2.6	8.0	8.0
Mexico	2.5	18.0	22.3	19.8	27.3	23.2	11.4	0.0	0.0	6.5	5.8	8.3	1.2	7.6
Emerging Europe														
Czech Republic	–	5.0	11.6	5.5	10.6	10.9	–	–	0.0	0.0	1.5	1.6	1.9	–
Hungary	0.0	2.8	7.6	19.7	72.3	63.4	-5.7	0.0	0.6	2.2	18.6	67.7	61.4	-7.3
Poland	0.1	9.3	10.3	19.9	23.7	14.8	11.5	0.0	0.0	3.4	9.1	5.7	3.1	2.9
Russia	–	2.7	12.9	29.7	55.1	75.5	38.7	n.a.	3.2	12.8	23.2	45.9	56.1	46.1
Emerging Asia														
China	3.5	38.4	79.1	78.1	138.4	147.8	–	0.8	0.9	11.3	21.2	17.0	53.5	–
India	0.0	3.6	7.6	20.3	25.1	41.2	–	0.0	0.5	3.0	14.3	17.3	18.4	–
Indonesia	1.1	-4.6	8.3	4.9	6.9	9.3	5.3	0.0	0.0	3.1	2.7	4.7	5.9	3.0
Korea	0.8	9.3	6.3	3.6	1.6	2.2	–	1.1	5.0	4.3	8.1	15.3	12.8	–
Malaysia	2.3	3.8	4.0	6.1	8.5	7.4	–	0.0	2.0	3.0	6.0	11.1	15.2	–
Philippines	0.5	2.2	1.9	2.9	2.9	1.4	–	0.0	0.1	0.2	0.1	3.5	0.3	–
Thailand	2.4	3.4	8.1	9.5	11.3	8.6	6.0	0.1	0.0	0.5	1.0	2.9	2.6	3.8
Other EMEs/NIEs														
Singapore	5.6	16.5	14.4	27.7	31.6	22.7	–	2.0	5.9	11.2	13.3	24.5	8.9	–
Hong Kong	–	61.9	33.6	45.1	54.4	59.6	48.4	–	59.4	27.2	45.0	61.1	50.5	52.3
Israel	0.2	5.9	4.8	15.3	8.8	10.9	3.8	0.2	3.3	2.9	15.5	8.6	7.2	1.2
South Africa	-0.1	1.0	6.5	-0.2	5.7	9.6	5.6	0.0	0.3	0.9	5.9	3.0	-2.1	1.8
Advanced Economies														
Australia	8.1	13.6	-35.6	26.4	41.1	47.3	–	1.0	3.3	-33.9	23.9	20.0	38.1	–
Canada	7.6	66.1	25.9	59.8	111.4	45.4	20.6	5.2	44.5	27.6	44.5	59.6	79.0	42.2
France	13.2	42.4	85.0	71.8	105.9	100.4	61.6	34.8	174.3	113.8	111.4	172.0	204.8	162.4
Germany	3.0	210.1	46.5	56.6	77.3	25.0	35.8	24.5	59.7	77.0	119.2	163.7	137.2	61.6
Japan	1.8	8.2	3.2	-6.8	22.2	24.6	11.8	50.5	31.5	45.4	50.2	73.5	130.8	74.6
UK	33.5	122.2	177.4	154.1	197.8	93.5	47.0	20.1	246.3	80.8	85.6	275.5	163.1	16.7
US	48.5	321.3	112.6	243.2	275.8	319.7	152.1	37.2	159.2	36.2	244.9	398.6	332.0	221.0

– : Not Available.
Source: International Financial Statistics, June 2010; IMF.

countries (Table 3.32). However, since the second quarter of 2009, there are indications of a revival in portfolio flows to EMEs in line with the recovery in major EME stock exchanges and prospects about growth in EMEs recovering faster than that of advanced economies.

Debt Flows

3.120 In international debt markets, primary issuance froze and secondary trading of emerging market bonds was greatly reduced in September and October 2008, even for highly rated corporations and sovereigns with relatively sound fiscal positions (*e.g.* Brazil, Malaysia and South Africa). External bond issuance and bank borrowing by corporations in developing countries had risen from US$ 81 billion in 2002 to US$ 423 billion in 2007, mainly driven by Europe and Central Asia where corporate borrowings increased sharply from US$ 19 billion to US$ 197 billion over the same period. However, such borrowings fell to US$ 271 billion in 2008 with the deepening of the global financial turmoil. As against net borrowings of US$ 28 billion during the first three quarters of 2008, the last quarter saw net repayments by EMEs of $27 billion, as many emerging market corporate borrowers lost their access to international capital markets. Overall, emerging market bond issuance declined sharply from US$ 186 billion in 2007 to US$ 106 billion in 2008.

Table 3.32: Cross-country Movement of Portfolio Flows

(US$ billion)

Country	Portfolio Investment Inflows							Portfolio Investment Outflows						
	1990	2000	2005	2006	2007	2008	2009	1990	2000	2005	2006	2007	2008	2009
1	2	3	4	5	6	7	8	9	10	11	12	13		
Latin America														
Argentina	-1.1	-1.3	-1.7	7.9	7.1	-7.1	-3.0	0.2	1.3	-1.4	0.0	0.0	0.0	0.0
Brazil	0.6	8.7	6.7	9.1	48.1	-0.8	46.2	0.1	1.7	1.8	-0.5	-0.3	-1.9	-3.0
Chile	0.4	-0.1	1.4	0.8	-0.5	2.8	2.0	0.0	-0.8	4.2	10.1	16.0	11.6	13.9
Mexico	3.4	-1.2	7.8	0.1	13.4	4.8	15.3	7.4	-1.3	0.0	0.0	0.0	0.0	0.0
Emerging Europe														
Czech Republic	–	0.5	0.1	1.9	2.2	0.5	–	–	2.2	3.5	3.0	4.8	0.5	–
Hungary	0.0	-0.1	5.8	8.8	0.5	0.9	-3.7	0.0	0.3	1.3	2.4	2.9	3.9	0.9
Poland	0.0	3.4	15.1	1.5	0.9	-4.4	16.2	0.0	0.1	2.5	4.6	6.3	-2.4	0.4
Russia	–	-12.8	-0.7	9.5	16.0	-27.4	8.2	–	0.4	10.7	-6.2	10.0	7.8	10.9
Emerging Asia														
China	0.0	7.3	21.2	42.9	21.0	9.9	–	0.2	11.3	26.2	110.4	2.3	-32.7	–
India	0.0	2.5	12.2	9.5	35.0	-15.0	–	0.0	0.1	0.0	0.0	-0.2	0.0	–
Indonesia	-0.1	-1.9	5.3	6.1	10.0	3.0	10.3	0.0	0.0	1.1	1.8	4.4	1.3	0.2
Korea	0.7	12.7	14.1	8.1	30.0	-38.5	–	0.5	0.5	14.1	26.9	54.6	-23.1	–
Malaysia	-0.3	-2.1	-3.0	5.6	9.3	-21.1	–	0.0	0.4	0.7	2.1	3.9	2.9	–
Philippines	-0.1	0.3	3.4	6.1	3.9	-4.4	–	0.0	0.8	0.1	1.6	-0.8	-0.6	–
Thailand	0.0	-0.6	7.1	5.7	2.9	-2.6	3.0	0.0	0.2	1.5	1.4	9.6	-0.4	12.2
Other EMEs/NIEs														
Singapore	0.6	-1.2	6.3	12.0	18.6	-4.6	–	1.6	13.4	5.3	17.3	28.1	18.6	–
Hong Kong	–	46.5	9.3	15.0	75.2	-12.8	4.9	–	22.0	40.7	41.8	77.9	25.4	49.1
Israel	0.0	3.9	2.3	4.0	3.6	2.2	3.1	0.4	3.3	8.0	8.0	3.7	2.0	7.6
South Africa	0.3	1.8	5.7	21.9	13.7	-7.6	13.4	0.3	3.7	0.9	2.2	3.4	6.7	1.9
Advanced Economies														
Australia	7.0	14.9	59.0	97.2	60.2	30.4	–	-0.4	10.9	21.3	43.9	77.3	-3.0	–
Canada	16.0	10.3	10.9	27.6	-32.5	29.6	95.9	2.2	43.0	44.2	69.4	42.8	-10.0	6.2
France	43.2	132.3	225.2	191.3	114.5	242.6	417.2	8.4	97.4	243.6	350.3	282.1	126.8	92.4
Germany	11.8	40.9	221.7	181.0	401.2	25.0	-26.0	14.0	191.5	257.3	203.4	199.9	-23.1	101.6
Japan	46.7	47.4	183.1	198.6	196.6	-103.0	-56.3	37.8	83.4	196.4	71.0	123.5	189.6	160.2
UK	23.8	268.1	237.0	285.5	406.7	363.9	284.0	30.0	97.2	273.4	257.0	179.6	-199.6	241.1
US	22.0	436.6	832.0	1126.7	1154.7	527.7	376.6	28.8	127.9	257.5	498.9	396.0	-117.4	549.4

– : Not Available.

Source: International Financial Statistics, June 2010; IMF.

3.121 As exchange rates depreciated sharply against the major international currencies in view of the deepening of the crisis, corporations that had borrowed heavily in international debt and credit markets to finance investment (*e.g.*, Russian energy companies) encountered difficulties rolling over that debt. When local exchange rates fell against the dollar or the euro, the corporations suffered heavy losses. There are, however, indications of revival of emerging market bond issuance during the first and second quarter of 2009.

Trade Credit

3.122 As discussed earlier, the collapse in trade during the crisis was partly attributed to the shortages of credit to exporters and importers. These short-term credits, which have a typical tenor of 120–180 days, are used to facilitate deals between distant partners with limited knowledge or business experience of one another. Although they cover only between 10 and 20 per cent of all trade (most trade is conducted on an "open account" basis between regular business partners), short-term credits tend to be most important for small and medium-sized exporters. Thus, trade credits, which facilitated growth in trade in the earlier years, turned out to be one important reason for the decline in trade across regions during the current crisis (Table 3.33).

3.123 With the deepening of the global financial crisis, especially after the collapse of Lehman

Table 3.33: Cross-country Comparison of Short-term Trade Credit

(US$ billion)

Country	2005	2006	2007	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2
1	2	3	4	5	6	7	8	9	10
Advanced Economies									
Australia	26.4	28.7	58.7	59.0	71.7	71.3	64.4	66.8	79.4
Canada	5.7	6.1	6.9	6.9	6.9	6.6	5.5	5.2	5.7
France	87.8	96.6	107.4	116.9	117.5	105.3	100.9	123.0	129.6
Germany	918.7	1,109.1	1,354.4	1,596.9	1,550.4	1,469.7	1,211.9	1,146.6	1,198.9
Japan	433.3	382.1	359.1	410.3	365.0	369.3	409.8	400.4	483.5
UK	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.6	1.6
US	492.3	557.3	726.0	734.0	737.9	778.9	907.8	802.0	796.5
Hong Kong	9.0	7.4	9.5	10.7	10.1	9.9	9.3	7.2	8.6
Emerging Market Economies									
Argentina	0.3	4.6	5.1	5.7	7.6	7.4	7.7	7.6	–
Brazil	16.5	16.7	31.0	31.1	33.5	38.2	31.2	28.5	32.4
Chile	6.2	8.3	9.2	9.9	13.2	14.1	10.3	8.8	9.9
Czech Republic	3.8	4.5	6.6	6.4	8.0	7.6	6.9	5.8	6.2
Hungary	6.4	7.6	13.0	4.7	5.6	5.7	4.4	4.4	5.5
India	NA	25.1	36.7	43.2	45.6	46.8	42.6	40.2	37.1
Indonesia	0.7	0.8	0.7	1.0	1.3	1.7	1.6	1.2	1.2
Israel	7.7	9.0	11.6	11.3	11.6	11.4	9.3	7.0	7.1
Korea	51.7	95.1	130.2	143.5	143.3	155.6	111.7	102.8	104.4
Malaysia	10.2	8.1	12.6	23.4	26.4	27.0	20.6	21.6	21.5
Mexico	8.4	9.2	9.7	9.9	10.2	10.1	9.2	9.1	8.1
Poland	9.7	12.6	17.0	21.4	22.7	20.7	18.1	15.7	17.0
Russia	8.2	17.6	23.9	26.3	29.8	34.6	21.3	16.1	12.9
South Africa	5.5	7.5	10.7	9.6	10.3	11.6	10.6	9.8	9.2
Thailand	9.4	9.6	11.1	13.0	13.9	13.6	12.1	10.3	10.7
Turkey	26.8	25.6	28.6	30.0	34.1	36.1	31.5	28.4	26.6

– : Not Available.

Source: Joint BIS-IMF-OECD-World Bank Statistics on External Debt.

Brothers in September 2008, many international banks either did not allow rollover of the credit or cancelled funded overdraft facilities without warning. When banks become risk-averse, they tend to shift their portfolios to more creditworthy borrowers, which are in a better position to serve longer-maturity loans. Banks have moved away from funded open-account facilities, which had become most common in recent years, to more traditional forms of trade finance as counterparty risk rose rapidly. According to the World Bank's Global Development Finance 2009, these changes reflected the higher capital requirements that banks faced as the creditworthiness of recipients of trade credit was downgraded. Indeed, capital requirements for trade finance tripled under the Basel II Accords over Basel I. Spreads had reportedly increased from 100 to 150 basis points (bps) to around 400 bps over LIBOR as country risk and counterparty concerns intensified, with much higher spreads reported in some cases. According to the IMF, the combination of higher cost of funds, liquidity premiums and higher risk resulted in a sharp increase in the price of short-term trade finance. Many exporters also restricted the credit they were willing to provide their customers as a result of reduced access to capital and heightened concerns about customer creditworthiness. Realising that the higher cost along with declining availability of finance had the potential to undermine the efforts undertaken to stimulate domestic economies, co-ordinated global initiatives were announced to support trade finance. For instance, the G-20 agreed to ensure availability of at least US$ 250 billion over a two-year period to support trade finance.

3.124 Although the increase in costs of trade finance turned out to be a global phenomenon, the decline in availability of trade credit has been felt more by the EMEs. According to a survey by the IMF-Bankers' Association for Finance and Trade (BAFT) on bank-intermediated forms of international trade finance, the price of trade finance increased sharply due to the increased cost of funds to the banks, which outweighed the dampening price effect of less restrictive monetary policies in many advanced economies. The BAFT survey results also suggest that the downturn in trade largely reflected falling demand rather than a lack of trade finance. Trade generally fell by much more than trade finance during 2008 and the first half of 2009, including in the areas hit hardest by the crisis (industrial economies, emerging Europe, Latin America and, in the first half of 2009, emerging Asia). The trade finance problem is also sector-specific, apart from being country- and region-specific. India has been relatively less affected by the liquidity squeeze in international credit markets. Despite tightness in the overseas markets since September 2008, the disbursement of short-term credit to India has hovered around its monthly trend of over US$ 3 billion in the subsequent months, reflecting the positive impact of various policy initiatives by the authorities.

Short-term Debt

3.125 Flows of short-term debt (debt with an original maturity of one year or less) to developing countries were strong during the first half of 2008. However, such flows became negative in the third quarter of 2008 and later registered a sharper drop in the fourth quarter of 2008 following the deterioration of global financial market conditions. Many countries borrowed short term to finance their growing trade and firms contracted short-term loans to finance imports and pre-pay for exports. In China, for example, trade finance in 2007 amounted to US$ 69 billion, accounting for more than half of the country's short-term debt. Similarly, all of India's US$ 45 billion in short-term debt is trade-related. As a result, the sharp drop in short-term debt has also strained trade finance. Reflecting the decline in short-term debt, short-term international liabilities of many EMEs in Asia and Europe declined. Interestingly, many advanced economies including the US and UK also recorded sharp declines in their short-term international liabilities, possibly reflecting a decline in foreign private holdings of non-treasury securities on account of risk aversion by investors (Table 3.34).

Bank Financing

3.126 The participation of foreign banks in developing countries' financial systems has increased rapidly in recent years. At the end of 2007, the 910 foreign banks with a presence in developing countries controlled combined assets in excess of US$ 1.2 trillion and accounted for more than 39 per cent of total domestic banking assets. Foreign-owned lenders account for a particularly high proportion of local banking assets in three regions—70 per cent in several Eastern European countries, and approximately 40 per cent in some Latin American and Sub-Saharan countries.

3.127 International banks started to withdraw funding from some emerging markets in the third quarter of 2008. At first, countries with sound and relatively liquid banking systems were affected. For instance, cross-border loans to banks and the non-bank sector in China, Chinese Taipei, the Czech Republic, Malaysia and Poland decreased by US$ 30 billion in the third quarter of 2008. Central banks and market commentary at the time suggested that some international banks may have reduced loans to these EMEs in order to overcome severe liquidity shortages in their home markets.

3.128 The reversal in cross-border banking flows became more severe in the fourth quarter of 2008. According to the BIS international banking statistics, banks from advanced economies reduced cross-border loans to developing countries by US$ 205 billion during the fourth quarter (1 per cent of the combined GDP of EMEs), reversing more than 60 per cent of the inflows recorded during the previous three quarters of 2008. Brazil, China, Korea, Turkey and oil-exporting countries, including Russia, were particularly affected. Loans to banks declined more sharply than loans to the non-bank sector. At the same time, residents of many EMEs (especially in central Europe and oil-exporting countries, including Russia) withdrew part of their deposits and other foreign assets held in BIS-reporting banks. This provided an important cushion to the emerging markets that had been unavailable in the past. However, some deposit withdrawals may have reflected official foreign exchange intervention rather than the autonomous

Table 3.34: International Short-term Liabilities up to One Year Remaining Maturity

(US$ billion)

Country	1990	2000	2005	2007	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09
1	2	3	4	5	6	7	8	9	10	11
Advanced Economies										
Australia	25	35	54	119	118	125	110	81	95	107
Austria	–	49	87	98	116	111	97	67	64	59
Canada	–	76	129	201	219	190	186	191	199	197
France	–	250	610	1,148	1,288	1,313	1,155	979	923	921
Germany	–	356	685	938	1,086	1,000	920	739	750	736
Japan	–	193	410	405	444	400	365	352	368	480
UK	–	731	1,530	2,409	2,704	2,404	2,175	1,789	1,713	1,796
US	–	531	864	1,302	1,374	1,230	1,219	1,075	1,011	982
Latin America										
Argentina	7	39	7	11	12	12	11	11	11	12
Brazil	22	34	27	52	55	68	62	48	53	56
Chile	4	10	11	18	20	21	23	19	17	18
Mexico	18	22	22	25	28	28	30	31	34	33
Emerging Europe										
Czech Republic	–	6	11	17	21	19	19	15	13	11
Hungary	3	5	15	27	31	28	29	30	27	28
Poland	3	8	16	26	31	31	32	32	26	29
Russia	–	11	46	93	97	100	97	78	74	81
Emerging Asia										
China	9	19	61	121	138	160	148	102	121	118
India	4	9	31	78	80	83	83	69	66	69
Indonesia	13	20	18	29	31	31	32	28	26	27
Korea	2	7	16	21	28	32	23	17	15	15
Malaysia	20	33	53	127	157	152	145	100	110	114
Philippines	3	7	10	11	12	11	10	7	7	8
Thailand	9	10	11	9	10	10	10	10	9	10
Other EMEs/NIEs										
Singapore	134	65	78	123	142	144	138	106	108	109
Hong Kong	131	70	70	93	110	110	99	82	86	89
Israel	2	3	5	5	6	6	7	6	7	7

– : Not Available.
Source: Bank for International Settlements.

response of emerging market banks to the reduced availability of cross-border finance.

3.129 With the global credit squeeze, some emerging East Asian economies experienced severe foreign currency liquidity shortages. Despite the large build-up of foreign exchange reserves since the 1997-98 Asian financial crisis, dollar illiquidity tested the resilience of Asian banks as access to international interbank markets became difficult. As the global financial crisis intensified, major international banks sharply reduced interbank credit to Asian banks. Although this reduction reflected more the liquidity needs of major global banks than any change in Asian banks' creditworthiness, it nonetheless led to tighter credit conditions and foreign currency liquidity shortages. Especially in the Republic of Korea and Indonesia, withdrawals of foreign currency liquidity were on a scale large enough that, from time to time, there were significant challenges to financial stability. In view of the sharp rise in foreign currency liquidity and counterparty risks, cross-currency basis swap spreads (the cost that Asian banks have to shoulder in borrowing dollars by using local currency as collateral) widened sharply. This foreign currency liquidity issue also had important ramifications for the region's investment and trade flows. The countries that had built up their international reserves from capital flows in the past years experienced a decline in their reserve levels during the recent crisis (Table 3.35). Nevertheless,

Table 3.35: International Reserve Movement

(US$ billion)

Country	2006	2007	2008Q1	2008Q2	2008Q3	2008Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4
1	2	3	4	5	6	7	8	9	10	11
Argentina	31	45	49	46	46	45	45	44	46	46
Brazil	85	179	194	200	206	193	189	200	221	237
Chile	19	17	18	20	24	23	23	23	26	25
China	1,066	1,528	1684	1811	1908	1949	1957	2135	2288	–
Hong Kong	133	153	161	158	160	182	186	207	227	256
France	43	46	50	46	41	34	25	29	45	47
Germany	42	44	47	48	45	43	43	45	61	60
India	171	267	300	303	278	247	242	255	271	265
Indonesia	41	55	57	57	55	50	53	55	60	64
Japan	880	953	993	979	974	1009	996	996	1028	1022
Mexico	76	87	91	94	99	95	85	81	88	100
Philippines	20	30	33	33	33	33	34	35	38	39
Poland	46	63	74	79	71	59	58	64	75	76
Russia	296	467	499	555	543	413	368	396	395	417
South Africa	23	30	31	31	31	31	30	32	35	35
Switzerland	38	45	47	47	45	45	50	77	86	98
Thailand	65	85	107	103	100	109	114	118	129	135
Turkey	61	73	77	76	77	70	67	66	71	71
UAE	28	77	83	61	45	32	34	36	39	–
UK	41	49	51	49	42	44	40	45	58	56
US	55	60	65	65	61	67	64	70	123	120

– : Not Available.

Source: International Financial Statistics, June 2010; IMF.

during the recent crisis, reserves acted as buffer against volatile capital flows and provided confidence to the market in the inherent strength of the macroeconomic fundamentals of several economies including India.

3.130 To sum up, the transmission of the global financial crisis to the real economy was routed mainly through the decline in world trade especially in the second half of 2008 and early 2009. The decline in trade flows was further accentuated by the sharp reduction in commodity prices in line with the decline in demand. The trade channel of the transmission of global crisis played a particularly important role in economies that had greater integration in global trade, such as the East Asian economies. Along with shrinking trade flows, net private capital flows to emerging and developing economies went through a sharp reversal during 2008 with many of the EMEs facing much tighter limits on external financing, as global deleveraging and increasing risk aversion curtailed investor interest in these markets. Countries with larger current account and fiscal deficits, and sectors with significant foreign exchange exposures on their balance sheets, were more affected by the tightening of external financing conditions and withdrawals of capital. Despite in modest decline in remittance inflows in 2009, these flows have remained more resilent compared to private debt and equity flows, though the adverse developments turned out to be more serious for some small, poor countries where it makes up a relatively large share of GDP. Finally, in the course of 2009, global imbalances contracted to some extent with reduction in current account deficits/surpluses of several countries notably the US and China.

IV. IMPACT ON REAL ECONOMY

3.131 The period since the second half of the 1990s is generally characterised as benign inflation, lower interest rates, higher risk appetite and booming stock market-inflicted exuberance among households and corporates. This strong growth of the financial sector buttressed the growth of real

Table 3.36: Growth in Real GDP

(Annual per cent change)

	Average 1992-2001	2006	2007	2008	2009	2010P
1	2	3	4	5	6	7
World	**3.2**	**5.1**	**5.2**	**3.0**	**-0.6**	**4.2**
Advanced Economies	**2.8**	**3.0**	**2.8**	**0.5**	**-3.2**	**2.3**
USA	3.5	2.7	2.1	0.4	-2.4	3.1
Euro area	2.1	3.0	2.8	0.6	-4.1	1.0
Japan	0.9	2.0	2.4	-1.2	-5.2	1.9
Other advanced economies	3.7	3.9	3.9	1.2	-2.3	3.0
Emerging and Developing Economies	**3.8**	**7.9**	**8.3**	**6.1**	**2.4**	**6.3**
Regional Groups						
Central and Eastern Europe	2.6	6.5	5.5	3.0	-3.7	2.8
Commonwealth of Independent States	—-	8.5	8.6	5.5	-6.6	4.0
Developing Asia	7.3	9.8	10.6	7.9	6.6	8.7
Middle East & North Africa	3.4	5.7	5.6	5.1	2.4	4.5
Western Hemisphere	3.0	5.6	5.8	4.3	-1.8	4.0

P: Projections.

Source: World Economic Outlook, April 2010.

economic activity during the period just before the onset of the recent financial crisis. In the first half of the 2000s, the world economy grew at a record 5.1 per cent – well above the average growth of 3.2 per cent achieved during 1992-2001. World output growth was mainly driven by emerging and developing economies led by China and India. This was the period when the world economy was increasingly looking decoupled and the growth potential was shifted from the US to developing Asia (Table 3.36).

3.132 The impact of the global financial crisis spilled over to the real sector in the advanced economies. Even as policymakers acted to bring the banks back from the brink of collapse, consumer & business confidence declined substantially. Reflecting the decline in asset prices were the end of a housing construction boom in several countries, tight credit market conditions, fall in consumer and business sentiment, and contraction in household expenditure (including on houses) in the advanced economies. The impact on consumption was severe because the recent recession involved housing busts as well as systemic banking crises in some of the major advanced economies. This was in line with the findings in the literature that the impact of banking crises on consumption has increased in the post-1990s period, despite the benefits of financial liberalisation in easing liquidity constraints (Barrell et al., 2004). The study also found that the impact becomes greater in countries with high personal debt. Signs of weakening also emerged in the corporate sector, particularly those exposed to consumption or housing construction or those with significant exposure to energy prices. These developments were reflected in falling income, shrinking demand and deceleration in trade in leading major advanced economies such as the US, Euro area, the UK and Japan into recession by the fourth quarter of 2008 (Table 3.37). The recession deepened, specially as the recent crisis affected all the major components of aggregate demand in advanced economies (Box III.3)

Table 3.37: Quarterly GDP Growth

(Per cent)

Country	Q1-2008	Q2-2008	Q3-2008	Q4-2008	Q1-2009	Q2-2009	Q3-2009	Q4-2009	Q1-2010
1	2	3	4	5	6	7	8	9	10
Australia	0.8	0.6	0.4	-0.8	0.6	0.8	0.3	1.1	0.5
Canada	-0.2	0.0	0.1	-0.8	-1.8	-0.7	0.2	1.2	1.5
Germany	1.6	-0.6	-0.3	-2.4	-3.5	0.4	0.7	0.2	0.2
Japan	0.3	-1.0	-1.1	-2.5	-4.2	1.7	0.1	1.1	1.2
Korea	1.2	0.3	-0.1	-4.5	0.2	2.4	0.1	0.2	2.1
Mexico	1.3	-0.3	-0.2	-2.0	-6.8	0.3	2.4	1.9	-0.3
New Zealand	-0.3	-0.6	-0.6	-1.0	-0.8	0.1	0.3	0.8	..
UK	0.7	-0.1	-0.9	-1.8	-2.6	-0.7	-0.3	0.4	0.3
USA	-0.2	0.4	-0.7	-1.4	-1.6	-0.2	0.6	1.4	0.8
Euro area	0.8	-0.4	-0.5	-1.9	-2.5	-0.1	0.4	0.1	0.2
G-7	0.2	-0.1	-0.7	-1.7	-2.4	0.1	0.4	1.0	0.7
NAFTA	0.0	0.3	-0.6	-1.4	-2.1	-0.2	0.7	1.4	0.7

Source: OECD database.

Box III.3
Impact on Aggregate Demand

An analysis of aggregate demand revealed that during the current financial crisis, the downturn in output growth in the advanced economies has been unusually deep, involving most components of spending. The weakening in demand during 2008 was broad-based across all GDP components, *viz*., consumption, investment and net exports.

Private consumption contracted in all major economies in the final quarter of 2008. Rising commodity prices strongly affected households' real income in the first half of the year. Faced with subdued real income growth, falling financial wealth, tightening credit conditions and worsening labour market prospects, household spending moderated considerably in the course of the year, with private consumption in the advanced economies growing by around 0.3 per cent in 2008 as a whole. Consumer confidence indicators, which had peaked in mid-2007, fell to their long-term average levels in the early months of 2008, sharply deteriorating further to reach very low levels by the end of the year. Decline in private consumption was sharp in the United States, where it plunged by an annualised 0.2 per cent, accounting for almost half of the decline in output. The hardest hit category was spending on consumer durables, which slumped during the second half of 2008. In contrast, consumption accounted for only a small part of the drop in output in the Euro area and Japan. The downturn in these economies was led instead by a major collapse of international trade, accounting for about 75 per cent and 50 per cent of the decline in output in Japan in the fourth quarter of 2008 and the first quarter of 2009, respectively, and for about 60 per cent of the decline in the Euro area in the final quarter of 2008.

Although private consumption contracted, public consumption remained robust in most of the advanced economies in 2008 and 2009, reflecting the fiscal stimulus measures undertaken by the sovereign government to boost domestic demand (Table).

In the advanced economies, total investment growth contracted by 1.9 per cent in 2008 following two years of elevated growth. The decline in growth was more pronounced for residential investment than for other private investment. Indeed, housing investment contracted in 2008, following the end of the expansionary phase of the residential construction cycle in 2007 in the context of slowing house price growth. The deceleration was generally more pronounced in countries that had experienced very fast growth in previous years. Waning capacity pressures, renewed uncertainty and tighter financing conditions led to cuts in corporate investment.

The external environment deteriorated significantly in 2008, aggravated by the financial crisis, with growth slowing in advanced economies and emerging markets becoming increasingly affected. External demand slowed as activity in advanced economies decelerated and emerging markets became increasingly affected by the financial turmoil. Growth in euro area exports slowed markedly in 2008, to an annual rate of around 1.8 per cent, compared with 6.0 per cent in 2007, and turned negative over the last three quarters of the year. During the last few months of the year, various survey indices on industrial export orders or order books fell to historically low levels. However, there are indications of recovery in retail sales since the second quarter of 2009.

Table: Components of Aggregate Demand in Advanced Economies

(annual per cent change)

	Private Consumer Expenditure			Public Consumption			Gross Fixed Capital Formation		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
Advanced Economies	**2.5**	**0.3**	**-0.8**	**2.0**	**2.5**	**2.3**	**2.2**	**-1.9**	**-12.0**
United States	2.7	-0.2	-0.6	1.4	3.0	1.8	-1.2	-3.6	-14.5
United Kingdom	2.1	0.9	-3.2	1.2	2.6	2.2	7.8	-3.5	-14.9
Euro Area	1.6	0.4	-1.1	2.3	2.1	2.2	4.8	-0.4	-11.1
Japan	1.6	-0.7	-1.0	1.5	0.3	1.6	-1.2	-2.6	-14.3

Source: World Economic Outlook April 2010.

3.133 Emerging market economies looked relatively resilient during the initial months of the crisis, benefiting from large capital inflows and benign macroeconomic conditions. However, with the slowdown in economic activities in advanced economies becoming more entrenched, global trade shrinking and turbulence in global financial markets intensifying, the contagion spread to the EMEs. As a result, the crisis quickly spread around the world, pushing the global economy into a severe and synchronised recession (Chart III.17). Overall, world GDP growth contracted by 0.6 per cent in 2009, after recording a healthy growth in earlier years.

3.134 The cross-country comparison of fifteen advanced and emerging economies suggested that

Chart III.17: Impact of Crisis on Economic Growth

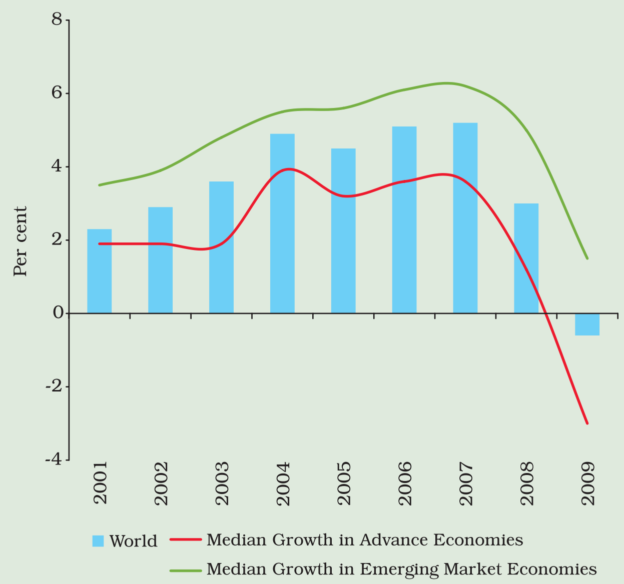


Table 3.38: Comparison of GDP Growth Estimates for 2009

(per cent)

Country	April 2008 Pre-Lehman	April 2010 A Year Later
1	2	3
US	+0.6	-2.4
Japan	1.5	-5.2
China	+9.5	+8.7
UK	+1.6	-4.9
Canada	+1.9	-2.6
France	+1.2	-2.2
Germany	+1.0	-5.0
Russia	+6.3	-7.9
India	+8.0	+5.7
Brazil	3.7	-0.2

Source: WEO, IMF 2008 and 2010.

the recent crisis was more negatively biased in terms of real GDP growth and growth rates were more clustered compared to the slowdown in economic activity after the dot-com bubble burst in 2001 (Chart III.18). This reflects the growing inter-linkages between countries in terms of trade and financial flows which facilitated swift transmission of contagion across countries.

3.135 The severity of the impact of the financial crisis on economic growth can be ascertained from the significant downward revisions in growth forecasts of major economies for 2009 by the IMF before and after the collapse of Lehman Brothers in September 2008 (Table 3.38). From a pre-Lehman scenario where every country was expected to register positive growth in 2009, a year after the event there were only a handful of countries, *viz.*, China and India that were projected to see positive economic growth during the year. All other countries were expected to contract during the year, though at varying degrees.

3.136 Against the backdrop of falling household income, weakening corporate performance and heightened uncertainties following the financial crisis, the trend of savings and investment across the region decelerated in 2009 (Table 3.39). This, in turn, appears to have contributed to the deepening of recessionary conditions in major advanced economies and expected slowdown in growth in many EMEs during 2009. Even countries

Chart III.18: Synchronised Fall in GDP Growth

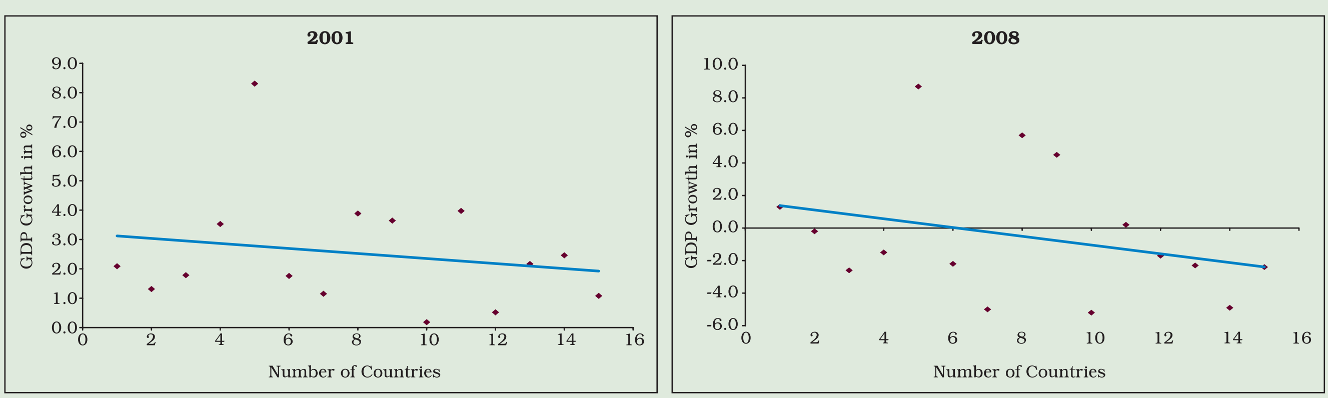


Table 3.39 : Gross Saving and Investment

(as a percentage of GDP)

	Saving					Investment				
	1996-2003	2007	2008	2009	2010 (P)	1996-2003	2007	2008	2009	2010 (P)
1	2	3	4	5	6	7	8	9	10	11
Advanced economies	21.1	20.7	19.5	17.1	17.8	21.3	21.5	21.0	18.0	18.4
United States	17.0	14.5	12.6	10.8	12.2	19.6	19.5	18.2	15.0	15.7
Japan	28.1	28.4	26.8	23.0	22.7	25.6	23.7	26.6	20.3	19.8
Germany	20.1	26.0	25.9	21.8	21.6	20.2	18.3	19.2	17.0	16.1
United Kingdom	16.0	15.6	15.3	12.5	12.3	17.4	18.3	16.9	13.8	14.0
Emerging economies	25.0	33.6	33.7	31.1	32.6	24.9	29.4	29.9	29.2	30.4
Developing Asia	33.1	45.0	43.9	43.6	45.4	31.7	37.9	38.2	39.5	41.3
Middle East & North Africa	27.3	41.6	42.4	29.6	32.7	23.4	26.0	26.8	27.8	27.3

Source: World Economic Outlook, April 2010, IMF. P: Projection.

that had high savings and investment rates like China experienced significant slowdown in real GDP growth.

3.137 The impact, however, varied across countries/regions. For instance, the household saving ratio in the Euro area increased during 2008 partly due to the rise in economic and financial uncertainties. The increase in the savings rate has been fairly widespread, in particular in countries that witnessed strong deteriorations in the labour market situation and sharp declines in house prices, and households were highly indebted.

3.138 Two major features of the impact of the recent crisis on the world economy came out distinctly: (i) a synchronised decline or deceleration in economic activity in all economies which are associated with a collapse in world trade; and, (ii) growing signs of an adverse feedback loop between the real economy and the financial sector. The weakening of economic activity has impaired the quality of bank loans, adversely affecting their capital positions and their willingness to extend credit to the private sector. This, in turn, constrained the pace of economic activity and the ability of the private sector to service its debts, entailing the risk of a vicious circle. By significantly eroding the level of economic activity, the financial crisis has also led to a loss of potential output in major economies. This is also supported by various studies covering both advanced and developing economies. A panel study of output behaviour in 190 countries shows large and persistent actual output losses associated with financial crises, with output falling by 7.5 per cent relative to trend over a period of 10 years in the event of a banking crisis (Cerra and Saxena, 2008). Another study for 30 OECD economies also estimated that, on average, a financial crisis could lower potential output by 1.5 –2.1 per cent within five years (Furceri and Mourougane, 2009).

3.139 The sharp fall in global economic activities along with the decline in international commodity prices from mid-2008 had significant downward pressures on inflation, even sparking fears of deflation in many countries (Table 3.40 and Chart III.19). According to the IMF, inflation is expected to decline from 3.4 per cent in 2008 to 0.1 per cent in 2009 in advanced economies, while in EMEs inflation is expected to fall from 9.2 per cent to 5.2 per cent over the same period. In China, the loss of foreign export markets has created overcapacity that has added to the downward pressure on prices. On the other hand, inflation showed more persistence until early 2009 in Latin America and Russia. In some countries (e.g., Mexico and Russia), inflation concerns have been accentuated by depreciation pressures, a combination that poses a dilemma for monetary policy. On balance, in early 2010.The inflation pressures are generally subdued but diversed.

Advanced Economies

3.140 The impact of the crisis on the real economies of the advanced and emerging market economies are analysed in the following sections.

Table 3.40: Trends in Consumer Price Inflation

(Per cent)

	Average 1992-2001	2006	2007	2008	2009	2010P
1	2	3	4	5	6	7
1. Advanced Economies	**2.4**	**2.4**	**2.2**	**3.4**	**0.1**	**1.5**
United States	2.7	3.2	2.9	3.8	-0.3	2.1
Euro area	2.3	2.2	2.1	3.3	0.3	1.1
Japan	0.4	0.3	0.0	1.4	-1.4	-1.4
2. Emerging and developing economies	**39.0**	**5.6**	**6.5**	**9.2**	**5.2**	**6.2**
3. Regional groups						
Commonwealth of Independent States	—-	9.5	9.7	15.6	11.2	7.2
Central and Eastern Europe	52.9	5.9	6.0	8.1	4.7	5.2
Developing Asia	7.4	4.2	5.4	7.4	3.1	5.9
Middle East & North Africa	10.1	7.5	10.0	13.5	6.6	6.5
Western Hemisphere	51.9	5.3	5.4	7.9	6.0	6.2

P: Projections.
Source: World Economic Outlook Report, April 2010.

The US

3.141 In the US, economic activity had shown signs of deceleration even before the upsurge in financial market tensions. The housing market was a primary source of weakness in the US real economy as well as in the financial markets. As per the National Accounts data, residential investment in the US started declining from the second quarter of 2008 (Table 3.41). However, during the crisis, the slowdown in economic activity spread outside the housing sector. While there was positive growth in the second quarter of the year partly due to temporary fiscal stimulus measures and support from foreign trade, intensifying financial market strains, restrictive credit conditions and weaker foreign demand contributed to an outright contraction in output throughout the second half of 2008. The US economy was officially declared to have entered into recession from December 2008. Overall, US economic activity decelerated markedly in 2008 – the growth in real GDP was 0.4 per cent in 2008 compared with 2.1 per cent in 2007. According to the US Bureau of Economic Analysis, downturns in manufacturing, retail trade, and finance and insurance industries were the leading contributors to the slowdown in US economic growth in 2008. The value-added of finance and insurance industries dropped 3.2 per cent in 2008 and further to 2.7 per cent in 2009, which was its first decline since 1992.

Chart III.19: Consumer Price Inflation – Select Countries

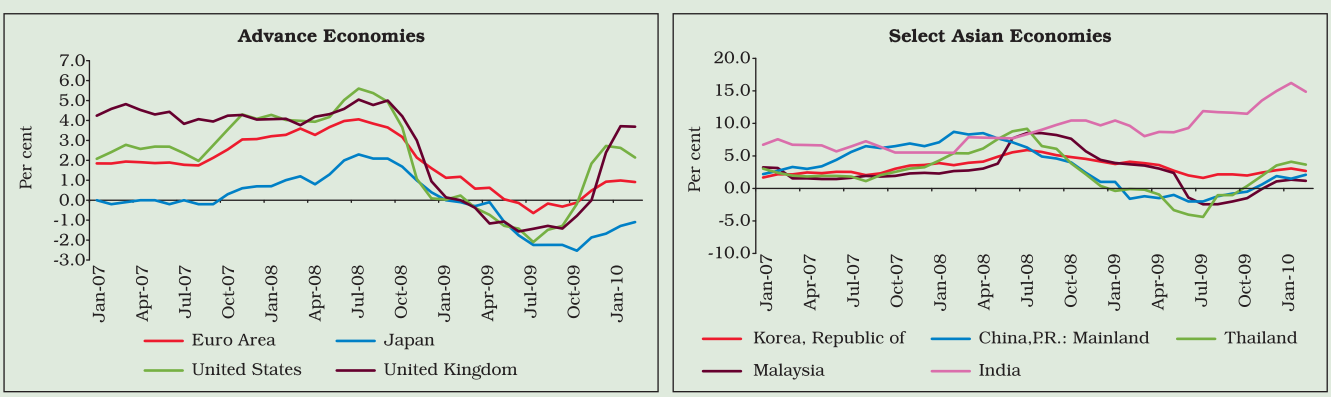


Table 3.41: Composition of Real Domestic Demand (seasonally adjusted)

(Growth in per cent)

Item	2006	2007	2008	2009	2008				2009				2010
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GDP	**2.7**	**2.1**	**0.4**	**-2.4**	**-0.7**	**1.5**	**-2.7**	**-5.4**	**-6.4**	**-0.7**	**2.2**	**5.6**	**3.0**
PCE	2.9	2.6	-0.2	-0.6	-0.6	0.1	-3.5	-3.1	0.6	-0.9	2.8	1.6	3.5
Goods	3.3	3.1	-2.1	-1.9	-5.1	-0.5	-7.7	-10.0	2.5	-3.1	7.2	2.8	6.5
Services	2.7	2.4	0.7	0.1	1.8	0.4	-1.3	0.5	-0.3	0.2	0.8	1.0	2.0
GPDI	2.7	-3.8	-7.3	-23.2	-7.4	-10.4	-6.9	-24.2	-50.5	-23.7	5.0	46.1	14.7
Non-residential	7.9	6.2	1.6	-17.8	1.9	1.4	-6.1	-19.5	-39.2	-9.6	-5.9	5.3	3.1
Residential	-7.3	-18.5	-22.9	-20.5	-28.2	-15.8	-15.9	-23.2	-38.2	-23.3	18.9	3.8	-10.7
Exports	9.0	8.7	5.4	-9.6	-0.1	12.1	-3.6	-19.5	-29.9	-4.1	17.8	22.8	7.2
Goods	9.4	7.4	5.9	-12.2	4.2	14.1	-1.8	-25.5	-36.9	-6.3	24.6	34.1	8.9
Services	7.9	11.8	4.2	-4.1	-9.0	7.8	-7.7	-4.3	-13.6	0.1	5.6	2.6	3.8
Imports	6.1	2.0	-3.2	-13.9	-2.5	-5.0	-2.2	-16.7	-36.4	-14.7	21.3	15.8	10.4
Goods	5.9	1.7	-3.9	-16.0	-3.5	-4.6	-3.7	-19.6	-41.0	-16.5	25.1	20.3	10.7
Services	7.1	3.5	0.7	-3.6	3.0	-7.1	6.1	-0.9	-11.5	-7.5	7.0	-1.9	9.0
GCE&I	1.4	1.7	3.1	1.8	2.6	3.6	4.8	1.2	-2.6	6.7	2.6	-1.3	-1.9
Memo:													
Corporate Profitability	10.5	-4.1	-11.8	-3.8	-2.6	-3.8	3.6	-22.8	5.3	3.7	10.8	8.0	5.5

PCE: Personal Consumption Expenditure; GPDI: Gross Private Domestic Investment

GCE&I: Government Consumption Expenditures and Gross Investments

Source: Bureau of Economic Analysis, US.

3.142 The impact of the sub-prime crisis was also reflected in the deceleration in growth of private consumption expenditure (PCE), which has turned negative since the beginning of 2008 with deteriorating consumer sentiment and labour market conditions, in addition to a decline in household wealth owing to falling house prices and equity valuations. Contraction in private payrolls, declines in employment and earlier increases in food and energy prices have together eroded the purchasing power of households. In the US, the unemployment rate rose to 7 per cent in December 2008 which was highest level in last one and half decade. Since then the pressure on unemployment continued and the rate of unemployment remained in the range of 8-10 per cent during 2009 and 2010. With mounting job losses and resultant steep falls in wealth, by the third quarter of 2008, US household net worth had fallen by US$ 5.6 trillion over the year. The sluggishness of real incomes, coupled with tighter credit and declining household wealth had put strong downward pressure on consumer spending.

3.143 After recording sharp growth in 2005 and 2006, corporate sector profitability declined from 2007 in line with the decline in personal consumption expenditure and increased costs of production driven by energy and other commodity prices up to mid-2008. The decline in corporate profits along with looming uncertainty about future growth prospects with the deepening of the global financial crisis led to delayed investment plans. Business investment, in fact, weakened amid declining corporate profits, tighter lending standards, and the broadly weakening outlook for demand. The ongoing housing market correction – intensified by the financial turmoil – continued to be a major drag on the economy, with residential investment contributing significant drag on GDP growth during 2007 and 2008.

3.144 Foreign trade, however, was a major contributor to growth in the US throughout most of 2008, reflecting buoyant external demand earlier in the year and the lagged effects of past US dollar depreciation. However, the positive trade effect faded during the second half of 2008 as a sharp economic slowdown in a number of US trading partners weighed on foreign demand and exports. Nonetheless, the current account deficit narrowed from 5.2 per cent of GDP in 2007 to 4.9 per cent of

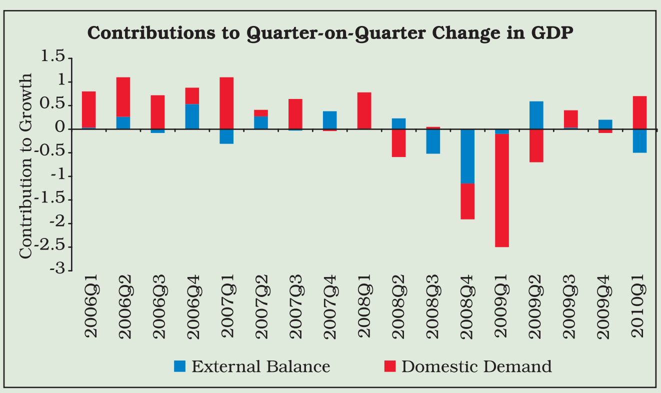
GDP in 2008 and further 2.9 per cent in 2009. Accordingly, the contribution of net exports to growth in real GDP worsened in 2008 from its level in 2007. According to the estimates of the Congressional Budget Office (CBO) in March 2009, the US federal budget deficit increased to 3.2 per cent of GDP in 2008 from 1.2 per cent in 2007. The rising deficit reflects an expected drop in tax revenues and increased federal spending, in large part related to the government's actions to address the crisis in the financial and housing markets.

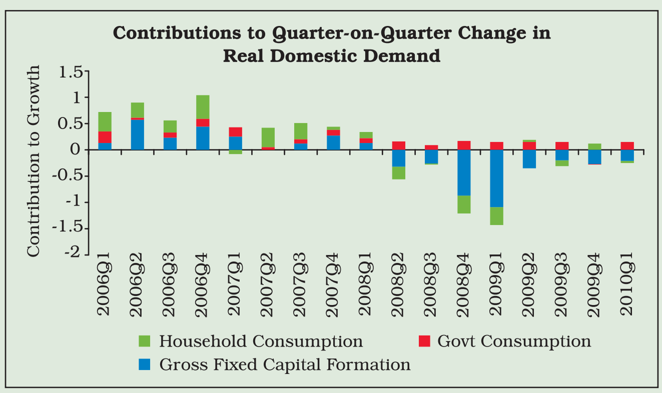
The Euro area

3.145 While the year 2008 started on a relatively resilient note, there was rapid deterioration in economic activity from the middle of the year in the face of weakening domestic demand and a pronounced slowdown in the world economy. With the onset of the crisis, consumer and business confidence began to decline in the euro area and the UK. Domestic demand has softened in the euro area since the second quarter of 2008, with investment registering a significant decline and consumption moderating. Both domestic demand and net trade made significant negative contributions to growth during 2008 (Chart III.20). While half of the quarter-on-quarter growth in the first part of 2009 in the Euro area arose from internal demand, amid particularly subdued consumption and weakening residential investment, the other half resulted from net exports. During the second half of 2008, firms started to react forcefully to the rapid depletion of order books, postponing expansion plans and cutting inventories in the face of weak demand and costlier access to financing. With the significant deterioration in the external environment – on account of renewed weaknesses in the US economy and activity in emerging markets, which had previously been perceived to be shielded from the effects of the global slowdown – the year-on-year growth in euro area exports fell to its lowest level since 2003 by the third quarter of 2008. As the recession continued, the contribution of external demand continued to be negative till first quarter of 2009. As the global economic environment improved, the negative contribution improved in the fourth quarter of 2009. There are a number of factors behind this decline, including the fact that the global drop in investment in equipment and machines particularly affects euro area countries that are more specialised in capital goods.

3.146 Tight credit conditions, commodity price-related inflationary pressures and deteriorating confidence brought an end to the rapid growth in housing prices witnessed up to the third quarter of 2007. Faced with subdued real income growth, falling financial wealth, tightening credit conditions and worsening labour market prospects, household spending moderated significantly during 2008 and also during the first quarter of 2009. Household spending decisions were also severely affected by expectations regarding lifetime income, which, in addition to expected future income, also includes returns on financial and real estate wealth. Since

Chart III.20 : Real GDP in the Euro Area





the financial market turmoil began in mid-2007, developments in euro area financial assets have, for most consumers, had an adverse wealth impact which has been heightened by subdued developments in house prices. As a result, the year-on-year growth in private consumption fell to its slowest rate since 1993 in the euro area.

3.147 The falling house prices were reflected in a slowdown in construction investment, which includes both residential and commercial buildings, that partly contributed to the moderation in investment growth during 2008. Apart from falling house prices in several countries, tighter financing conditions and declining profitability also drove the moderation in investment. Residential house prices in the euro area decelerated from an annual growth rate of 6.6 per cent in 2006 to 1.5 per cent in 2008 and decelerated to -3.1 per cent in 2009 (Table 3.42). Falling residential house prices, by making residential investment less profitable, depressed construction investment. Fluctuations in the value of commercial properties were more pronounced than those observed for residential properties. Business investment has also declined sharply over the past year. Business investment slowed in the euro area on account of the weakening of demand, historically low capacity utilisation, lowering of profitability, low business confidence, and tighter lending standards which raised financing costs coupled with reduced funding availability. In view of these developments, the euro area entered into recession in the second quarter of 2008, with the three largest economies – Germany, France and Italy – all contracting.

Table 3.42: Residential Property Prices in the Euro Area

(annual % change)

	Weight %	1999-2005 average annual change	2006	2007	2008	2009	2009		2009				2010
							H1	H2	Q1	Q2	Q3	Q4	Q1
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Belgium [1]	3.7	7.5	11.8	9.3	4.8	-0.3	-0.6	-0.1	0.9	-2.1	-1.4	1.2	–
Germany [2]	27.0	-0.9	0.2	0.7	1.0	-0.2	–	–	–	–	–	–	–
Ireland [2]	2.1	12.0	13.6	-0.5	-9.1	-13.7	-11.3	-16.1	-11.0	-11.6	-13.8	-18.5	-18.9
Greece [2]	2.5	9.5	13.0	6.2	1.5	-4.7	-4.1	-5.2	-4.2	-4.1	-5.2	-5.3	–
Spain[2])	11.7	13.8	10.4	5.8	0.7	-7.4	-7.6	-7.1	-6.8	-8.3	-8.0	-6.3	-4.7
France[1]	21.1	11.2	12.1	6.6	1.2	-7.1	-8.1	-6.2	-6.9	-9.3	-7.9	-4.4	
Italy[2]	17.1	6.9	5.8	5.0	2.6	-0.5	-0.3	-0.7	–	–	–	–	–
Cyrus[2),3)]	0.2	–	10.0	15.0	13.0	-6.0	–	–	–	–	–	–	–
Luxembourg[2]	0.4	11.1	10.8	10.1	–	–	–	–	–	–	–	–	–
Malta[2]	0.1	10.8	3.5	1.1	-2.7	-5.0	-7.9	-2.0	-9.9	-6.0	-2.5	-1.4	–
Neitherlands[1]	6.3	7.8	4.6	4.2	2.9	-3.3	-1.5	-5.1	-0.3	-2.8	-5.1	-5.0	-4.3
Austria[2,4]	3.0	0.7	4.0	4.1	1.3		4.6		4.3	4.9	3.4		
Portugal[2]	1.8	2.9	2.1	1.3	3.9	0.4	1.5	-0.7	2.7	0.3	-0.8	-0.6	–
Slovania	0.4	–	17.6	22.6	3.1	-8.2	-8.4	-8.0	-7.1	-9.8	-10.9	-5.1	–
Slovaka[1]	0.6	–	16.8	23.9	22.1	-11.1	-8.9	-13.3	-4.3	-13.4	-14.3	-12.3	–
Finland[1]	2.0	–		5.5	0.6	-0.3	-4.5	4.1	-5.5	-3.6	0.4	7.9	11.3
Euro Area	100.0	6.4	6.6	4.5	1.5	-3.1	-3.1	-3.1	–	–	–	–	–

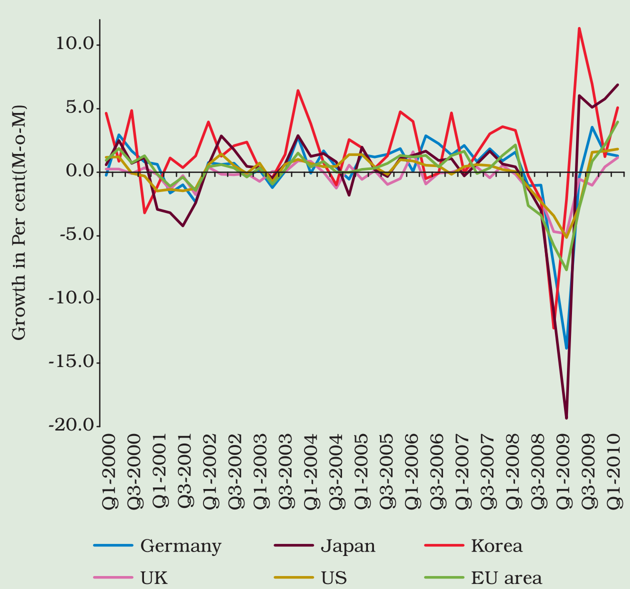
Note: Weights are based on 2007 nominal GDP.
1. Existing dwellings (houses and flats); whole country.
2. All dwellings (new and existing houses and flats); whole country.
3. Th property price index is estimated by the Central Bank of Cyprus.
4. Up to 2000; data for Vienna only.

Source: ECB Bulletin, May 2010.

3.148 From a sectoral perspective, the slowdown in activity was broad-based, although more marked in the industrial sector, which tends to display greater sensitivity to economic cycles (Chart III.21). Manufacturing activity fell abruptly in the second half of 2008, in particular with regard to capital goods, which suffered from weaker external demand, rapid depletion of order backlogs and sharp cuts in activity in the car industry. Construction continued to be very weak, despite a temporary boost in the first quarter of 2009 owing to good weather conditions, with a steady deterioration in the residential sector, which was particularly severe in some countries. Although more resilient, services grew at their slowest pace since 2004, against the background of weak private consumption and slackening business activity.

3.149 A weak and uneven recovery is underway in Europe. Macroeconomic policies still support the upswing and extraordinary measures are underway to address the sovereign crisis. Now policymakers face the difficult balancing act between continuing their support for the economy and establishing a credible path to policy normalization. The spike in government bond spreads in Greece in January 2010, and the spillovers to Portugal, Spain, and other advanced economies with important fiscal challenges, have underscored continuing fragilities. After more than a year, the trend of growth in Euro area continued to be skewed and volatile particularly in the Central and Eastern EU countries. The Greek debt crisis deepened in mid-April 2010 increased significant risks to the euro recovery. Euro area real GDP rose, on a quarterly basis, by 0.2 per cent in the first quarter of 2010, following an increase of 0.1 per cent in the final quarter of 2009. Although, GDP growth improved, however, the rate of unemployment continued to be at higher level. In comparison with US, the unemployment rate began to increase in Euro area latter but it stood at 10 per cent level in March 2010. Private consumption declined by 0.1 per cent, on a quarterly basis, in the first quarter of 2010, after increasing by 0.2 per cent in the fourth quarter of 2009. The continued weakness in household real disposable income, which has mainly reflected a decline in employment. On the supply side, in the first quarter of 2010, industrial production expanded in February, by 0.9 per cent month on month, following a 1.6 per cent increase in January. As a consequence of these increases, industrial production in the first two months of 2010 was on average substantially above its level in the final quarter of 2009. Value added in the industrial sector (excluding construction) grew by 2.2 per cent in the first quarter of 2010, following increases of 0.3 per cent in the fourth quarter of 2009 and 2.1 per cent in the third quarter.

Chart III.21: Growth of Industrial Production (SA)



Japan

3.150 As regards Japan, its recovery from a decade of stagnation in economic growth received a setback during the financial crisis through the collapse of external demand with serious knock-on effects on domestic economic activity. Economic expansion in Japan ended abruptly in 2008, with slightly positive growth in the first quarter followed by a marked decrease in overall production thereafter. Strong external demand and domestic investment supported real GDP growth in the first quarter. However, substantial declines in net exports and business investment – which had been the driving force of the Japanese recovery in previous years – along with restrained consumption owing to increasing labour market uncertainty and declining real incomes offset the positive growth of the first quarter and resulted in negative GDP growth rates for the rest of the year. In the first quarter of 2010, real GDP expanded by 1.2 per cent quarter on quarter according to the first preliminary data release of Japan's Cabinet Office. Economic activity was mainly driven by net exports of goods and services, which accounted for 0.7 percentage point of the quarterly real GDP growth, and by private demand (0.5 percentage point). For the first time in two years, personal consumption and residential and business investment showed positive quarterly growth rates.

3.151 While the Japanese banking sector remained relatively resilient to the global financial market turmoil, substantial stock market losses and the intensification of the financial turmoil had a negative impact on firms' investment and consumption in the second half of 2008. A strong appreciation in effective terms of the Japanese yen put additional downward pressure on profitability and investment in export-oriented industries. In view of the rapid deterioration in economic conditions, the Bank of Japan lowered its target for the uncollateralised overnight call rate cumulatively by 40 basis points to 0.1 per cent by December 2008; it had earlier left the target unchanged since February 2007 (ECB Annual Report, 2008).

3.152 The fiscal policy measures undertaken to combat the adverse impact of the financial crisis on the real economy, particularly the contraction in demand, led to sharp deterioration in the fiscal position of sovereign governments, with fiscal deficit rising to double-digit levels in many of the advanced economies in 2009 (Table 3.43). Japan's high fiscal deficit and net public debt may raise concerns about fiscal sustainability, and the anticipation of a sizeable fiscal adjustment in coming years could weigh on the recovery. After the financial crisis, Japan's potential growth rate is projected to fall from about 1½ percent in 2007 to around 1 percent over the medium term, led by a shrinking labor force and slower capital accumulation dampening the cyclical rebound.

Table 3.43: Government Fiscal Balance

(Per cent of GDP)

	Average 1994-2003	2006	2007	2008	2009	2010P
1	2	3	4	5	6	7
Major advanced economies	-3.6	-2.3	-2.1	-4.7	-10.0	-9.5
United States	..	-2.0	-2.7	-6.6	-12.5	-11.0
Euro area	-2.7	-1.3	-0.6	-2.0	-6.3	-6.8
Japan	-6.0	-4.0	-2.4	-4.2	-10.3	-9.8
United Kingdom	-2.1	-2.6	-2.7	-4.8	-10.9	-11.4

P: Projected.
Source: World Economic Outlook Report, April 2010.

Emerging Market Economies

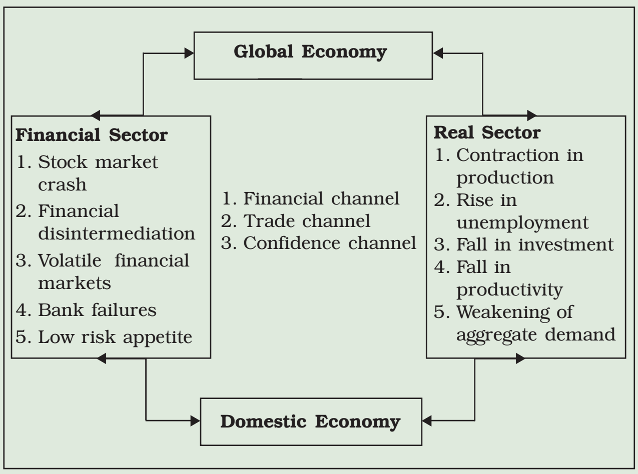
3.153 While advanced economies were slowdown rapidly, the emerging market economies appeared relatively insulated from the crisis in the initial phases. However, with the deepening of the crisis from September 2008, as global growth slowed substantially with advanced economies falling into recession, the growth in EMEs also came down sharply. The IMF estimated the GDP growth of emerging market and developing economies to decelerate to 2.4 per cent in 2009, down from 6.1 per cent in 2008. This downturn is clear evidence that the forces of globalisation are too strong for the decoupling hypothesis to work.

3.154 International trade and finance were the two major channels through which the crisis affected the real economies of the EMEs (Box III.4). The drying-up of external funds, particularly trade credits, made international trade more difficult and put great strain on smaller firms in emerging economies that have few internal sources of working capital. This, coupled with the decline in external demand for products from countries in recession, resulted in a synchronised global collapse in trade and industrial production. The IMF estimated world trade to have contracted by 10.7 per cent in volume terms during 2009 (see Table 3.22).

Box III.4
Transmission Channels of Financial Crisis: Financial and Real Linkages

The current financial crisis has been transmitted to the emerging market economies in three phases. The period between February 2007 and May 2008 appears to have been a brief golden age of decoupling of emerging economies when they largely remained insulated from the financial crisis. However, in the second and third phases the world economy moved closely in tandem, largely negating the 'decoupling' argument.

In terms of geographical expansion, three factors led to the transmission of the financial crisis from advanced economies to EMEs. The shocks from the financial market were relatively less persistent, although there was a dramatic increase in uncertainty in financial markets and cross-country capital flows reversed towards safer destinations. In this period of a credit crunch, the stock markets crashed and financial market became volatile. The EMEs were relatively insulated from developments in the US financial market primarily due to the limited exposure of their financial system to the toxic innovative products. The persistent shock to the real economic activity emanated from the trade channel, which emerged as the single most important factor that contributed to sharp declines in economic activity in the expectation of weakening external demand. The confidence channel emerged due to the collapse of big financial institutions that raised uncertainty in the global economic environment and spread a negative investment outlook.



1. Financial Channel

The financial markets in EMEs were relatively immune largely due to their limited exposure to sub-prime and related products, the so-called toxic assets, unlike European countries. As of May 2008, the total reported write-downs and credit losses of the world's 100 biggest banks and securities amounted to US$ 379 billion. Of these, Asia (excluding Japan) accounted for US$ 10.8 billion, which was less than 3 per cent of global losses (William E. James, 2008). However, real economic impacts through the financial channel could not be ignored. In particular, the availability of loanable funds was a key factor that influenced investment behaviour independent of the cost of capital. Available bank credit to the private sector may be quantitatively the most important variable in determining the amount of actual investment in developing countries (Gertler, 1988; Hubbard, 1998; Jongwanich and Kohpaiboon, 2008).

2. Trade channel

Initially, global trade did not collapse due to the slowdown of economic activity in the advanced countries, since over the period there was significant expansion of trade relations amongst the EMEs. The economic recession in the G-3 economies had ultimately led to a contraction in their import demand, thereby discouraging exports from developing EMEs. The effects of the slowdown in G-3 demand varied across industries and countries. The electronics sector was severely affected since the extent of intra-Asian trade in parts and components in this industry is perhaps larger than in any other industry. In addition, this industry is probably more dependent on the G-3 markets than others and the products of this industry display high world income elasticity.

3. Confidence channel

The confidence channel broadly operated through the stock market. Major events such as the collapse of Lehman Brothers, with implications for financial stability, had negative spillover effects on EMEs' stocks. The loss of investor confidence in EMEs' equity markets closely mirrored that of the US, and the two markets have moved in tandem since August 2007. Falling stock markets further dampened business and consumer confidence, resulting in the slowdown of economic activity and banking business. Stock market slumps may also have had a significant negative effect on the balance sheets of banks, especially for banks with substantial exposure to equities.

To sum up, the financial crisis spread through three major channels, of which the financial channel played the dominant role in the slowdown in the real sector due to increasing financial deepening and global financial integration. As regard the trade channel, the impact were somewhat reduced by the rebalancing of economic activity by all the countries that were affected by the trade channel. However, the confidence channel was critical in exacerbating the impact of the finance and trade channels on the overall financial crisis.

3.155 Economic growth in emerging Asia held up well despite the financial market turbulence and weakness in exports, mainly supported by strong domestic investment rates supported by high savings (Table 3.44). This could also be attributed to macroeconomic fundamentals which were much healthier than they were 10 years ago—as reflected in the improved sovereign credit ratings of the countries. Asian countries have cut back domestic spending, reduced fiscal deficits, and reformed their economies. Moreover, corporate balance sheets in Asia have improved as debt-to-equity ratios reduced sharply and foreign currency borrowing was no longer a large component of corporate sources of funding in most countries.

3.156 Amid the broadening of the economic slowdown and tight global financial conditions, export growth declined sharply in the second half of 2008, especially in small open economies, such as Singapore, Taiwan and Hong Kong. The overall slowdown in economic activity was also driven by a weakening of domestic demand owing to deteriorating consumer and business confidence, and the downturn in real estate investment (ECB Annual Report, 2008). Within emerging Asia, the adverse impact of the contraction in trade on economic growth varied depending on the contribution of final external demand to total value added in these economies. Malaysia and Thailand suffered most from a double-digit fall in exports. The global downturn also affected growth in Indonesia and the Philippines. However, with both countries less reliant on exports than many of their emerging East Asian neighbours, their respective slowdowns were not as dramatic. The four middle-income ASEAN economies (Indonesia, Malaysia, the Philippines, and Thailand) contracted by 1.0 per cent in the first quarter of 2009. In line with the slowdown in economic activity, industrial production declined for all ASEAN-4 economies except Indonesia. To date, ASEAN-4 economies have been affected much less by the current crisis than during 1997-98.

3.157 Within Asia, economic contraction in the NIEs was the worst since the 1997-98 Asian financial crisis due to the precipitous drop in exports and weak domestic demand. The fall in export growth resulted in substantial reduction in GDP growth due to the heavy reliance of these countries on an export-led growth model. Consumption has fallen substantially in line with the fall in income and weakening of consumer confidence due to heightened uncertain economic environment. In terms of share, the fall in exports and imports has been somewhat offset by the rise in the share of government consumption expenditure in GDP mainly due to the rebalancing of the economy towards domestic sectors. The collapse in global demand led to a dramatic slowdown in NIEs' exports during the first five months of 2009. Along with the

Table 3.44 : Real GDP Growth, Investment and Export – Select Asian Economies

(as a percentage of GDP)

	Real GDP Growth			Investment Rate (Percentage to GDP)			Merchandise Exports Growth		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
1	2	3	4	5	6	7	8	9	10
China	13.0	9.6	8.7	41.7	42.5	45.8	25.8	17.6	-16.1
Hong Kong	6.4	2.1	-2.7	20.9	20.5	22.5	8.9	5.6	-11.9
India	9.2	6.7	7.2	37.6	35.6	34.5	28.9	13.7	-15.0
Indonesia	6.3	6.0	4.5	24.9	27.8	31.0	14.0	18.3	-14.4
Korea	5.1	2.3	0.2	29.4	31.2	25.9	14.2	14.2	-13.7
Malaysia	6.2	4.6	-1.7	21.7	19.1	14.0	9.6	13.1	-21.1
Philippines	7.1	3.8	0.9	15.4	15.2	14.0	6.4	-2.5	-22.3
Singapore	8.2	1.4	-2.0	20.7	30.1	27.6	10.1	13.0	-20.3
Thailand	4.9	2.5	-2.3	26.4	28.9	21.9	18.2	15.9	-13.9

Source: Asian Development Outlook 2010, ADB.

precipitous drop in domestic demand, industrial production fell sharply. However, the pace of the decline has begun to moderate. The worst-hit economies were Taiwan and Singapore, where GDP in the first quarter fell by 10.2 per cent and 9.6 per cent, respectively. Double-digit declines in fixed investments and exports contributed to the steep fall in Taiwan's GDP. Hong Kong's economy also continued to shrink in the first quarter of 2009, declining by 7.8 per cent, with both external and domestic demand contracting. Meanwhile, the Republic of Korea's economy contracted 4.2 per cent in the first quarter of 2009; however, the decline may have stopped as the economy grew by 0.5 per cent (seasonally adjusted annualised rate) compared with the last quarter of 2008. Collectively, economic growth in the NIEs has declined more than during the 1997-98 Asian financial crisis, although the pace of decline has been less steep. The growth continued to decline till the first half of 2009-10 and turned positive in the fourth quarter of 2009. In the fourth quarter of 2009, Korea witnessed significant increase in growth to 6.0 as against 2.6 per cent in Hong Kong and 4.0 per cent in Singapore.

3.158 Amid the slowdown across most of emerging East Asia, China remains a major bright spot as it continued to grow at a healthy rate during the first half of 2009. Its 6.1 per cent GDP growth in the first quarter of 2009 was the lowest since the introduction of quarterly GDP figures in the fourth quarter of 1999. But growth performance improved in the second quarter, increasing by 7.9 per cent and reached 11.9 per cent in first quarter of 2010. Like other emerging East Asian economies, however, Chinese exports were badly affected by the plunge in external demand, falling 22.2 per cent in May 2009. However, continued strong growth in fixed-asset investment, which was given added impetus by the government's massive stimulus package, managed to offset the effects of declining exports (Box III.5). Fixed-asset investment growth accelerated to 38.7 per cent in May 2009, compared with 25.4 per cent in May 2008 and moderated to 26.1 per cent in April 2010. However, consumer demand, as reflected by retail sales growth, weakened to 13.7 per cent in April before rising again to 14.9 per cent in May 2009 and increased to 18.5 per cent in April 2010.

Latin America

3.159 Economic growth in Latin America was robust in the first half of 2008. Inflationary pressures were elevated and rose throughout the year, with inflation rates for the region increasing to 8.7 per cent in 2008 from 6.1 per cent in 2007. Countries with fixed or quasi-fixed exchange rates recorded higher inflation than those with an inflation-targeting regime. Improved macroeconomic fundamentals, high commodity prices and strong domestic demand continued to support the economic outlook in the first half of 2008, although they also resulted in increased inflationary pressures. However, from mid-September 2008 external financial conditions deteriorated as the global financial crisis unfolded. In particular, spreads on credit default swaps on Latin American sovereign debt widened considerably, especially in Argentina and Venezuela (by around 4,000 and 3,000 basis points respectively at the end of the year). In addition, currencies fell vis-à-vis the US dollar, equity markets dropped significantly by around 50 per cent over the year and liquidity shortages emerged. Brazil and Mexico were particularly hit by liquidity shortages, as large outflows affected the financial landscape of the region. For 2010, regional GDP is expected to grow by 4 percent—good performance by historical standards. Real linkages with the Latin American region are limited to Greek crisis, but the region could be affected if tail risks materialize. Exports to Greek, Italy, *etc.* account for less than 5 percent of total exports of the LAC region, limiting contagion through real channels. However, in an extreme scenario, a sovereign debt crisis in Southern Europe could have spillovers through market confidence effects. The recovery in global capital markets has been faster than anticipated, contributing to a positive short-term growth in advanced economies, and easing external financing conditions for emerging markets have significantly buoyant the overall economic environment in Latin America in 2010. However,

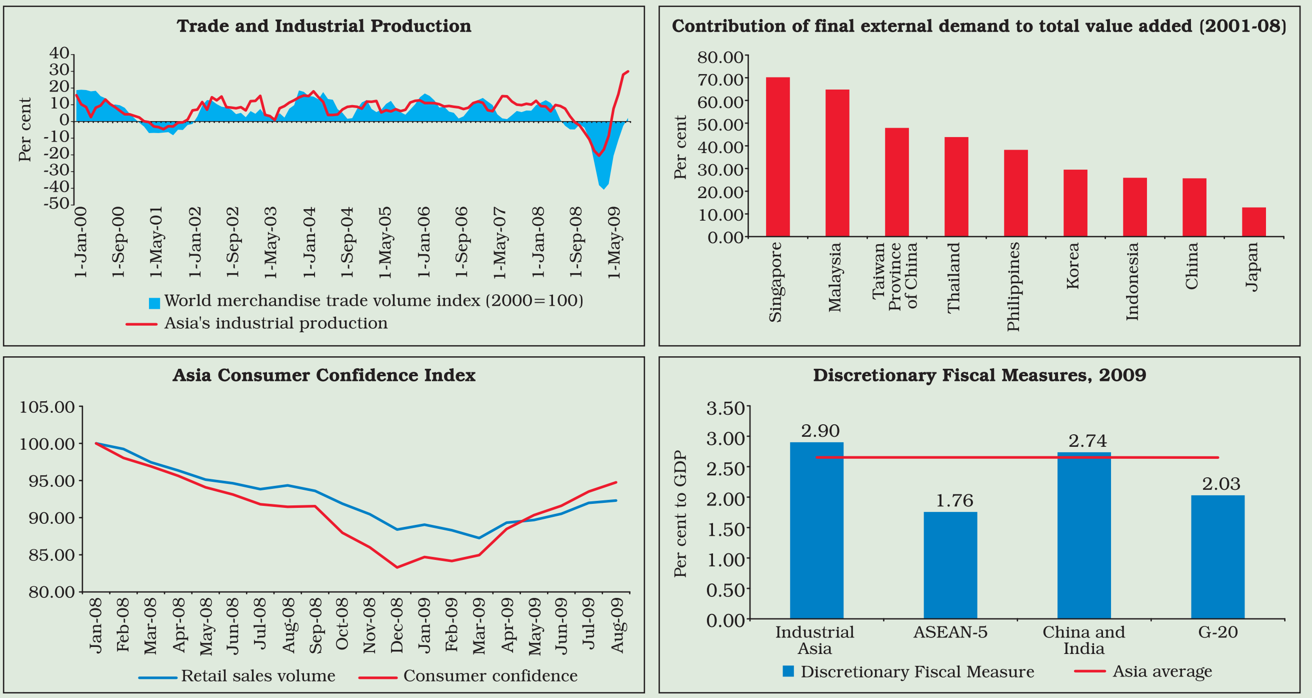
Box III.5
Impact of the Global Crisis on Asia

The current global economic slowdown has had a significant impact on the Asian economy through its external sector linkages. The Asian economies were witnessing high growth led by an export-driven growth model. During the 1990s, world trade rose by around 7 per cent on average, providing impetus to Asian economies' growth performance. The Asian region is highly dependent on exports particularly on US consumption, which is responsible for about one-fourth of Asia's export value added. In the midst of the global financial crisis, the demand for Asian exports dropped significantly, resulting in overall contraction in trade. In the last quarter of 2008, real exports fell by 6.5 per cent in the United States, 6.7 per cent in the euro area, 13.8 per cent in Japan and an estimated 10 per cent in China. Industrial production in the Asian economies decelerated significantly in line with the sharp deceleration in demand from the advanced economies (Chart). The Asian economies rely heavily on the export sectors, the contribution of final external demand to total value added.

As the crisis struck the world economy, trade and financial flows, which used to act as powerful drivers of globalisation, abated at the end of 2008, further transmitting the effect of the crisis across borders. The crisis has resulted in significant weakening of consumer and investor confidence. Despite efforts of rebalancing growth through domestic sectors, the poor consumer and investor confidence prolonged the recovery from the crisis. The most interesting fact which emerged from the crisis is that there was a synchronised fall in confidence which heightened the uncertainty. The weakening of economic activity and wealth effects due to corrections in asset prices resulted in a huge fall in consumption and investment activity.

In the period of weakening of demand both domestically and externally, discretionary fiscal measures were undertaken in Asian economies. As a result, the strong fiscal response played an important role in stabilising Asian economies during the first half of 2009. As per the IMF, simulations using the IMF's Global Integrated Monetary and Fiscal (GIMF) model estimated that fiscal stimulus accounted for, on average, about 1¾ percentage points of GDP growth in the first half of 2009 in Asia.

Chart : Impact of Crisis on Trade in Asian Economies



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fiscal prudence and weak growth continue to be a key challenge in the region.

Impact on Labour Market

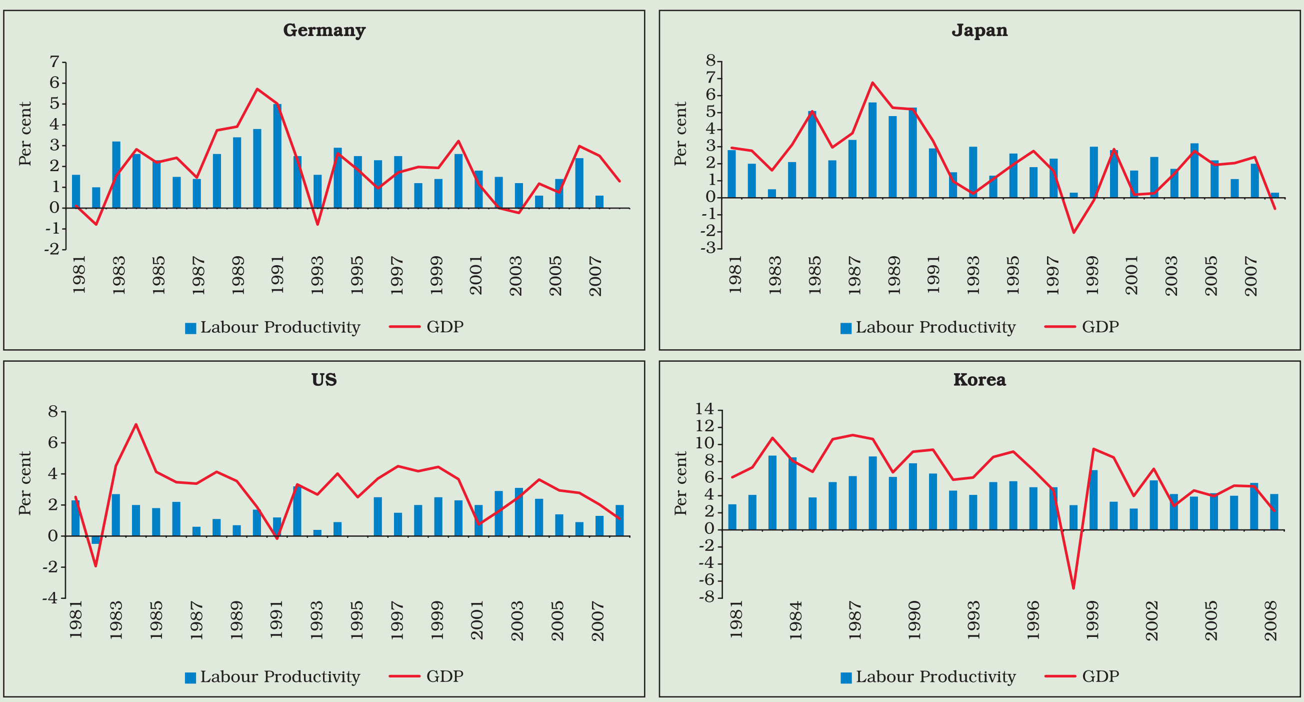
3.160 The financial crisis had an adverse impact on the level of employment. The erosion of economic activity and depressed economic environment led to rapid lay-offs, both in private corporate businesses and factories. The fall in employment was prominent in the manufacturing sector, which has a higher sensitivity to financial crises due to its dependence on international trade. Labour market conditions deteriorated further due to the reversal of labour migration. The inefficient allocation factors of production such as capital and labour led to sharp falls in productivity during the current financial crisis (Box III.6).

Box III.6
Labour Productivity Analysis during Boom and Bust Period

The economic literature provides strong evidence that financial crises are periods of turbulence, that often result in lay-offs, a strained labour market and, at times, high losses of skills from the displacement of workers from crisis sectors to non-crisis sectors (Ljungqvist and Sargent, 1998). In the period of crisis, the fall in output is largely attributed to a fall in factor productivity as a result of higher prices of factors of production, protectionist tendencies and significant fall in research & development. In a cross-country analysis, empirical estimates of the impact of the productivity shock on output shows that output falls by nearly 4.5 per cent, which is close to half (46 per cent) of the overall impact of the crisis on GDP (Chart). TFP (measured as y/k) falls by about 4 per cent, which is roughly 43 per cent of the corresponding fall.

During the period of financial crisis, due to rapid and large relative price changes, many workers have to move to occupations and sectors that are very different from their prior employment experience. Thus, one can expect more displaced workers to find themselves in jobs for which their accumulated skills are ill-suited, and where new skills must be acquired, causing at least transitory losses in productivity. In normal times, this effect disappears and the differences in the change of wages are small or imprecisely measured. Earnings losses for movers are over 14 per cent higher than for stayers during the crisis. Outside the crisis, these relative losses do not show any clear pattern and are rarely statistically significant. A sudden drop in the quality of labour causes the capital-output ratio to fall and, hence, should cause utilisation of capital as

Chart : Trends in Labour Productivity Growth and GDP Growth



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well. The endogenous response of utilisation should therefore magnify the effect of labour turbulence on TFP.

The current financial crisis originated in the fall in the housing sector which has direct linkages with the construction sector. The construction sector emerged as an important driver in the fall in labour productivity in the US. The construction sector is around 5 per cent of total GDP, but due to poor productivity performance it has been a significant drag on aggregate productivity. In 2007, an abysmal negative 12 per cent labour productivity growth in construction accounted for negative 0.6 percentage points of aggregate productivity growth (OECD 2009).

The construction of new dwellings in the US remained high up to early 2006; afterwards, it started to decline steadily. In parallel, the negative labour productivity growth in the construction sector, after a short improvement in 2005, started again to decelerate strongly during 2006 and 2007. This suggested a serious excess supply problem. In contrast, the housing price bubble was still inflating in 2005; it levelled during 2006 but started to decline at the beginning of 2007. It is significant to note that the boom years of the mortgage and sub-prime business (2005-2006) coincide precisely with the periods where productivity performance was deteriorating rapidly, as if a substantial boost in demand through extended credit conditions could have compensated for the supply-side problems. There was clear evidence that pressure on the housing sector mainly emanated from a fall in productivity before the actual cooling of the housing market. On the other hand, disproportionate growth of financial activity in the housing market away from the real activity in the housing sector resulted in a mismatch of optimism about housing prices and the collapse of the financial system.

The ordinary least square estimates suggest that the financial crisis had a higher negative impact on output in the US and Korea than in Japan, which is possibly due to long phase of recession in Japan. This negative impact of the financial crisis is captured by a dummy variable; for the period when the crisis struck the economy it is 1, while for normal years it was defined as 0.[1]

Historically, it may be observed that labour productivity has a significant relationship with a financial crisis. In select countries, the average relationship of labour productivity growth tends to increase further during a financial crisis. This suggests that output growth expands/contracts in response to the shock in the labour market.

To sum up, the above analysis suggests that the period of financial crisis does impact the productivity growth due to strained impact on the labour market segment. The labour market shocks lead to a fall in total factor productivity which coupled with low investment activity in depressed business sentiments, cascades the impact of the financial crisis on the output in the economy.

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[1] The ordinary least squares (OLS) method specification with the coefficient significant at 5% to 10% is as follows for select countries: Pd=Labour Productivity, Dfin= Financial Crisis.

US Y= 2.17+Pd 0.49-Dfin3.18 Adj R-Sq 0.60 Dw stat 1.6

Japan Y= 0.03+Pd0.98-dfin1.19 Adj R-Sq 0.67 Dw stat 1.8

Korea Y= 1.13+Pd1.1-Dfin2.4 Adj R-Sq 0.43 Dw stat 1.5

3.161 Among the advanced economies, in the United States the total hours worked were cut at an annualised pace of 9 per cent in the first quarter of 2009 following an equally large cut in the preceding quarter, lifting the unemployment rate to 9.4 per cent by May 2009. Over the past few years, euro area labour markets had performed very positively, with strong increases in employment, rising participation levels and low unemployment rates. However, during crisis Euro area unemployment rate reached a 25-year high of 7.2 per cent in March 2008. With the onset of the financial turmoil and the associated sharp economic downturn, unemployment began to increase markedly (Table 3.45). In August 2009 the euro area unemployment rate was at 9.6 per cent – the highest rate recorded in a decade. Since then it increased further to 10.1 per cent in April 2010.

Table 3.45: Unemployment Rates

(Per cent)

	Euro Area 16	Bulgaria	Czech Republic	Denmark	Estonia	United Kingdom	Hungary	Lithuania	Latvia	Poland	Romania	Sweden
1	2	3	4	5	6	7	8	9	10	11	12	13
2005Q1	9.4	10.8	8.1	5.2	9.0	4.7	6.8	9.6	9.4	18.2	7.7	7.4
2005Q2	8.9	10.2	8.0	5.1	8.2	4.7	7.3	8.7	9.4	18.3	7.4	7.9
2005Q3	8.7	9.6	7.8	4.7	7.2	4.7	7.3	7.7	8.8	17.7	6.7	7.8
2005Q4	8.9	9.8	7.9	4.2	7.1	5.1	7.4	7.1	8.0	16.9	6.9	7.6
2006Q1	9.2	9.2	7.7	4.2	6.1	5.2	7.4	5.8	7.4	15.6	7.0	7.5
2006Q2	8.2	9.2	7.2	4.1	6.3	5.4	7.4	5.7	7.3	14.4	7.2	7.3
2006Q3	8.0	9.2	7.0	3.7	5.6	5.5	7.5	6.1	6.4	13.3	7.6	6.9
2006Q4	8.1	8.4	6.6	3.7	5.6	5.5	7.6	4.9	6.2	12.3	7.3	6.6
2007Q1	8.0	7.6	5.8	4.1	5.0	5.5	7.2	4.5	6.4	10.8	6.4	6.4
2007Q2	7.3	7.0	5.5	3.7	5.1	5.3	7.2	4.2	5.9	9.8	6.7	6.1
2007Q3	7.3	6.9	5.1	3.9	4.3	5.3	7.3	4.3	6.1	9.3	6.4	6.0
2007Q4	7.3	6.2	5.0	3.4	4.1	5.1	7.8	4.4	5.5	8.6	6.2	6.1
2008Q1	7.6	6.1	4.5	3.2	4.0	5.2	7.6	4.3	6.1	7.5	5.7	5.9
2008Q2	7.3	5.9	4.4	3.1	4.1	5.3	7.8	4.5	6.2	7.3	5.8	6.0
2008Q3	7.3	5.3	4.3	3.3	6.4	5.8	7.8	6.4	7.5	7.0	5.8	6.2
2008Q4	7.9	5.1	4.5	3.7	7.7	6.3	8.1	8.2	10.3	7.0	5.9	6.7
2009Q1	9.3	5.9	5.5	4.8	11.0	7.0	9.2	11.2	13.3	7.5	6.2	7.5
2009Q2	9.2	6.4	6.5	6.1	13.5	7.7	9.8	13.5	16.4	8.0	6.4	8.4
2009Q3	9.4	7.0	7.3	6.2	15.2	7.8	10.5	14.3	18.8	8.5	7.2	8.6
2009Q4	9.8	8.0	7.4	7.1	15.6	7.8	10.6	15.9	20.2	8.9	7.6	8.8
2010Q1	10.5	8.6	7.8	7.1	19.0		10.9	17.4	21.5	9.7	NA	8.9

Source: European Central Bank.

In the euro area, sustained growth in the labour supply, coupled with weak demand for labour, was behind the steady increase in the unemployment rate. A marked decline in the ratio of job offers to applicants since the beginning of 2009 suggests that the employment downturn in Japan is likely to deepen further. Within EMEs, during the current crisis, India and China have each lost 10 million jobs and 14,000 jobs have gone in South African mining.

3.162 In an integrated world, every region has been affected by the current global crisis, irrespective of the differences in their economic structures or policy frameworks. The volatilities in the financial markets along with the slowdown in economic activities in the advanced economies were, in fact, transmitted to the EMEs through all three channels – trade, financial and confidence – on account of the increased global integration witnessed in recent years. As a result, the decoupling theory which had gained prominence during the pre-crisis period has been discredited. The sharper declines in trade flows in the wake of the current financial crisis could be attributed to the increasing presence of global supply chains in total trade as also to the rapid developments in financial markets which led to the financialisation of global trade. The collapse in commodity prices has been a further blow to the value of global trade and has adversely affected the net commodity exporters. Thus, the crisis has highlighted the vulnerability of a growth strategy that is based on over-dependence on export demand. Consumption and investment witnessed sharp contractions in line with the fall in output and productivity. Industrial production collapsed in response to contraction in global trade while unemployment rates touched an all-time high.

V. CONCLUDING OBSERVATIONS

3.163 The flow of capital between nations, in principle, brings benefits to both capital-importing and capital-exporting countries. But the historical evidence, reinforced by the current global financial crisis, clearly shows that it can also create new exposures and bring new risks. The failure to analyse and understand such risks, excessive haste in liberalising the capital account and inadequate prudential buffers to cope with the greater volatility in more market-based forms of capital allocation have compromised financial or monetary stability in many emerging market economies. In an integrated world, every region has been affected by the current global crisis, irrespective of the differences in their economic structures, financial systems or policy frameworks.

3.164 Almost all segments of the global financial markets experienced tremors of the financial crisis, though to varying degrees. Interbank markets in advanced economies were the first one to be affected by the crisis – this market segment suffered from a severe liquidity crisis as banks became reluctant to lend to one another for fear of counterparty risks. Subsequently, the crisis spread to the money markets as manifested in the abnormal levels of spreads, shortening of maturities, and contraction, or even closure, of some market segments. In the wake of credit and money markets witnessing a squeeze and equity prices plummeting, banks and other financial institutions experienced erosion in their access to funding and capital base, owing to accumulating mark-to-market losses. The pressure on financial markets mounted with the credit spreads widening to record levels and equity prices crashing to historic lows, leading to widespread volatility across the market spectrum.

3.165 Domestic interbank markets in EMEs, however, did not seize up as severely as their counterparts in developed countries, although they experienced some liquidity strains largely due to the 'knock-on' effects of the crisis. Stock markets in EMEs, on the other hand, bore much of the heat of the crisis as equity markets all over the world witnessed high volatility, sharp declines in prices, turnover volumes and market capitalisation. During the second half of 2009, however, there have been some signs of recovery in the health of global stock markets. Government bond markets all over the world witnessed large swings in yields driven mainly by direct and indirect consequences of the intensified financial crisis. Corporate bond markets of advanced economies exhibited relative resilience during the current financial crisis, even though corporate bond issuance from the EMEs declined significantly amid heightening of spreads since the second half of 2008. Commodity prices, which reached record highs during the initial stages of the crisis as investors sought to hedge against a depreciating US dollar and possibly also as a hedge against higher inflation, witnessed a reversal in trend since the collapse of Lehman Brothers in September 2008, leading to a slowdown in economic activities.

3.166 Against the backdrop of large-scale disruptions in international financial markets and deteriorating macroeconomic conditions, financial institutions also suffered significantly. Commercial banks suffered from a decline in profitability and large mark-to-market losses; as a result, the liquidity problems transformed into a solvency problem leading to bank failures in the US and other matured economies in Europe. In order to restore confidence and revive the financial system, there were large-scale efforts by the governments and central banks in advanced economies. The banking system of the emerging market economies, on the other hand, reflected relative resilience during the crisis on account of their limited exposure to the toxic assets and the regulatory and supervisory measures taken to strengthen their balance sheets in the aftermath of the East Asian crisis. The crisis almost side-lined the investment banking industry, while the financial performance of the monoline insurers and hedge funds was impacted severely. As a result, the crisis accelerated the trend towards greater institutionalisation and transparency.

3.167 The tightening of credit conditions combined with deleveraging and risk aversion by banks and financial institutions led to a sharp slowdown in private sector credit growth, particularly in the advanced economies, which worked as a channel for transmitting the crisis from financial institutions to the real economy. The overall deceleration in bank lending to the private sector was broadly based though more pronounced in the case of household credit, including mortgages. Despite co-ordinated policy efforts, bank lending in the advanced economies remains restricted during the recent months, while credit growth in the EMEs is yet to pick up. Another channel through which the financial crisis impacted the real economy was through contraction in world trade especially during the second half of 2008. The sharper declines in trade flows in the wake of the current financial crisis could be attributed to the increasing presence of global supply chains in total trade as also to the rapid developments in financial markets which led to the financialisation of global trade. The collapse in commodity prices has been a further blow to the value of global trade and adversely affected net commodity exporters. Thus, the crisis has highlighted the vulnerability of the growth strategy based on over-dependence on export demand. Apart from decline in trade flows, net private capital flows to EMEs also reversed, reflecting global deleveraging and risk aversion on the part of investors, which led to tightening of external financing conditions. The impact, however, varied depending on the country's current account and fiscal position. On the other hand, remittance flows remained more stable than private capital flows. The current and capital account developments across countries indicate signs of rebalancing of the global imbalances in the recent period.

3.168 The global crisis that mainly emanated from the crisis in the financial sector resulted in widespread recession and caused serious output loss and heightened global uncertainties. Interestingly, factors such as globalisation, trade and capital flows which were major drivers of growth and prosperity of the world economy witnessed sharp contraction. The synchronised global economic recession has challenged the theory of decoupling which was emerging during the period before the economic crisis. In fact, the crisis transmitted to the EMEs through all the channels such as trade, financial and confidence channels on account of increased global integration witnessed in recent years. As a result, GDP growth witnessed sharp contraction and the baseline global growth scenario for 2009 fell into a negative trajectory. Many countries witnessed significant losses in their potential output. Consumption and investment witnessed sharp contraction in line with the fall in output and productivity. The industrial production collapsed in response to contraction in global trade, while unemployment rates touched an all-time high.

3.169 As demonstrated during the current crisis, while rising trade integration with the global economy and the increasing importance of their firms and households in international finance over the past decade have brought enormous economic and financial benefits to the EMEs, they have also widened channels through which a slowdown in economic activity in advanced economies could spread to the EMEs. Of the three major channels of contagion, the trade channel which has the strongest linkages with the financial and real sector has inflicted heavy loss of output and confidence. In response to weakening global economic demand, various countries have undertaken co-ordinated monetary-fiscal measures to stimulate demand. The impact of fiscal measures began to provide some signs of recovery in the second quarter of 2009. Emerging market economies, led by resurgence in Asia, are expected to lead the recovery process. However, the downside risk continues to pose challenge to the overall global economic outlook and the shape of the recovery continues to remain uncertain, depending on the exit policy toward discretionary measures. Financial market conditions have also improved markedly supported by strong public policies, but still there is a long way to go before returning to the pre-crisis situation. In recent months, sovereign yield curves have steepened considerably both in the advanced as well as emerging market economies, reflecting a combination of factors, such as monetary policy easing, improved recovery prospects and reduced risk of deflation.