GLOBAL OUTLOOK 2009

Surviving the Chill

ICICI Bank
Corporate Solutions

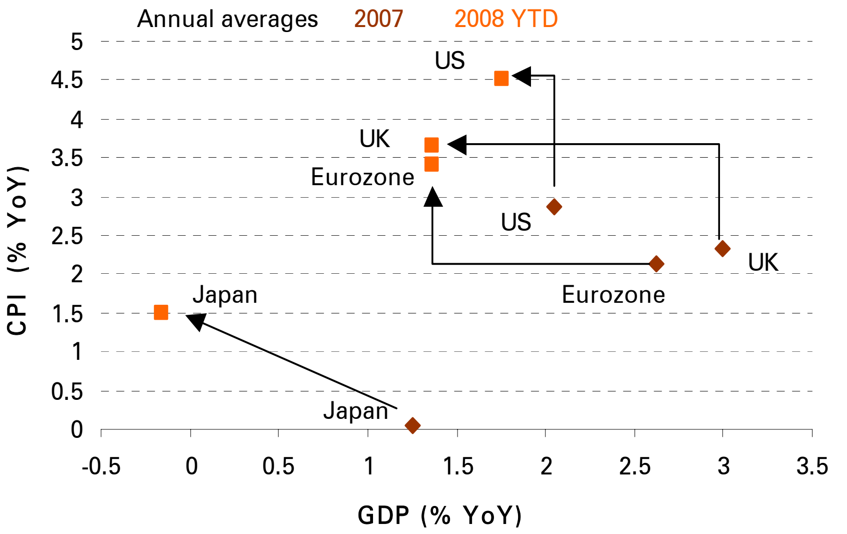
Key takeaways

Global themes for 2009

Growth to suffer further as the deleveraging hangover to continue. All hopes pinned on proactive policy response

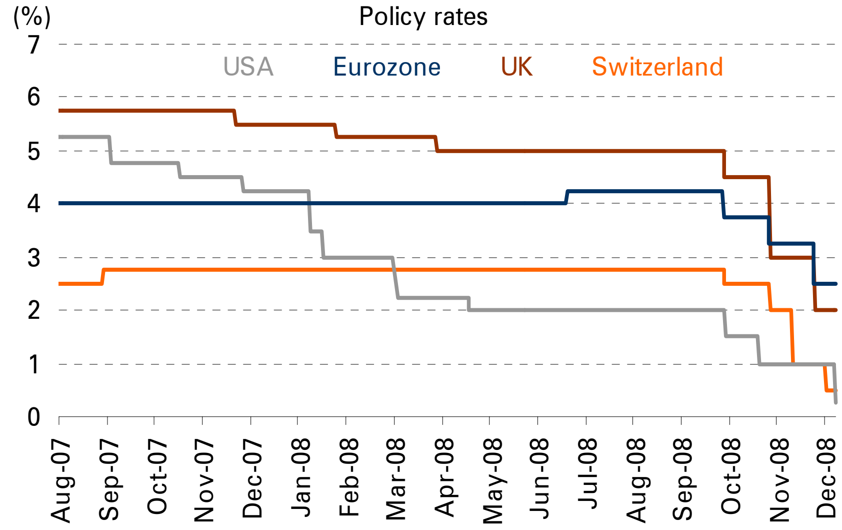
The year that was…

Growing growth concerns…



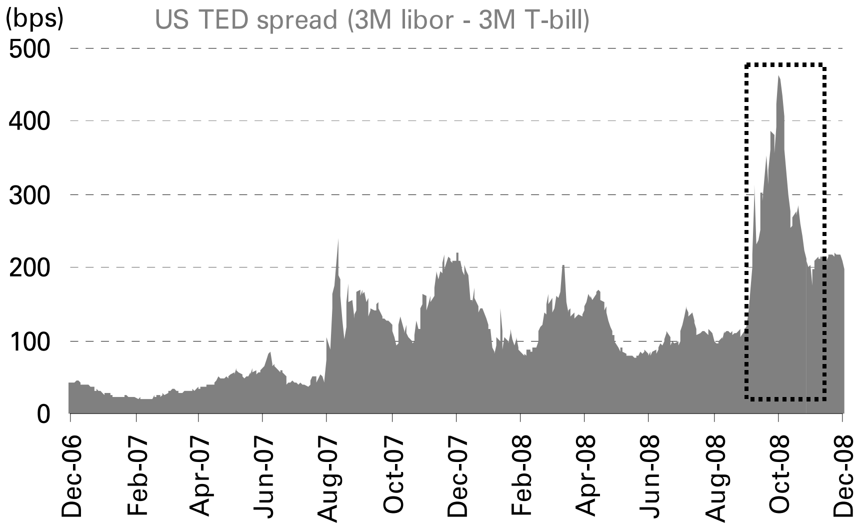
Source: Bloomberg, ICICI Bank Research

…led to substantial monetary easing…



Source: Bloomberg, ICICI Bank Research

…but financial markets remained frigid…



Source:Bloomberg, ICICI Bank Research

…and unprecedented events evoked unprecedented responses

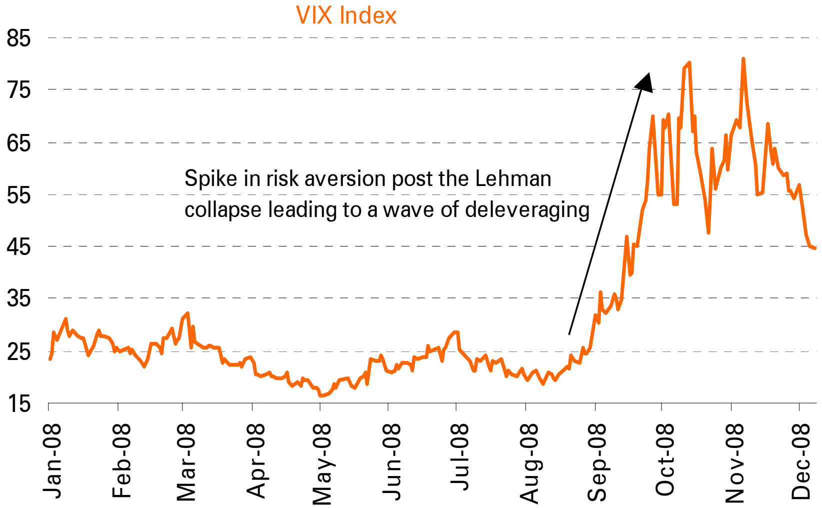
Credit Crises induced losses	
Feb-08	Losses reported by Fannie Mae, Freddie Mac, AIG, UBS
Mar-08	Bear Stearns sold to JPM
Sep-08	Lehman Brothers declares bankruptcy
	Bank of America buys Merrill Lynch
	Goldman Sachs, Morgan Stanley become bankholding Co's
Dec-08	Auto industry in trouble - GM, Ford, Chrysler vying for a bailout

Bailouts announced by the US	
Sep-08	Fannie Mae and Freddie Mac nationalised
	AIG bailout plan of USD 152.5 bn
Oct-08	TARP of USD 700 bn to help financial firms
Nov-08	Citi given a bailout plan of USD 300 bn
	USD 800 bn to finance agency backed securities and bonds
Dec-08	Auto industry bailout of USD 17.4 bn

Source:Bloomberg, ICICI Bank Research

The year that was…

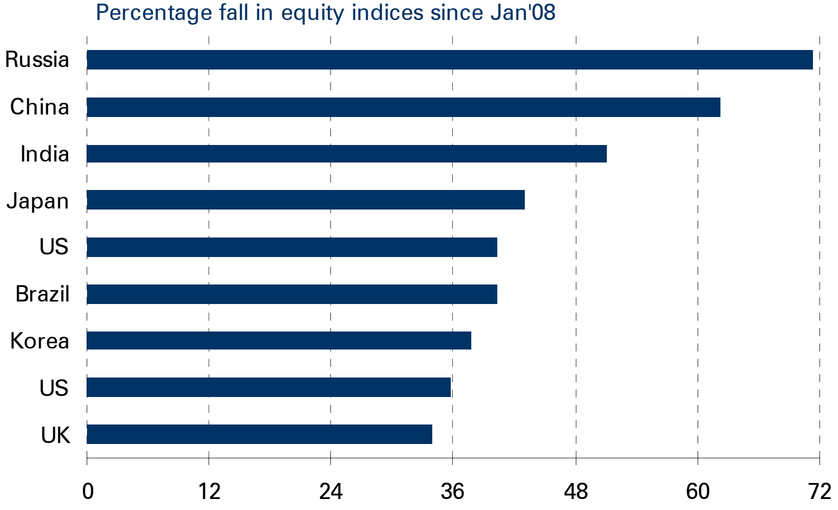
Rising risk aversion and the deleveraging phenomenon…


VIX Index

Spike in risk aversion post the Lehman collapse leading to a wave of deleveraging

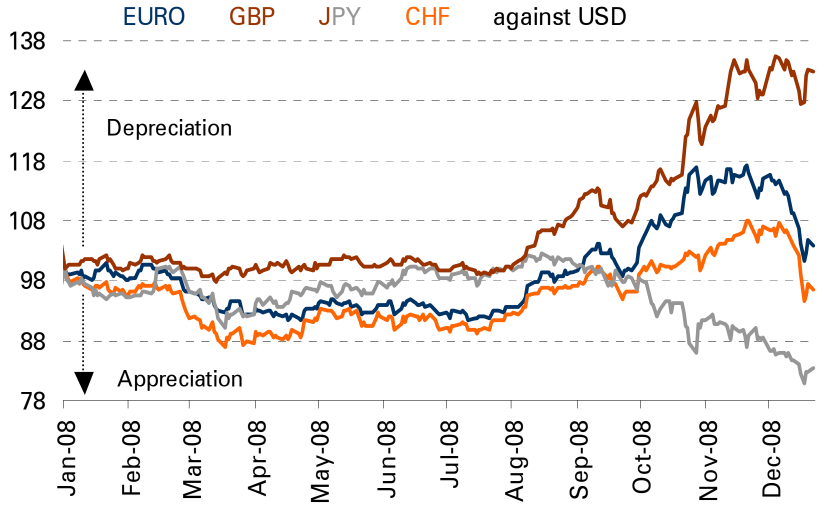
Source Bloomberg, ICICI Bank Research

…led to deep losses in equity markets…


Percentage fall in equity indices since Jan'08

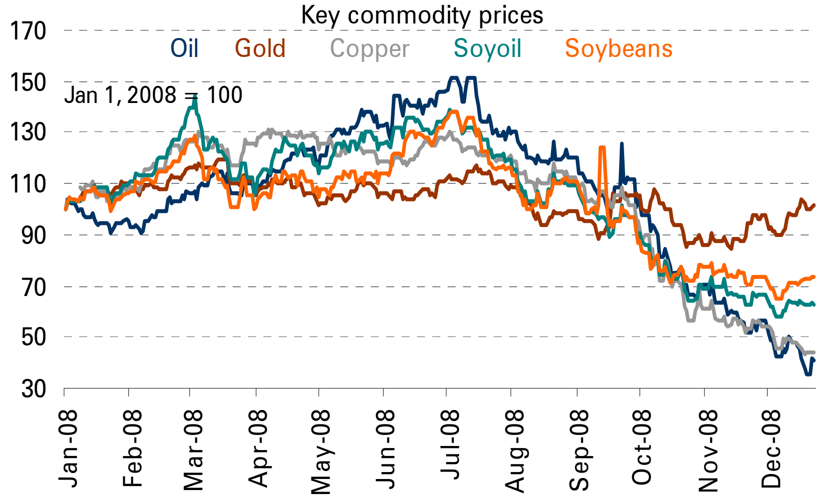
Source: Bloomberg, ICICI Bank Research

…and also led to reversal in the Dollar weakening cycle



Source:Bloomberg, ICICI Bank Research

Commodity prices take a breather – the only silver lining in 2008


Key commodity prices

Source:Bloomberg, ICICI Bank Research

The first global recession in 7 years could be a lengthy affair

World growth momentum comes to a halt after 7 years

Synchronous business cycles means no support to come from the developed world

Emerging markets are also contracting, led prominently by China

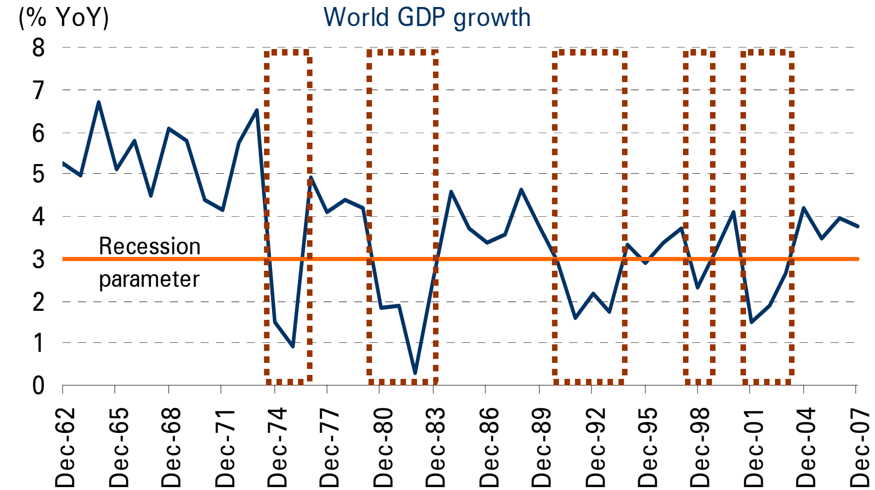
Growth slowdown is yet to reach bottom from a historical perspective

Pain associated with recessions coinciding with a credit crunch or asset price bust is much larger than those without it

However, each recession is unique and given the unprecedented features of the current episode, the outcome could be much more severe

The global economy heads for its first recession in 7 years

World growth momentum to halt in 2009



Dotted area marks global recessions

Source: IMF, World Bank, ICICI Bank Research

Multilateral agencies have already revised down its growth projections…

IMF Projections for Rate of Growth (% YoY)				
	For the year 2008		For the year 2009	
	IMF	World Bank	IMF	World Bank
World	3.7	2.5	2.2	0.9
Advanced economies	1.4	1.3	-0.3	-0.1
Developing economies	6.6	6.3	5.1	4.5
India	7.8	6.3	6.3	5.8
China	9.7	9.4	8.5	7.5
US	1.4	1.4	-0.7	-0.5
Euro zone	1.2	1.1	-0.5	-0.6
Japan	0.5	0.5	-0.2	-0.1

Source: IMF, World Bank, ICICI Bank Research

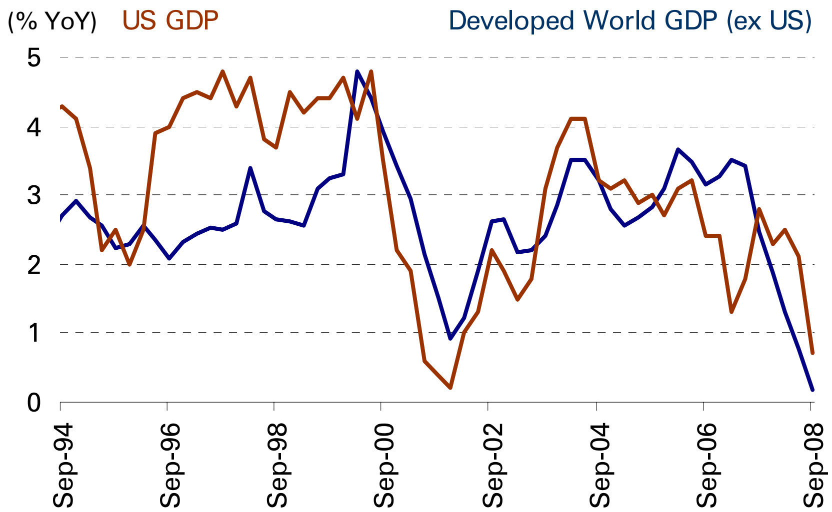
… as the US economy grapples with its longest recession since 1980

Business Cycles	Contraction Period (in months)	Output Decline*
November 1948 - October 1949	11	8.5
July 1953 - May 1954	10	13.9
August 1957 - April 1958	8	22.4
April 1960 - February 1961	10	16
December 1969 - November 1970	11	12.7
November 1973 - March 1975	16	15.3
January 1980 - July 1980	6	24.5
July 1981- November 1982	16	14
July 1990 - March 1991	8	8.0
March 2001- November 2001	8	8.7
December 2007 - Present	**12**	**5.3**

*Output decline is the difference in output growth between peak and trough during the cycle

Source: NBER, BEA, ICICI Bank Research

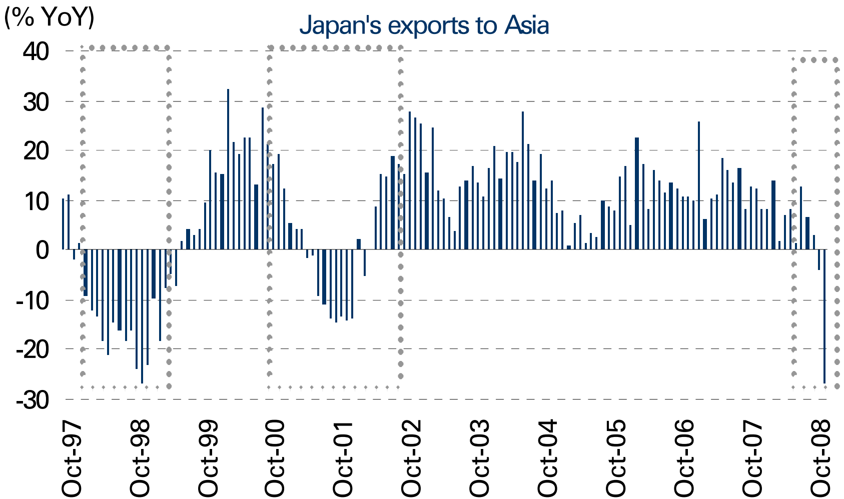
Synchronous biz cycles mean no support from rest of the developed world



Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

All forward looking indicators are pointing downwards

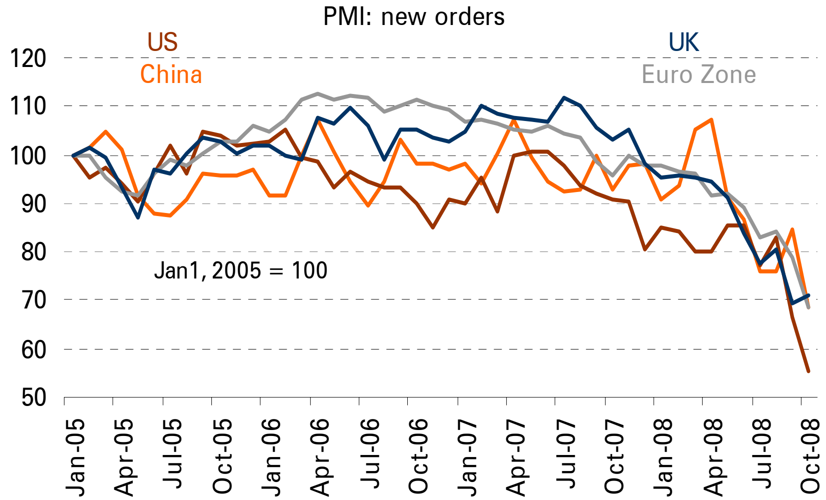
Already, indications that no support forthcoming from EM Asia as well



Dotted area marks global recessions

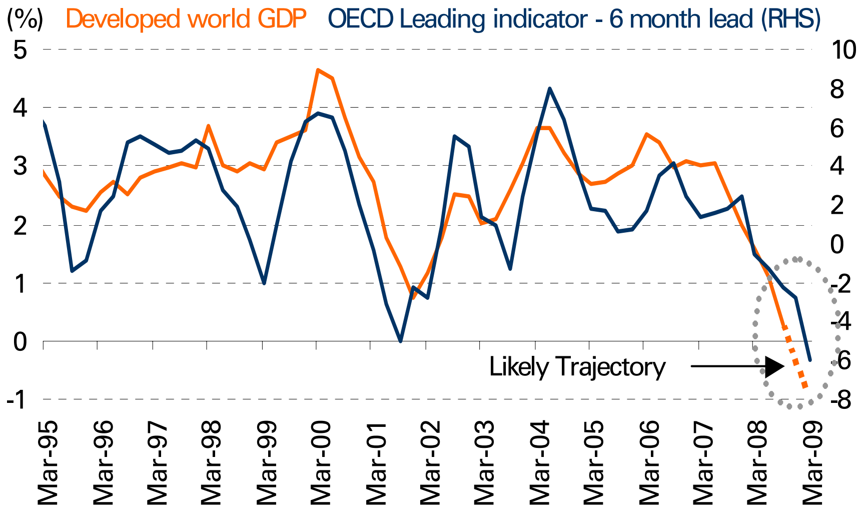
Source: Bloomberg, ICICI Bank Research

..while the order pipeline keeps on shrinking



Source: Bloomberg, ICICI Bank Research

OECD leading indicator pointing to a sharp fall in developed world growth



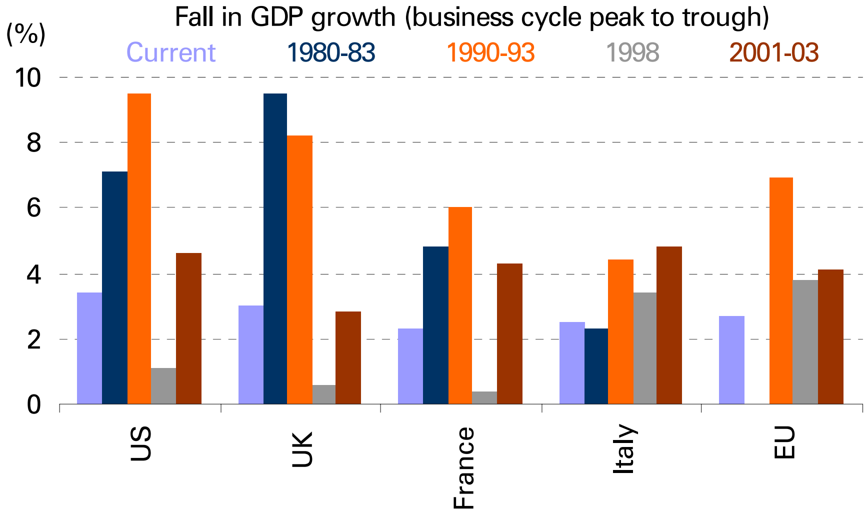
Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

Financial contagion lays rest to any hope of EM resilience

- The present crisis has highlighted the close knitted nature of global financial markets
- Gloomy forecasts for 2009 have been spread to every corner of the world, the appeal of decoupling in the real economy as a plausible hypothesis has been severely dented
- A cyclical synchronized downturn in the developed world could have been offset by expansionary monetary policy but spiraling inflation in H12008 laid rest to that possibility
- Simultaneous occurrence of credit market turmoil, asset price deflation and global recession could send major long term reverberations in the global economy

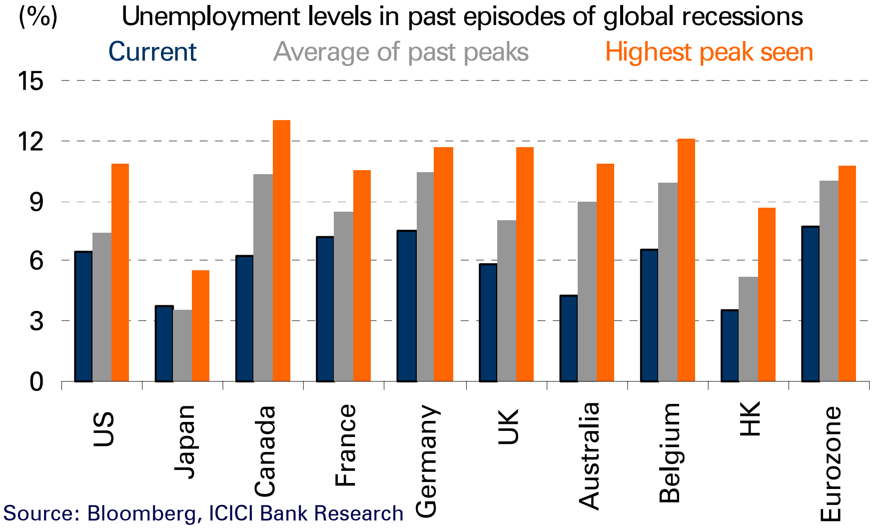
Even history tells us that the growth slowdown is yet to bottom

Current fall in growth still much lower than previous instances of recession



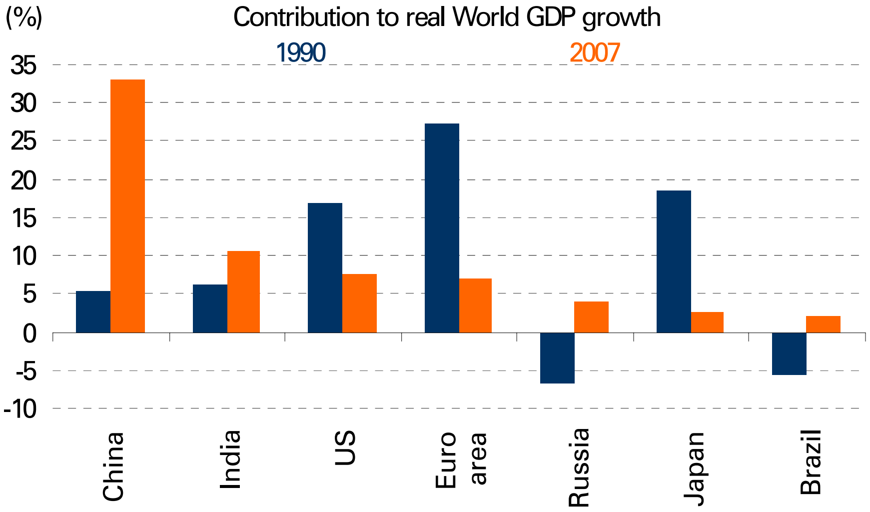
Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

More job losses are likely to be seen in coming months



Source: Bloomberg, ICICI Bank Research

Increased dependence on China might prove to be a bane this time

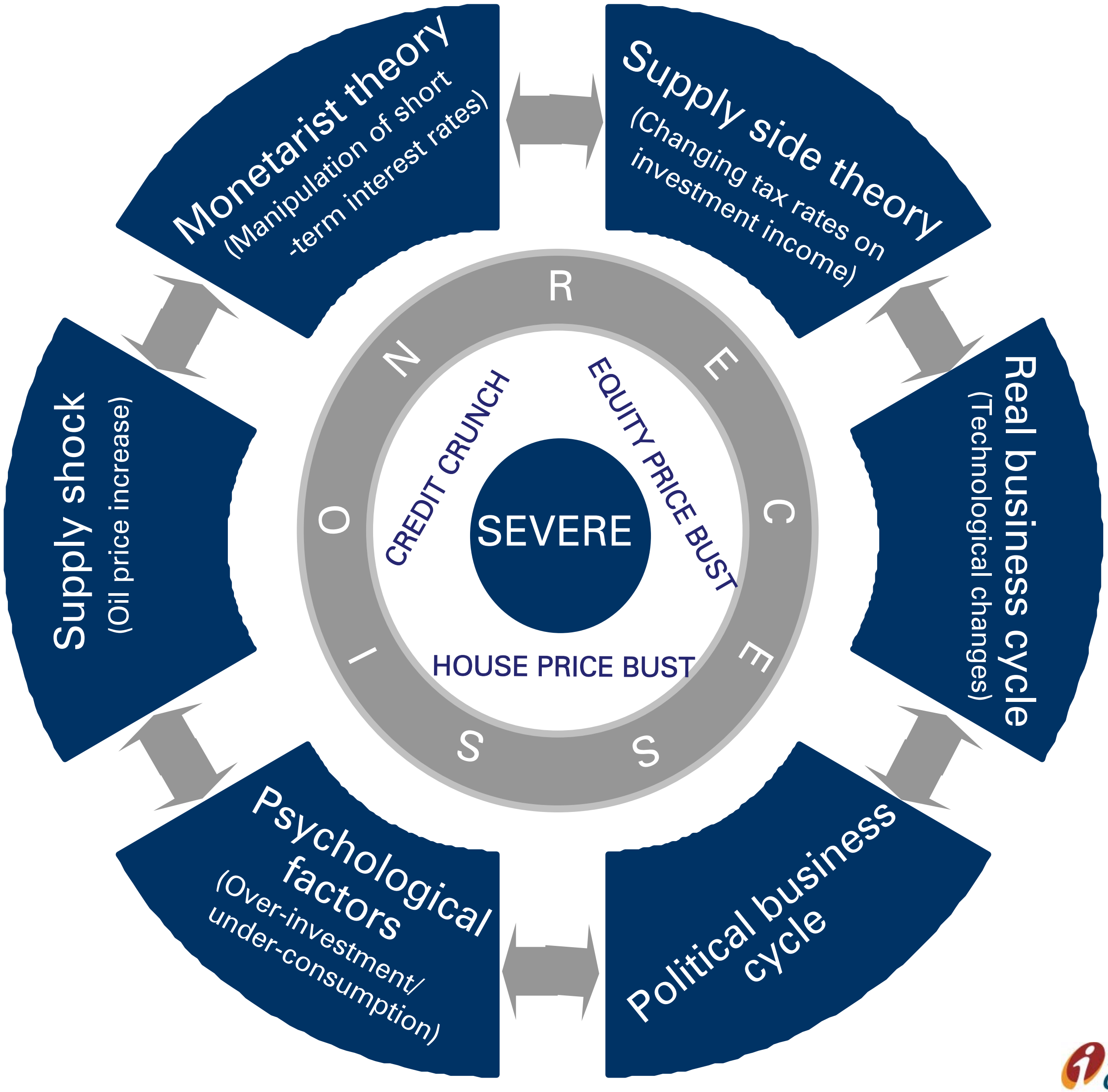


Source: IMF, Reuters Ecowin, ICICI Bank Research

…with its increased linkages affecting the rest of the world's growth

- A comparison of the present turmoil with earlier ones indicate that the economic slowdown in the developed world is likely to be much more pronounced and lengthy
- Emerging markets had carried the baton of world GDP growth in recent years. The BRIC economies alone contributed almost 50% of overall growth in 2007
- However, for 2009, estimates for Chinese growth range between 7.5-8.5% with strong downward bias.
- With lackadaisical support even from the Chinese economy, the widely touted last bastion of hope for many emerging markets, the outlook looks quite grim for the global economy in coming quarters. A sharper drop in Chinese growth could pull down the world economy growth to below 1%

Makings of a recession



Monetarist theory
(Manipulation of short -term interest rates)

Supply side theory
(Changing tax rates on investment income)

Real business cycle
(Technological changes)

Political business cycle

Psychological factors
(Over-investment/ under-consumption)

Supply shock
(Oil price increase)

RECESSION

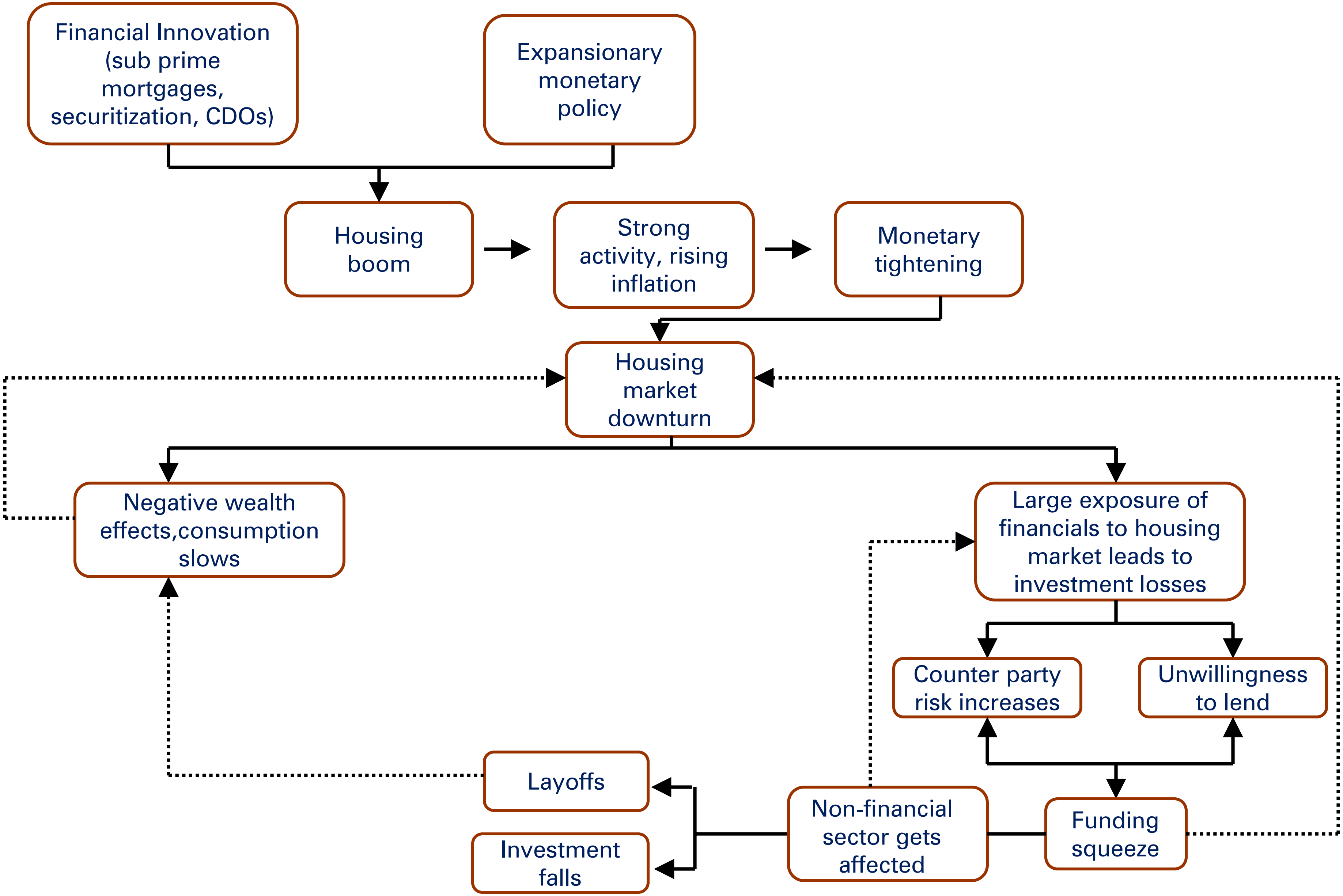
CREDIT CRUNCH

EQUITY PRICE BUST

HOUSE PRICE BUST

SEVERE

Tracing through the current crisis



Financial Innovation (sub prime mortgages, securitization, CDOs)

Expansionary monetary policy

Housing boom

Strong activity, rising inflation

Monetary tightening

Housing market downturn

Negative wealth effects,consumption slows

Large exposure of financials to housing market leads to investment losses

Counter party risk increases

Unwillingness to lend

Funding squeeze

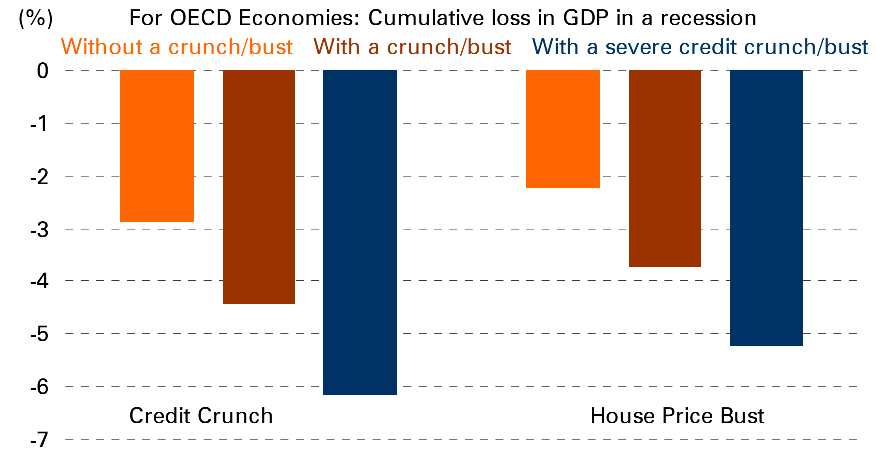
Non-financial sector gets affected

Layoffs

Investment falls

Assessing the impact cost of earlier recessions

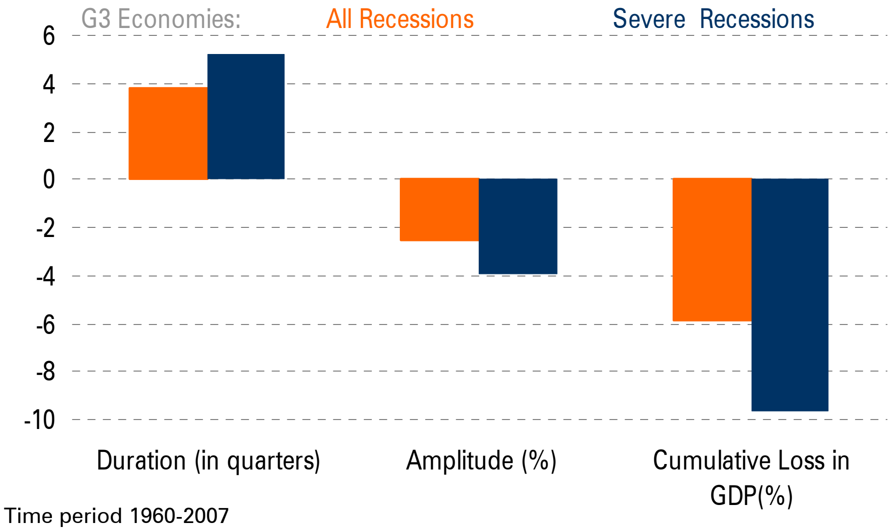
Episodes of crunch/bust in OECD have had more adverse impact



Time period 1960-2007

Source: IMF, ICICI Bank Research

Severe recessions in G3 nations last longer & result in greater output loss



Time period 1960-2007

Source: IFS, Ecowin, OECD, ICICI Bank Research

…& this is also true for those followed by a asset bust/credit crunch

For G3 Economies (Period: 1960-2007)

Events	Duration (in qtrs)	Amplitude (%)	Cumulative loss in GDP (%)
Recession without credit crunches	2.67	-1.23	-3.03
Recession with credit crunches	4.20	-2.92	-6.75
Recession with severe credit crunches	4.20	-3.23	-6.83
Recession without housing crunches	3.33	-1.88	-3.41
Recession with housing crunches	4.00	-2.73	-6.63
Recession with severe housing crunches	4.22	-2.96	-7.28
Recession without equity crunches	4.40	-2.87	-6.59
Recession with equity crunches	3.50	-2.32	-5.46
Recession with severe equity crunches	4.40	-3.08	-7.86

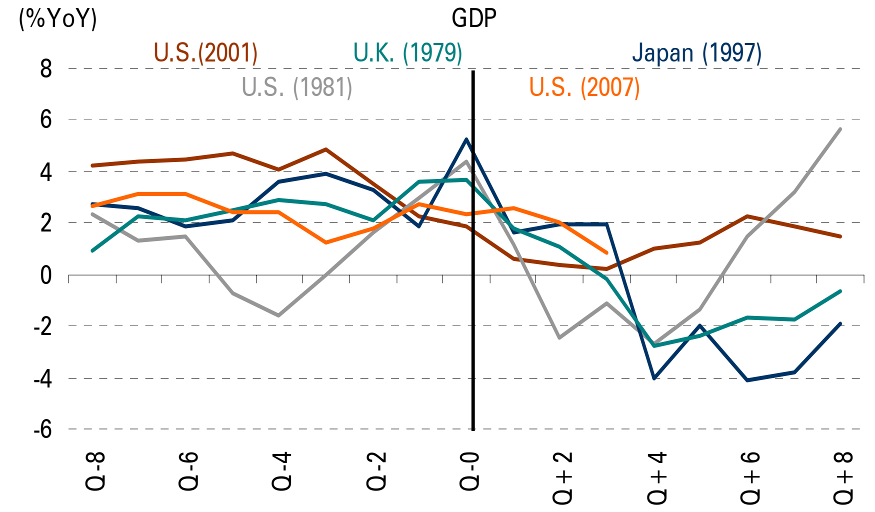
Source: IFS, Ecowin, OECD, ICICI Bank Research

The occurrence of all 3 together has worsened the present outlook

- In our study of G3 economies, we identified 13 recessions during the period 1960- 2007, and found that recessions in general lasted about 3.8 quarters and involved a peak to trough loss in GDP of about 2.5%, while a more severe recession went on for around 5.2 quarters and involved an output loss of nearly 4%
- Recessions coinciding with either a credit contraction, a house or an equity price plunge last longer and carry larger output losses than recessions without such events.
- With all the three buttressing the current recession we are possibly staring at a larger and prolonged cumulative impact

Responsiveness of economic variables in the past recessions

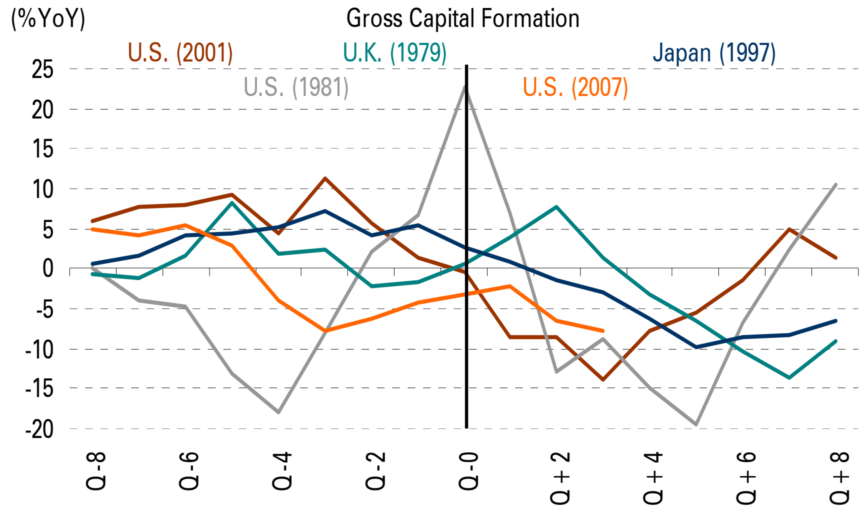
Growth did not rebound even after 3 years during Japan's 1997 recession



Q (quarters) = 0, start of recession

Source: CEIC, Bloomberg, ICICI Bank Research

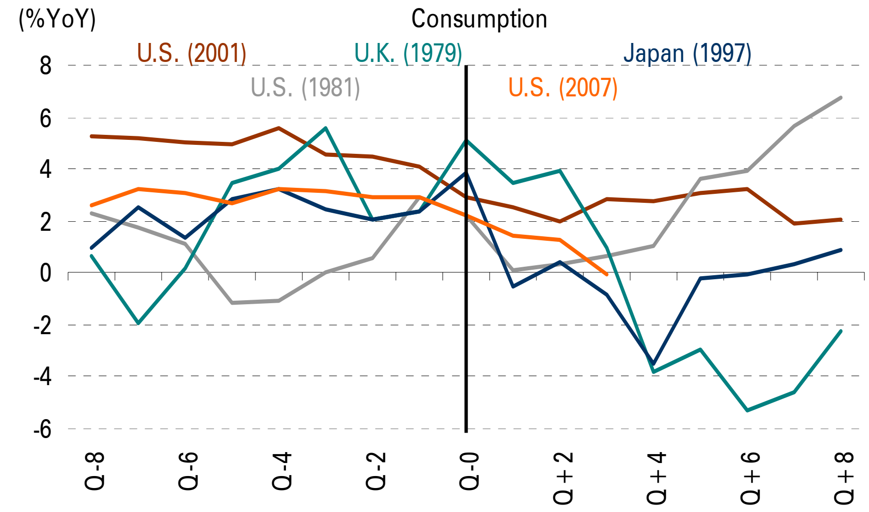
Investments tend to decline even before a recession sets in…



Q (quarters) = 0, start of recession

Source: CEIC, ICICI Bank Research

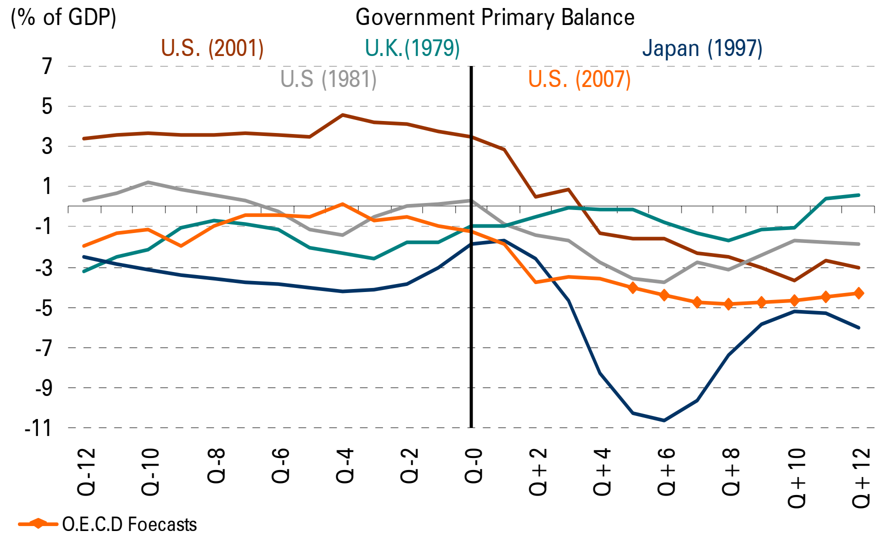
…while consumption drops relatively softly later in the cycle



Q (quarters) = 0, start of recession

Source: CEIC, CICI Bank Research

Fiscal situation tends to worsen following a recession

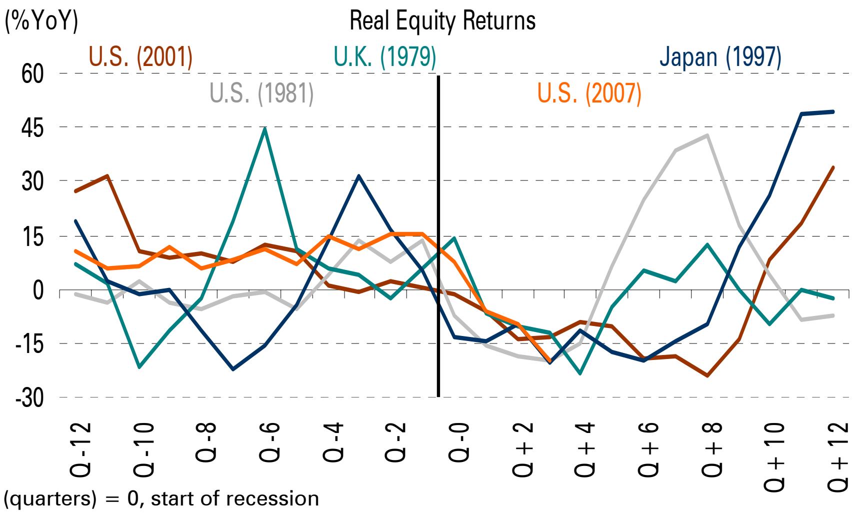


Q (quarters) = 0, start of recession

Source:OECD, ICICI Bank Research

Each recession unique in its own way

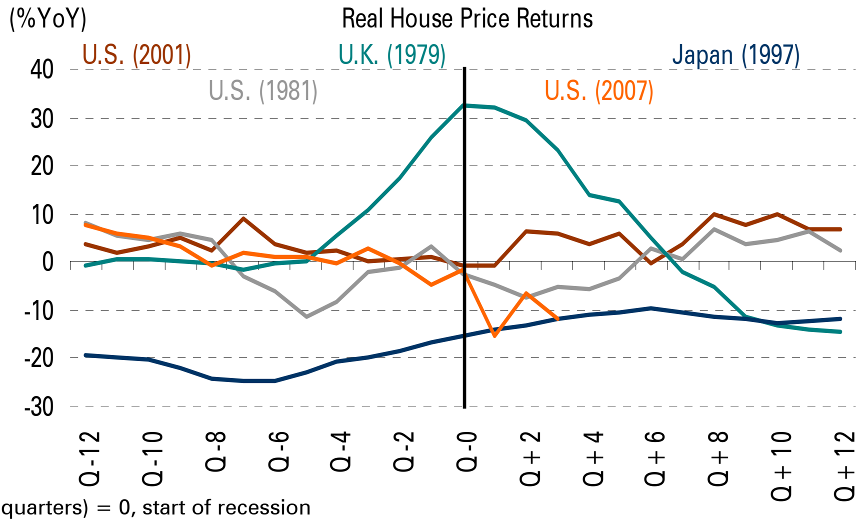
Equities are early to rebound



Q (quarters) = 0, start of recession

Source: Bloomberg, ICICI Bank Research

As in Japan, house prices might not recover even after 3 years



Q (quarters) = 0, start of recession

Source: Econmagic, Bloomberg, ICICI Bank Research

Financial sector take a more severe beating than the real sector

Peak to trough fall (in %)						
	Real sector variables			Financial variables		
	GDP	Consumption	Investment	Bond yields	Real Equity	Real Credit
U.K (1979)	-9.3	-10.9	-18.4	-11.2	-23.4	-32.4
US (1981)	-14.0	-6.7	-32.8	-11.1	-25.4	-11.8
Japan (1997)	-6.7	-7.3	-17.0	-67.5	-37.4	-30.4
US (2001)	-8.7	-4.5	-25.1	-19.8	-34.6	-7.5
US (2007)*	-5.3	-2.4	-18.8	-45.3	-20.6	-54.5

For real sector variables the peak to trough fall is in growth rates

* For the current episode, till present

Source: BEA, CEIC, Ecowin, IFS, Econmagic, Bloomberg, ICICI Bank Research

How much more pain in store in the current crisis episode?

- While variables tend to behave in a similar fashion in a recession, the magnitude varies, depending on what triggered the economic downturn and how that shock gets transmitted to the rest of the economy. In this sense, each recession is unique and has its own characteristics
- The current episode shares some common features with Japan (1997) - both were preceded by a severe credit crunch, house price bust and equity price bust
- However, the current episode is unprecedented in terms of the widespread inter-linkages between the real and the financial sector as well as its global reach
- Given this feature of the current recession, the outcome for 2009 could be more dismal

Drying global liquidity to jeopardize growth outlook further

Much of recent world growth was driven by thriving global liquidity

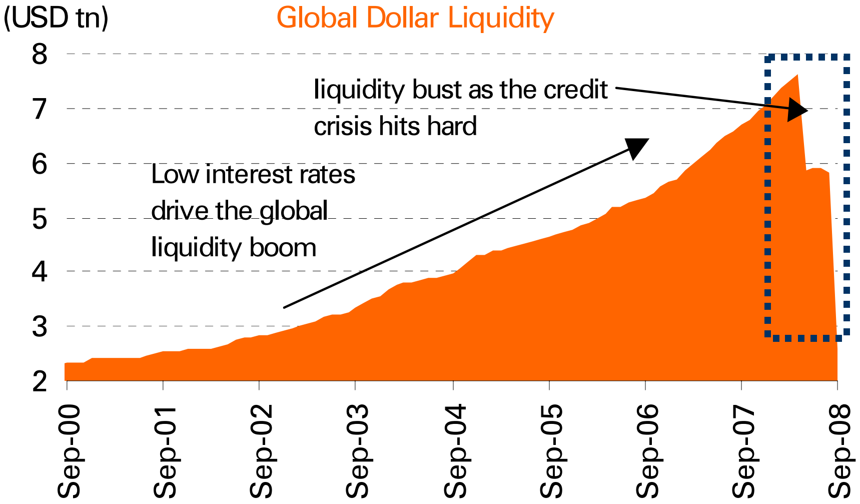
Traditional measures of liquidity, though looking good, still fail to take into account massive deleveraging currently underway

Amidst elevated risk aversion, banks are reluctant to step up lending despite massive Central bank funding

In this uncertain environment, ample scope remains for deleveraging to continue

Much of the global growth had been fuelled by liquidity boom

The boom and bust cycle in global liquidity



Global dollar liquidity is the sum of US monetary base and global foreign exchange reserves

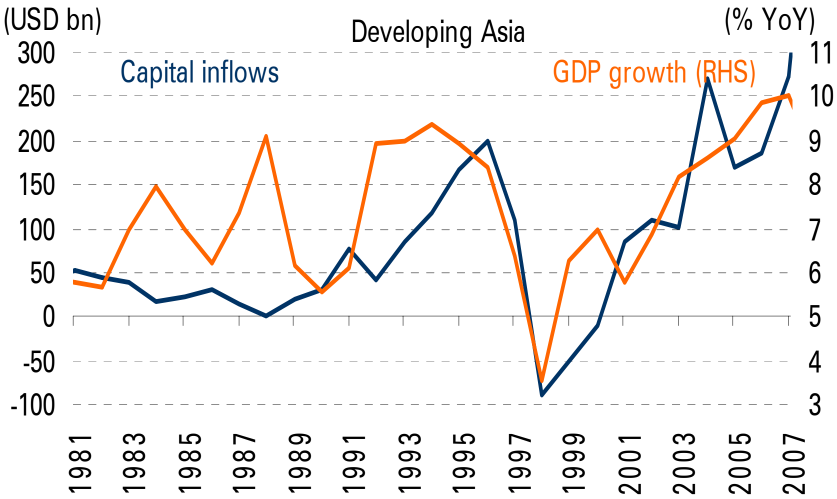
Source: Reuters Ecowin, ICICI Bank Research

A lot of recent growth performance was driven by the liquidity boom

	Average Growth in		Peak growth in the current cycle	Peak minus average growth(1991-2002)
	1981-2002	1991-2002		
Brazil	2.49	2.54	7.51	4.97
China	9.61	9.88	12.20	2.32
Hong Kong	5.04	3.54	12.00	8.46
India	5.54	5.92	11.30	5.38
Indonesia	4.75	4.14	6.51	2.37
Malaysia	6.30	6.50	8.20	1.70
Philippiness	3.19	2.53	8.30	5.77
S. Korea	7.31	6.08	6.30	0.22
Taiwan	6.72	5.64	9.23	3.59
Thailand	6.04	4.45	8.30	3.85

Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

This relationship is particularly evident in the case of EM economies



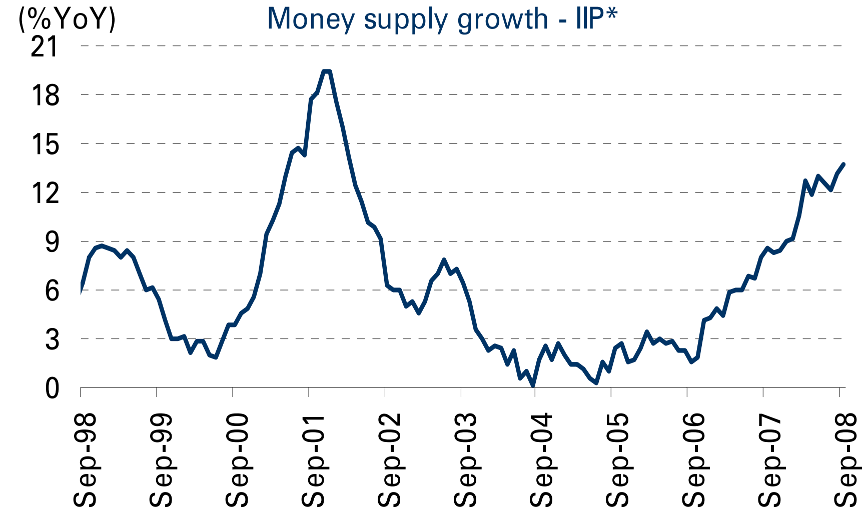
Source: IMF, ICICI Bank Research

Liquidity bust would hamper growth prospects of these economies now

- Extraordinary low interest rates at the start of the current decade, coupled with liberalized regulatory regimes had contributed to huge spurt in global liquidity
- Emerging markets with their improved fundamentals, stable inflation levels, liberal investment regimes and vast untapped potential provided the ideal destination for this ample liquidity
- This in turn fed into a sharp acceleration in investment cycles in these economies, helping them grow much rapidly than the average trend
- With global liquidity likely to remain subdued for some time, coupled with stricter regulatory policies this source of growth would no longer be easily available to the EM pack

Traditional measures of liquidity may still be looking good

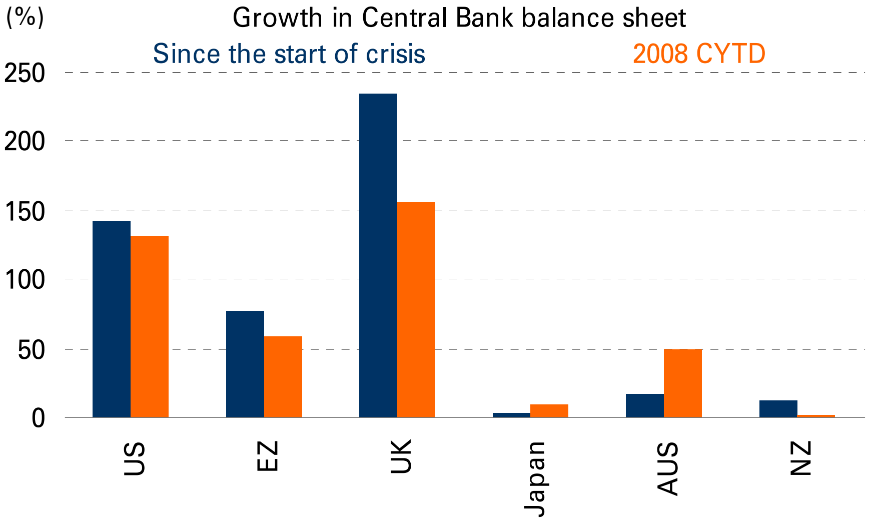
Broad money growth still outpaces industrial growth



*Average for G5 countries

Source: Bloomberg, ICICI Bank Research

Central banks have sharply enlarged their monetary bases in recent times



Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

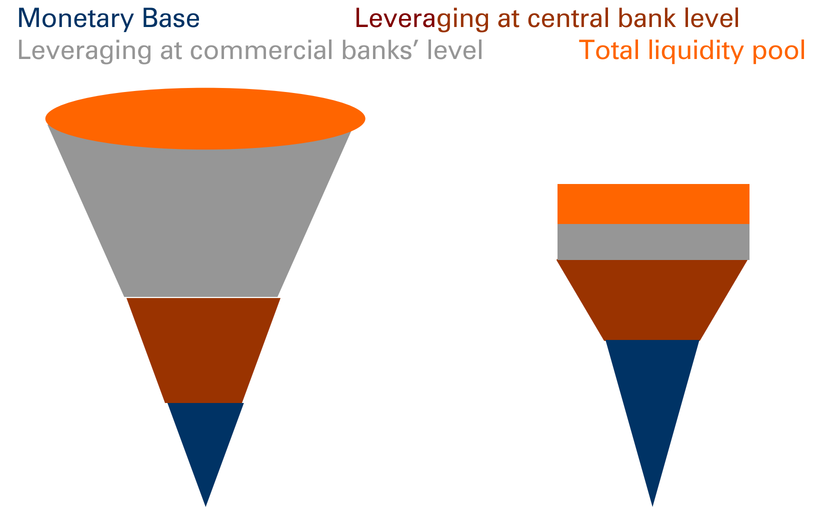
However, excess money supply unable to address the dysfunctional nature of global credit markets

Market	Indication of dysfunctionality
Agency Bonds	Agency bond spreads have risen by 111.1 bps over a period of 2 months
Agency MBS	Illiquid. Bids at auctions were at huge discounts
Asset Backed Commercial Paper (ABCP)	Yield on 90 day paper jumped from 2.88% in mid Sep to 4.59% after the Lehman bankruptcy
Auction rate securities (ARS)	Market no longer exists
Corporate Bonds	Spread of AAA rated long term securities widened from 0.71% in Mar 2007 to 2.77% in Nov 2008
Private MBS	Illiquid. Bids at auctions were at huge discounts
Short Term Money Market	Libor-OIS spreads: highest in the current year 384 bps as compared to 133 bps last year
Global cash and credit markets	Wide gyrations in currency markets. EMBI Global composite index stripped spread has drastically widened to 748 bps from 245 bps in the beginning of the year

Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

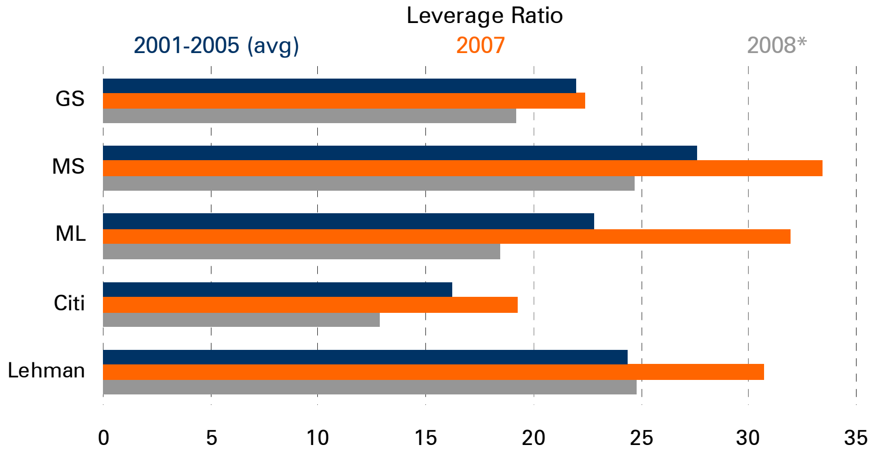
However these measures are deceptive, deleveraging hitting hard

Deleveraging restricts overall liquidity pool to a great extent



Source: ICICI Bank Research

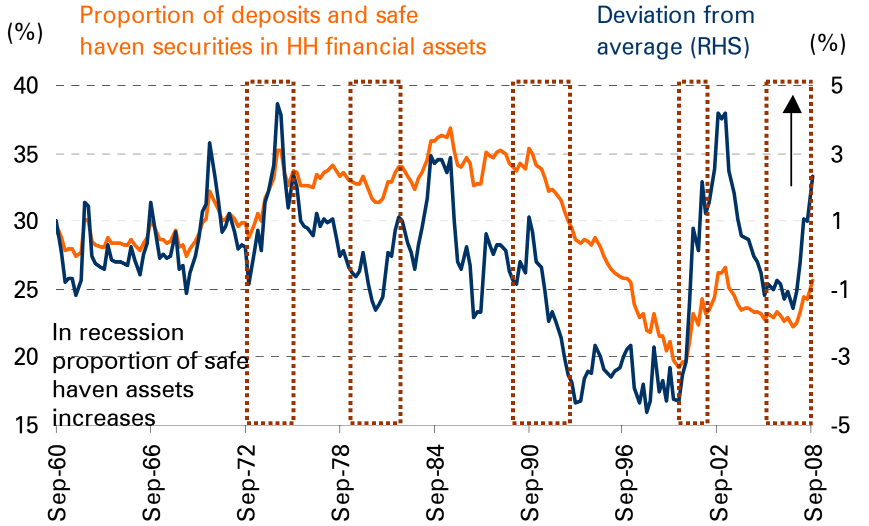
Scope for further deleveraging still remains in the financial sector



Leverage ratio = assets/equity, *Latest available quarter figures

Source: Bloomberg, ICICI Bank Research

Even households are likely to undergo a deleveraging process



Dotted area marks US recessions

Deviation signifies short term divergence from historical average

Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

Credit crunch could persist for some time

- Although traditional measures of ample liquidity still depict an optimistic picture, they are misleading as they do not account for the massive deleveraging being witnessed globally
- Because of deleveraging, a more than doubling in the Fed's balance sheet in 2008 alone has translated into only a 2 percentage point increase in broad money growth
- Much of the Central Bank liquidity infusion is getting used up in shoring up depleted balance sheets of commercial banks. In an environment of risk aversion, leveraged lending is unlikely to reappear anytime soon
- However, once risk appetite and leverage returns back, it will be a challenging task to rein in the liquidity that is being injected today

Deleveraging and wealth effect to weigh on US consumption

US consumers have become increasingly reliant on leveraging wealth

Recent erosion in wealth to restrict these channels of funds

Indications that the household deleveraging process has already begun

Commercial banks are mirroring household deleveraging tendencies

Historical analysis suggests vulnerability of households to asset price changes has increased over time

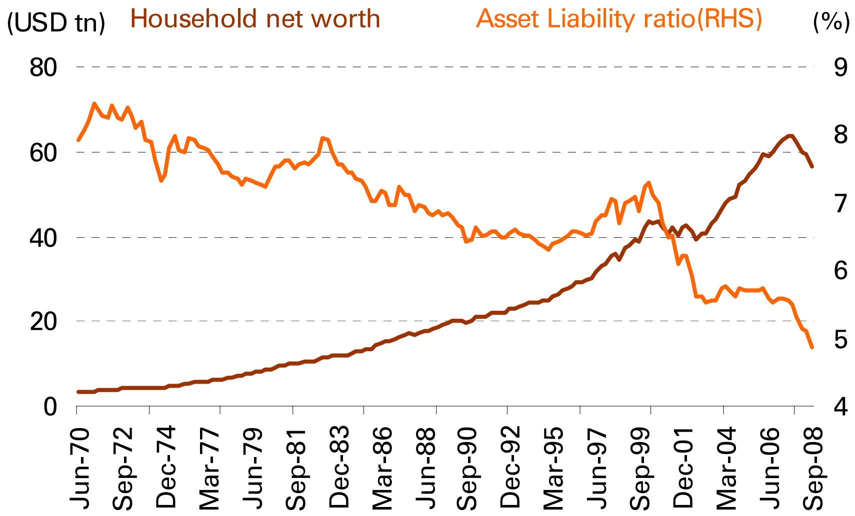
A glance through the US households' balance sheet

Liabilities have risen much faster than assets over the years, signifying increased leveraging

Household Flow of Funds											
Assets				Growth**		Liabilities				Growth**	
	1995	2007	2008*	1995 to 2007	2007 to 08		1995	2007	2008*	1995-2007	2007-08
Total assets (USD tn)	32.86	76.55	71.11	7.99	-9.35	Total liabilities (USD tn)	5.05	14.38	14.57	9.97	1.81
Proportion in total assets (%)				Growth**		Proportion in total liabilities (%)				Growth**	
Financial assets	62.98	63.36	63.66	7.81	-11.12	Credit market instruments	96.29	95.77	95.52	9.97	1.02
Equity holdings	22.12	22.78	21.07	7.30	-16.81	Bank loans	0.54	0.52	0.80	5.88	10.70
Credit market instruments	7.19	5.27	5.75	5.38	-2.34	Home mortgages	68.05	69.78	72.53	11.03	0.38
Total deposits	12.15	9.40	10.61	7.34	3.58						
Mutual funds holdings	3.09	5.45	5.92	13.35	-19.93						
Pension funds reserves	15.40	17.07	16.18	7.76	-15.06						
Treasury holdings	2.34	0.80	0.40	-12.53	69.07						
Tangible assets	37.02	34.49	36.34	8.14	-3.65						
* till Sept 2008 **Average annualised change period over previous period											

Source: Reuters Ecowin, ICICI Bank Research

Rising leverage propelled net worth to record highs in recent years



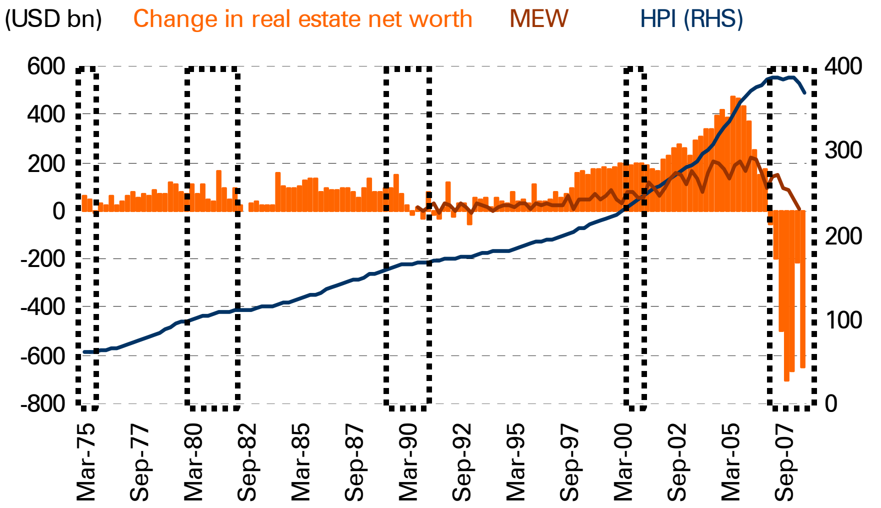
Source: Reuters Ecowin, ICICI Bank Research

The highly leveraged risk loving US household

- Easy availability of credit at low interest rates, coupled with the housing sector boom enabled US households to greatly leverage their balance sheets in recent years.
- Much of the growth in tangible assets was contributed by investments into real estate wealth via the home mortgage channel whose growth shot up dramatically during the housing boom years
- There is also a marked shift towards more riskier assets and lowered proportions of relatively safe haven financial assets like US Treasuries and deposits.
- Recent data shows a marked slowdown in fresh liabilities growth, suggesting deleveraging is underway

Asset price deflation impacting US household net worth

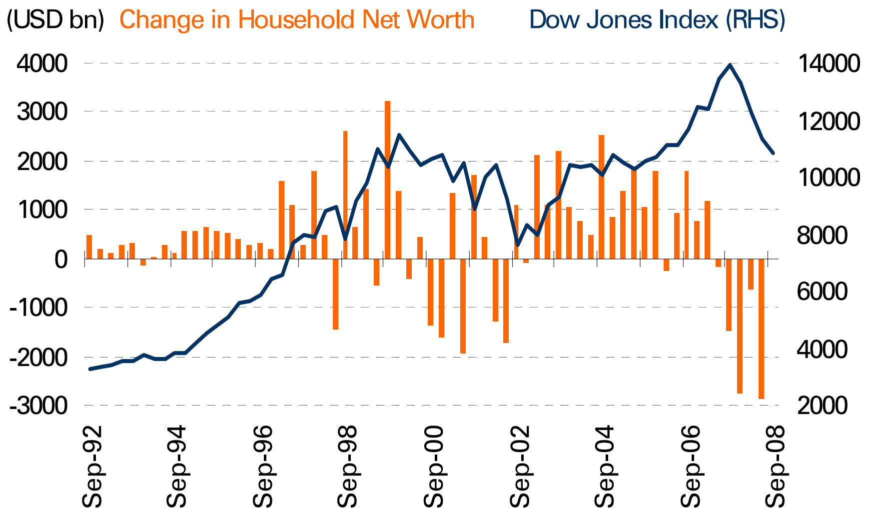
The housing bust has resulted in massive erosion in real estate wealth…



Dotted area marks US recessions

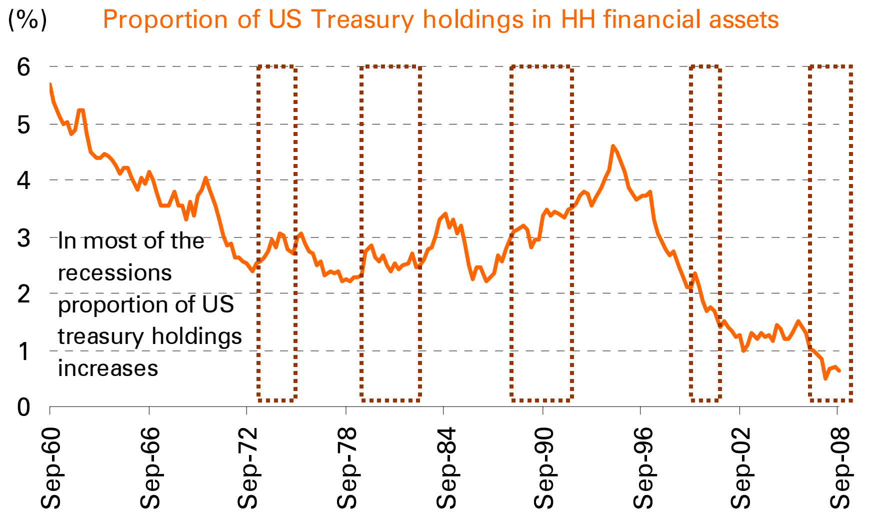
Source: Reuters Ecowin, ICICI Bank Research

…whilst the crash in equities have only exacerbated the situation



Source: Bloomberg, Reuters Ecowin, ICICI Bank Research

Indications that investments into safe haven treasuries might pick up soon



Dotted area marks US recessions

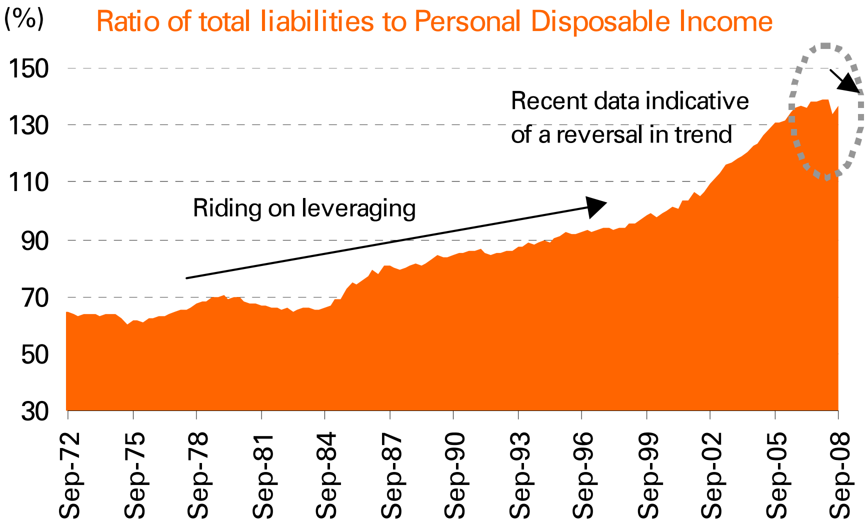
Source: Reuters Ecowin, ICICI Bank Research

Downside risks are stacked up for US spending in coming quarters

- In recent years, US consumers had become increasingly reliant on leveraging wealth (housing, equity and others) as a means to fund current consumption
- The Mortgage Equity Withdrawal (MEW) instrument greatly helped households to channel their appreciating housing wealth into spending. The extraction shot up dramatically from an average USD 41.2 bn per quarter in 1995-2000 to over USD 153 bn in 2003-07 (peak of USD 223 bn in Q1 2006)
- Given the low proportion of deposits and probable rigidity in selling assets at below par values, there is likely to be greater stream lining of current consumption than otherwise

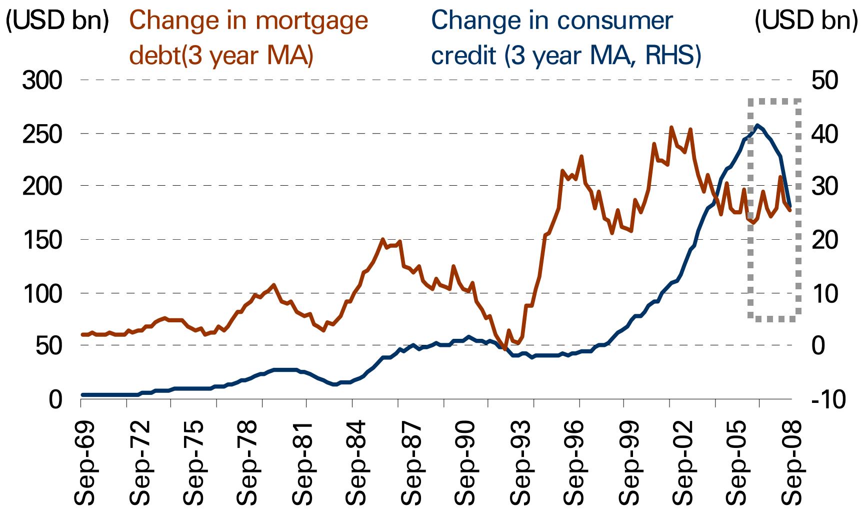
The household deleveraging process has already begun

The ratio of total liabilities to income is showing early signs of a reversal



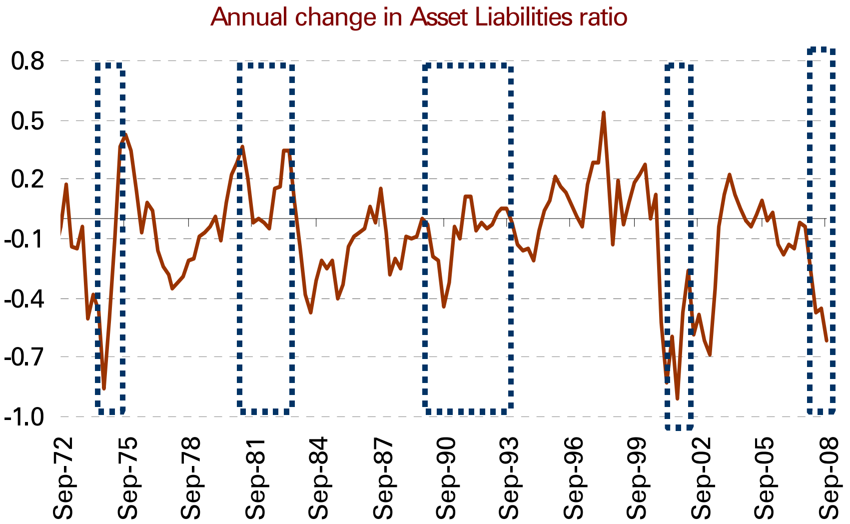
Source: Reuters Ecowin, ICICI Bank Research

Much of this drop is due to the fall in mortgage debt and consumer credit



Source: Reuters Ecowin, ICICI Bank Research

Pace of decline in asset liability ratio likely to slacken in coming quarters



Dotted area marks US recessions

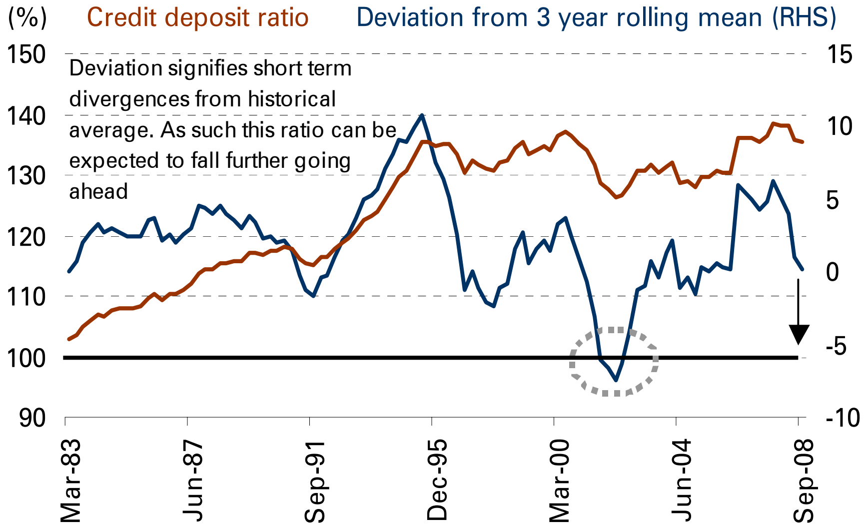
Source: Reuters Ecowin, ICICI Bank Research

Savings as proportion of total disposable income also likely to inch up

- There are early indications that the US households have embarked on the deleveraging process
- Household savings as % of GDP has declined from an average 5.2% in the 1990s to 1.54% in 2000-07. It had recently dipped below zero also, further highlighting the extent of leveraging present in the US household sector
- It has picked up slightly and now stands at 1.08%. A long spell of weak employment opportunities, low or negative asset market returns could drive these households to begin saving more, further exacerbating the already fragile consumer spending outlook
- Asset liability continues to decline despite deleveraging as asset prices have crashed. Historical analysis shows that the pace of change in asset liability ratio picks up initially in a recession but slackens thereafter

US commercial banks also showing deleveraging tendencies

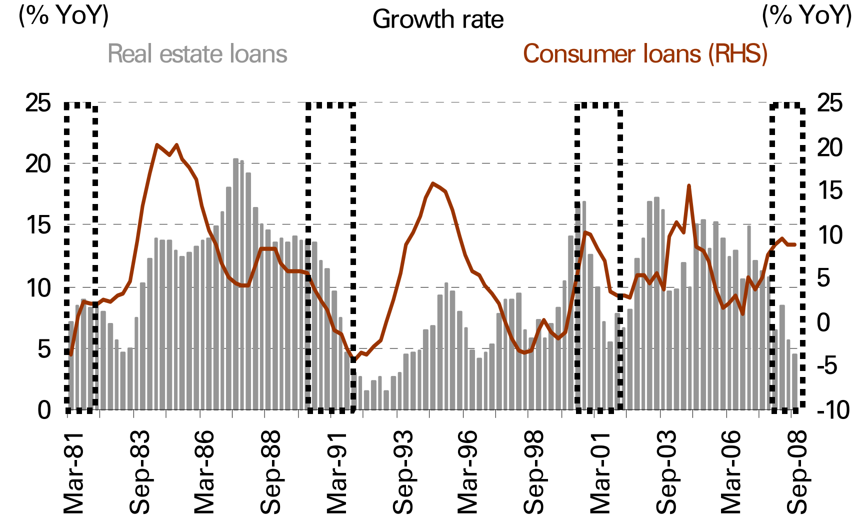
Credit deposit ratio showing signs of a corrective move…



Deviation signifies short term divergences from historical average. As such this ratio can be expected to fall further going ahead

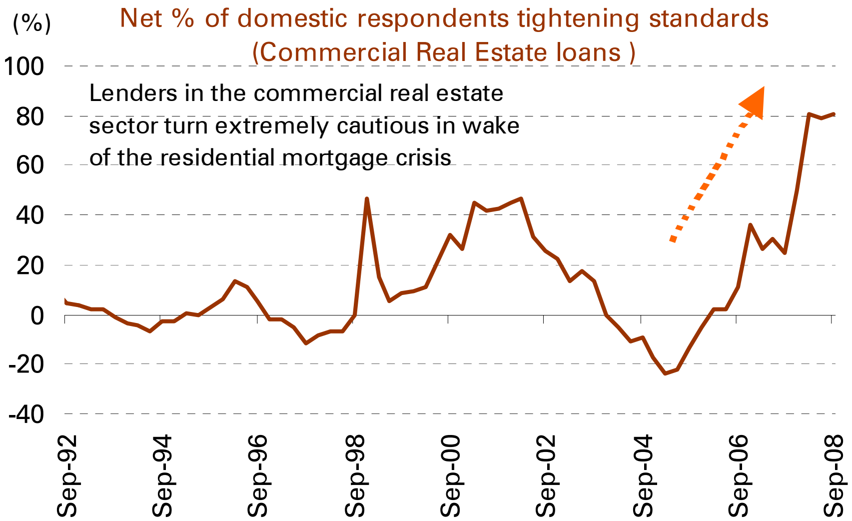
Source: Reuters Ecowin, ICICI Bank Research

…reflected more in real estate loans



Dotted area marks US recessions
Source: Reuters Ecowin, ICICI Bank Research

Latest surveys point to lowered willingness to lend to commercial sector



Lenders in the commercial real estate sector turn extremely cautious in wake of the residential mortgage crisis

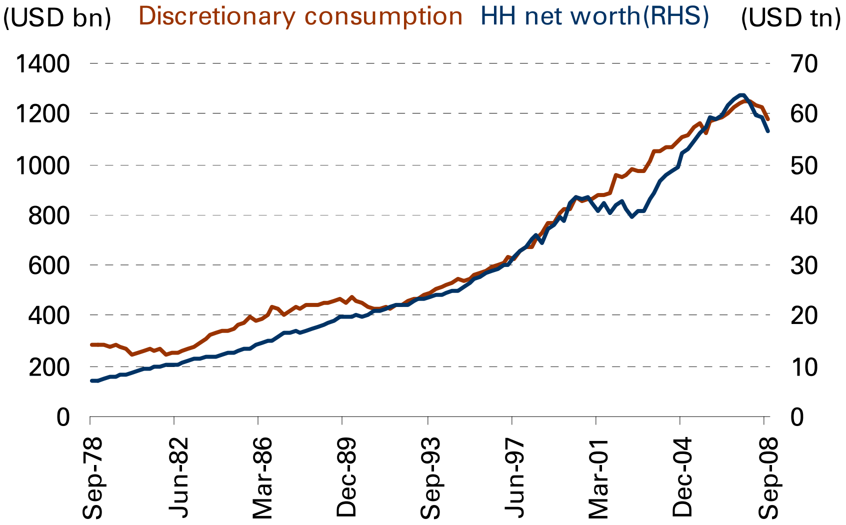
Source: Reuters Ecowin, ICICI Bank Research

As such, household deleveraging would get a push from this side as well

- US commercial banks have also displayed increasing tendencies towards leveraging in the recent years and the significantly elevated credit deposit ratio bears testimony to this fact.
- However, as an aftermath of the financial crisis, deleveraging has started in this sector as well with real estate loans and consumer credit declining substantially over the past few quarters. The credit deposit ratio peaked at almost 140% towards the end of 2007 and is now starting to correct as banks rein in lending
- Lending standards have also predictably tightened and this will further exacerbate the deterioration in the asset side of the commercial bank balance sheet

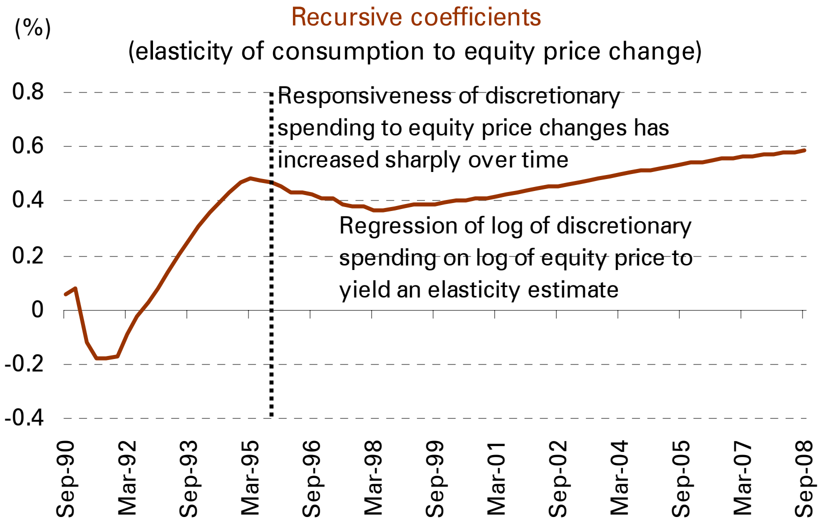
Wealth effect and deleveraging to weigh on consumption

Spiraling net worth has fuelled increased discretionary spending…



Source: Bloomberg, ICICI Bank Research

… resulting in equity moves now having a greater bearing



Source: Bloomberg, ICICI Bank Research

Combined impact of equity and housing wealth erosion to hit hard

Wealth effect from financial markets and real estate			
Marginal effect of change in real estate wealth = 0.08		Marginal effect of change in financial wealth = 0.23	
	Real estate wealth impact	Financial wealth impact	Total impact on consumption
Mar-07	0.0	28.3	28.3
Jun-07	-9.8	30.0	20.2
Sep-07	-30.5	13.4	-17.1
Dec-07	-50.2	-14.8	-65.0
Mar-08	-51.8	-39.8	-91.5
Jun-08	-12.9	-7.1	-20.0
Sep-08	-46.0	-49.4	-95.4
			(figures in USD bn)

Source: Federal Reserve, Reuters Ecowin, ICICI Bank Research

Increased vulnerability could easily prolong the current downturn

- Latest data shows a decline in consumption spending and the trend is likely to sustain for some quarters. Respite would come only if the downfall in housing and other asset prices comes to a halt
- A vector auto regression analysis also confirms the hypothesis that an exogenous shock (e.g. falling housing prices) to household net worth would have an adverse impact on personal consumption
- As such, the combined negative wealth effect from falling real estate wealth and equity valuations could adversely impair consumer spending in coming quarters and thus could prolong an already lengthy recession (the fifth longest since 1913)

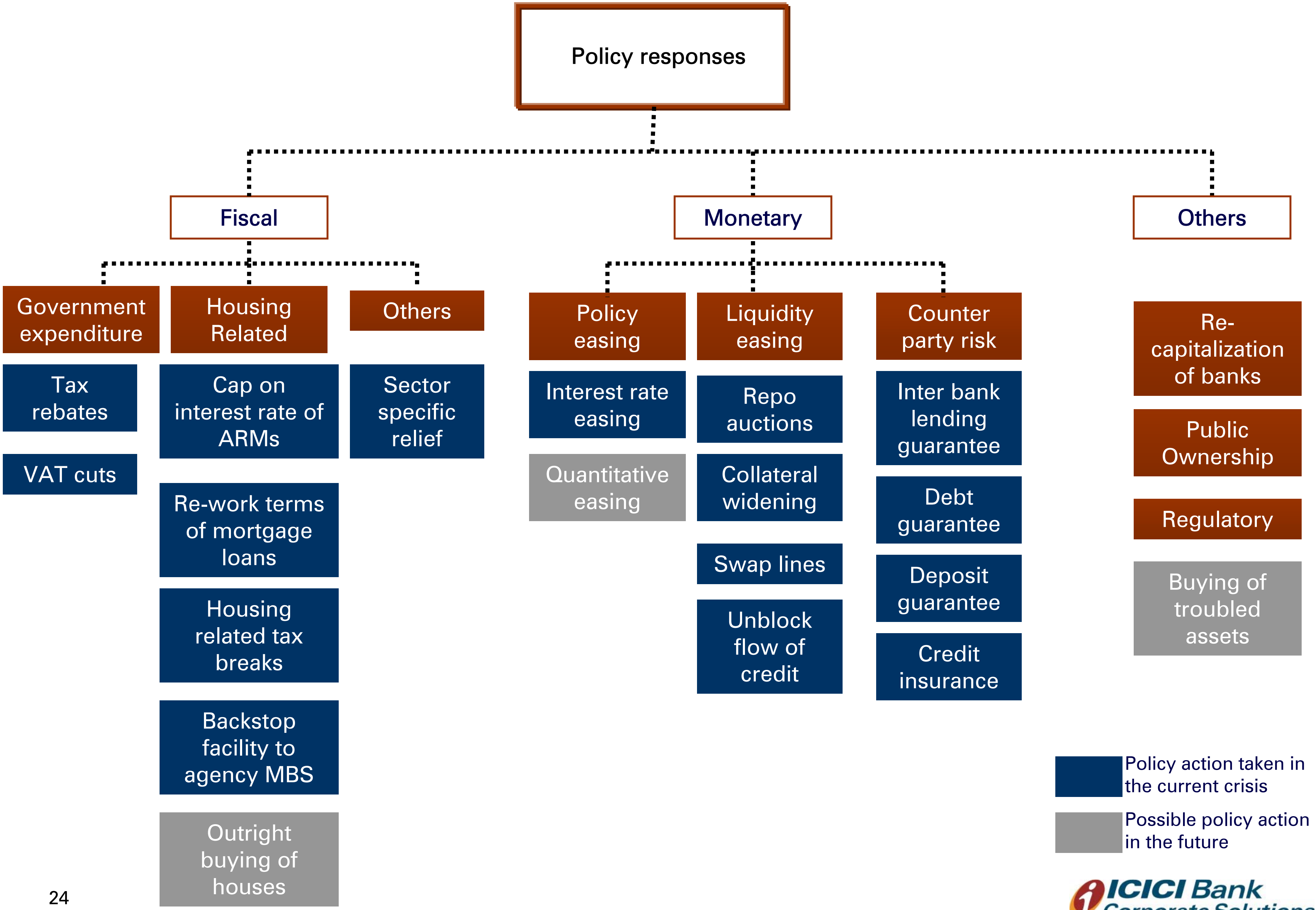
Proactive policy responses – the need of the hour

Most economies rise to the occasion – necessary fiscal packages announced

Analysis suggests fiscal scenario may worsen to hitherto unseen levels

Aggressive monetary policy easing to contain rapid growth slowdown

Investors pin their hope on an array of policy stimuli

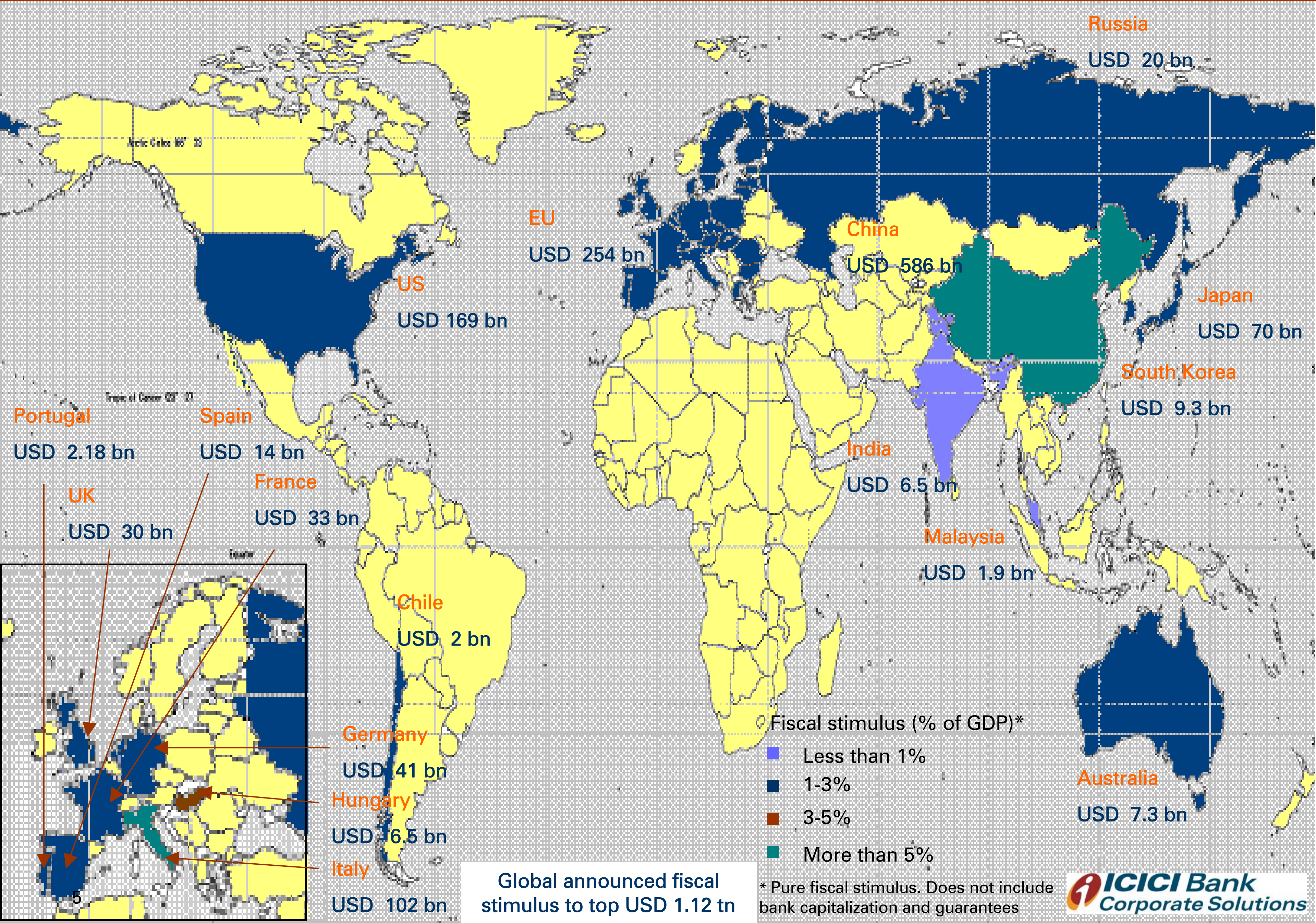


- Policy responses
  - Fiscal
    - Government expenditure
      - Tax rebates
      - VAT cuts
    - Housing Related
      - Cap on interest rate of ARMs
      - Re-work terms of mortgage loans
      - Housing related tax breaks
      - Backstop facility to agency MBS
      - Outright buying of houses
    - Others
      - Sector specific relief
  - Monetary
    - Policy easing
      - Interest rate easing
      - Quantitative easing
    - Liquidity easing
      - Repo auctions
      - Collateral widening
      - Swap lines
      - Unblock flow of credit
    - Counter party risk
      - Inter bank lending guarantee
      - Debt guarantee
      - Deposit guarantee
      - Credit insurance
  - Others
    - Re-capitalization of banks
    - Public Ownership
    - Regulatory
    - Buying of troubled assets

🟦 Policy action taken in the current crisis

⬜ Possible policy action in the future

Fiscal packages have become the order of the day



Russia
USD 20 bn

EU
USD 254 bn

China
USD 586 bn

Japan
USD 70 bn

US
USD 169 bn

South Korea
USD 9.3 bn

Portugal
USD 2.18 bn

Spain
USD 14 bn

India
USD 6.5 bn

France
USD 33 bn

UK
USD 30 bn

Malaysia
USD 1.9 bn

Chile
USD 2 bn

Germany
USD 41 bn

Hungary
USD 16.5 bn

Italy
USD 102 bn

Australia
USD 7.3 bn

Fiscal stimulus (% of GDP)*

- 🟪 Less than 1%
- 🟦 1-3%
- 🟫 3-5%
- 🟩 More than 5%

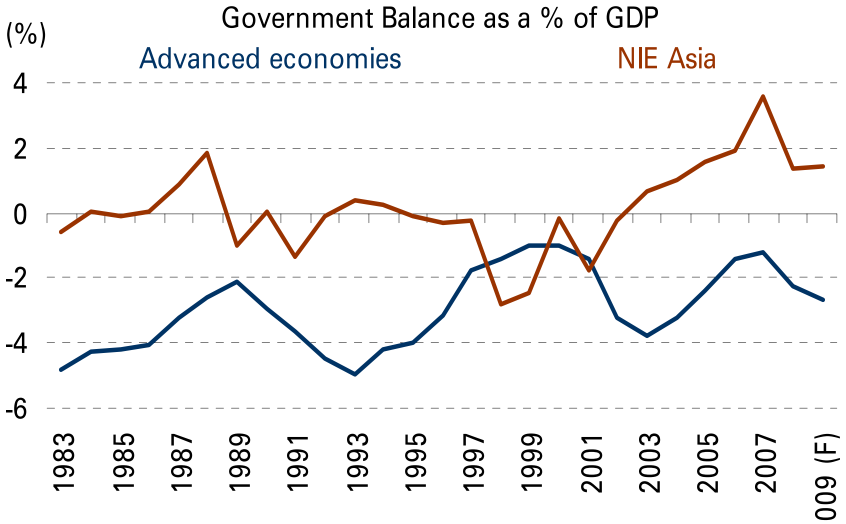
Global announced fiscal stimulus to top USD 1.12 tn

* Pure fiscal stimulus. Does not include bank capitalization and guarantees

ICICI Bank Corporate Solutions

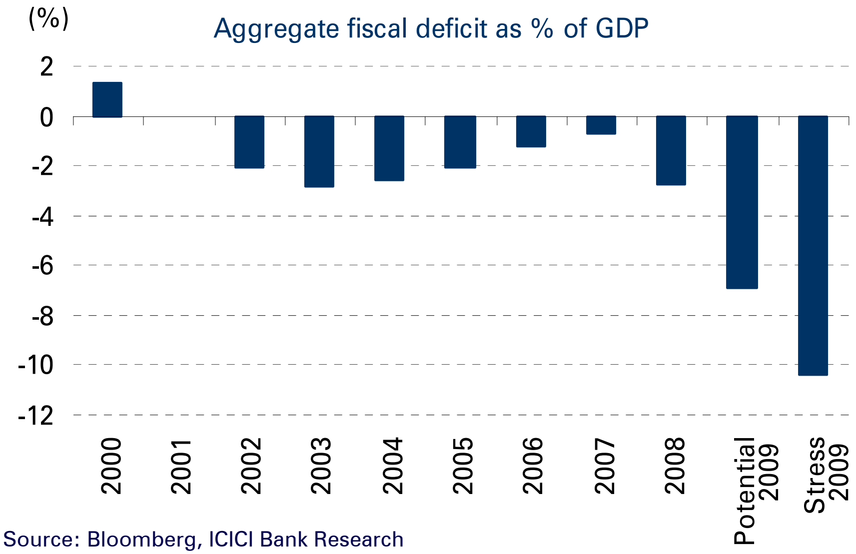
Possibility of fiscal stimuli getting stretched even further

Advanced economies run a deficit while NIEs have a fiscal surplus



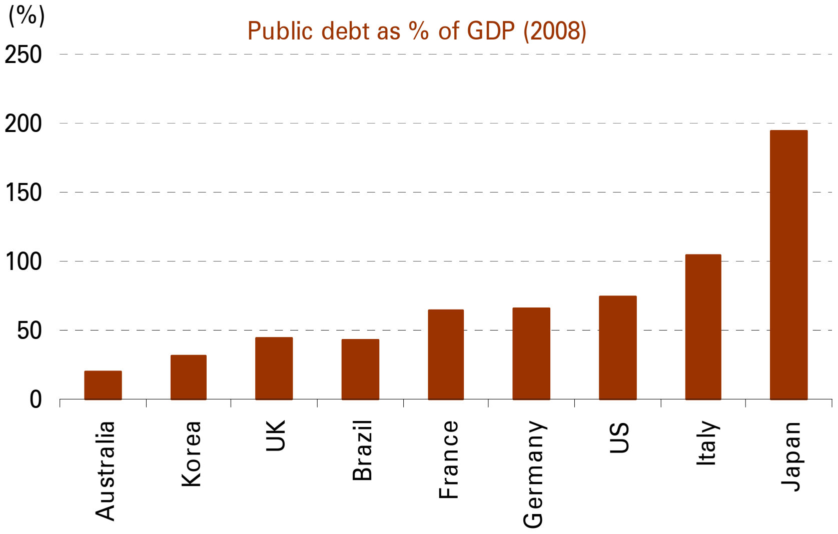
Source: Bloomberg, ICICI Bank Research

Potentially, there could be USD 2.3 tn of fiscal deficit in 2009…



Source: Bloomberg, ICICI Bank Research

…putting greater stress on public debt



Source: Bloomberg, ICICI Bank Research

…resulting in monetization of the deficits as an alternative financing tool

- If each economy has a fiscal deficit at the historically observed maximum and disburses at least half of the packages announced so far in 2009, then fiscal deficit for 15 large countries in the world could potentially be at USD 2.3 tn for the year (up from 896 bn in 2008)
- However, in case the growth scenario deteriorates significantly, raising the need for all the stimulus to be provided in the coming year itself, it would result in an increase in the fiscal deficit to USD 3.5 tn
- The fiscal stimulus being provided would increase the burden on public debt. US is a case in point, where the public debt limit has been increased from USD 10.6 bn to USD 11.3 bn for 2009
- As raising debt would not be easy, economies could also resort to monetization of deficits in the coming year

Dramatic reversal in monetary policy cycle in most economies

Change in Policy rates during inflationary and recessionary periods (bps)

Country	Recent Rate Hike Cycle*	Current Rate Cut Cycle
US	No Increase	-500
UK	50	-375
Australia	100	-300
Canada	25	-300
India	125	-250
South Korea	25	-225
China	135	-216
Euro zone	50	-175
Taiwan	50	-163
Thailand	50	-100
Japan	No change	-40
Indonesia	150	-25
Malaysia	No change	-25
Brazil	250	No Decrease
Russia	300	No Decrease
Singapore	Increase in slope of the exchange rate band	Move to a neutral bias from a tightening one

* Pertains to the period starting from Q1 2007, when inflationary concerns had started building up

Source: Bloomberg, ICICI Bank Research

Any silver linings in the gloomy prognosis for global economy?

Equity and credit – plummeting valuations create investment opportunities

Tentative signs of housing stabilization on the back of interest rate reduction

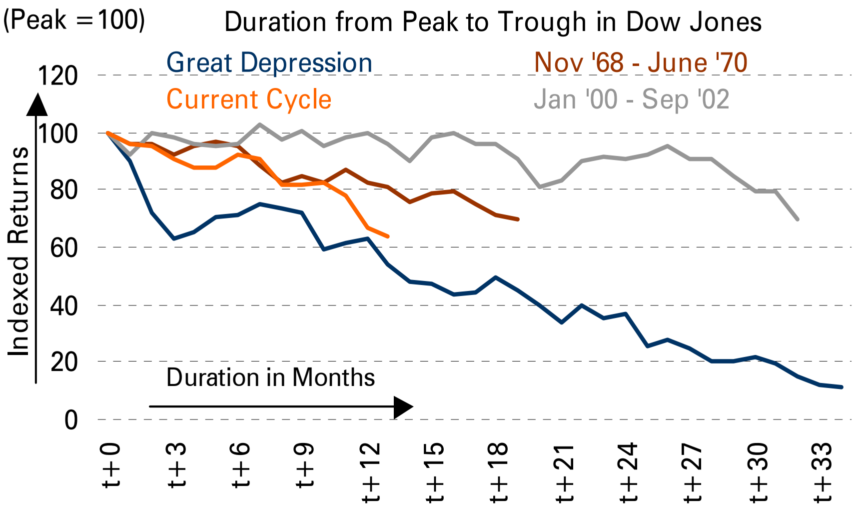
Inflationary pressures cease to be a threat as commodity prices soften

Lower oil subsidies to serve as a panacea for ailing fiscal balances

Easing crude to offset current account deterioration due to declining exports

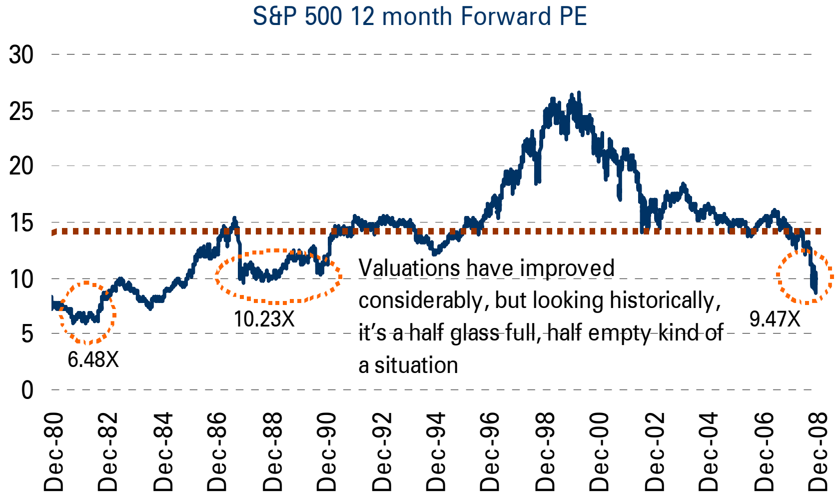
Asset valuations have dropped considerably

Credit crisis has forced one of the sharpest fall in equities historically


Duration from Peak to Trough in Dow Jones

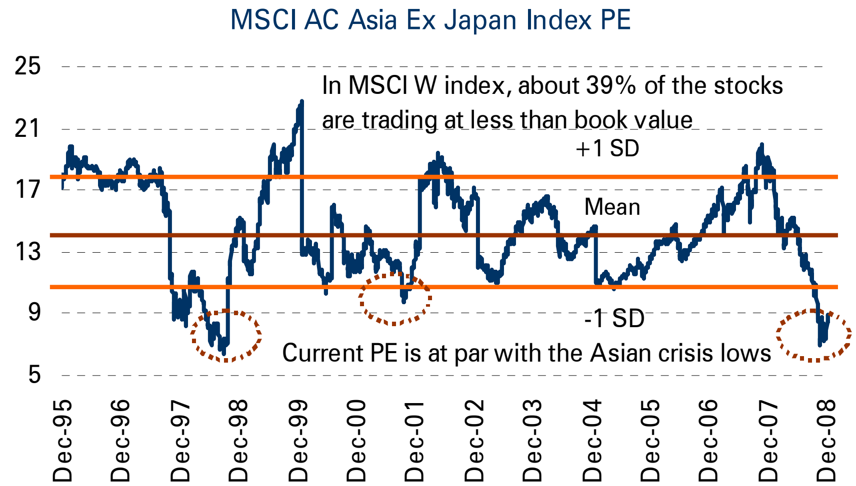
Source: Bloomberg, ICICI Bank Research

Valuations have dropped significantly as a consequence


S&P 500 12 month Forward PE

Source: Bloomberg, ICICI Bank Research

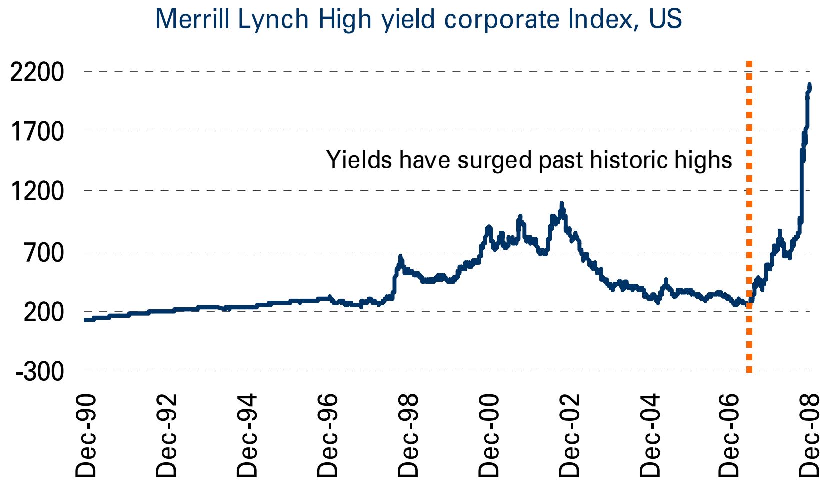
Even the Asian equities have been hit badly and appear attractive


MSCI AC Asia Ex Japan Index PE

Based on index member companies with positive earnings only

Source: Bloomberg, ICICI Bank Research

Segments of credit markets also enticing buying interest


Merrill Lynch High yield corporate Index, US

Source: Bloomberg, ICICI Bank Research

Housing stabilisation would pick momentum

The credit crisis has steered sharp declines in all housing indicators

US Housing market

Demand side indicators

29	30-year Mortgage Rates (%)	-1.67
27	Case Schiller price index (%)	-21.0
39	New home sales ('000 units)	-956
43	Mortgage Purchase applications (%)	-53

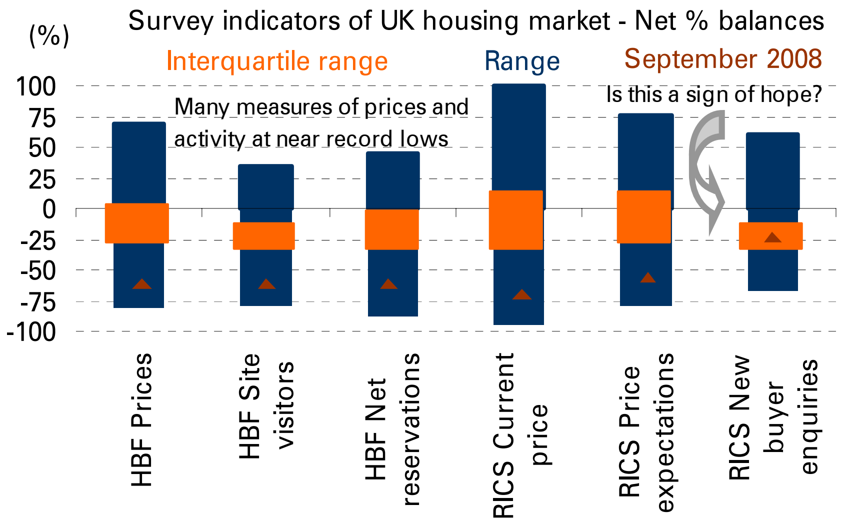
Supply side indicators

39	Inventory of unsold homes (months)	7.6
41	Home builders confidence (index value)	-87.5
41	US Home foreclosure filings ('000 units)	235.3
34	Housing starts ('000 units)	-1648

Number of months from peak to present
Movement from peak to present

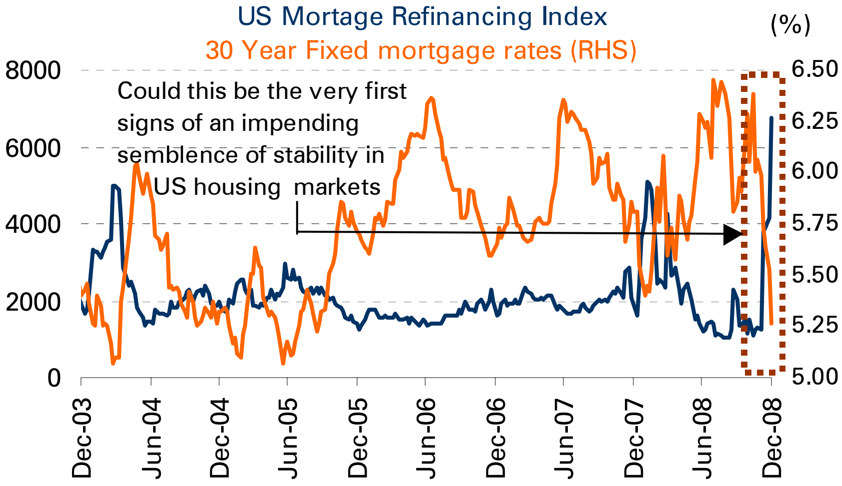
Source: Bloomberg, ICICI Bank Research

...with US not the only victim facing severe housing downturn



Source: BoE, ICICI Bank Research

...but light visible at the end of tunnel as refinancing shows an uptick



Source: Bloomberg, ICICI Bank Research

Impact of policy stimulus should also enable a housing stabilization

- While policy makers globally have in unison administered aggressive monetary and fiscal pills to address the bruises inflicted by the credit crisis, we might be witnessing early signs of tentative stabilization in different markets
- The inter-bank rates have started receding and mortgage rates have also embarked on the downtrend, globally. Refinancing have shown an up-tick and would pick up pace on signs of house prices bottoming out.
- Fed’s resort to Quantative easing indicates the willingness of the central bankers to take bold, even unconventional measures to stabilize the economy. While the steps already taken would help, we are likely to witness more targeted palliatives by policy makers globally to arrest housing concerns, which are at the heart of the current credit crisis.

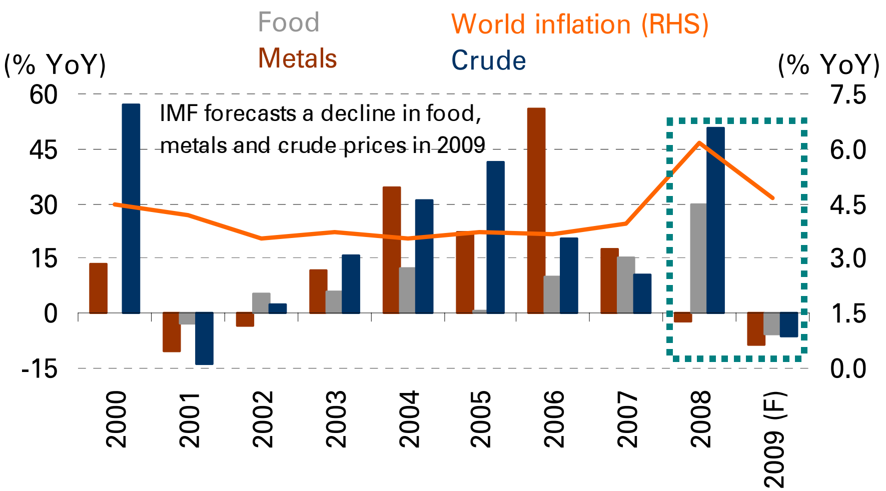
Fall in commodity prices to ease inflation and deficit concerns

Food & Fuel prices have been key contributors to inflation globally

	Contribution of food to inflation (%)		Contribution of fuel to inflation (%)	
	Nov-Mar '08	Apr-Oct '08	Apr-Jul '08	Aug-Oct '08
US	0.63	0.75	3.04	2.75
Euro zone	0.74	0.71	0.86	0.70
Asia	3.59	1.15	0.81	0.88

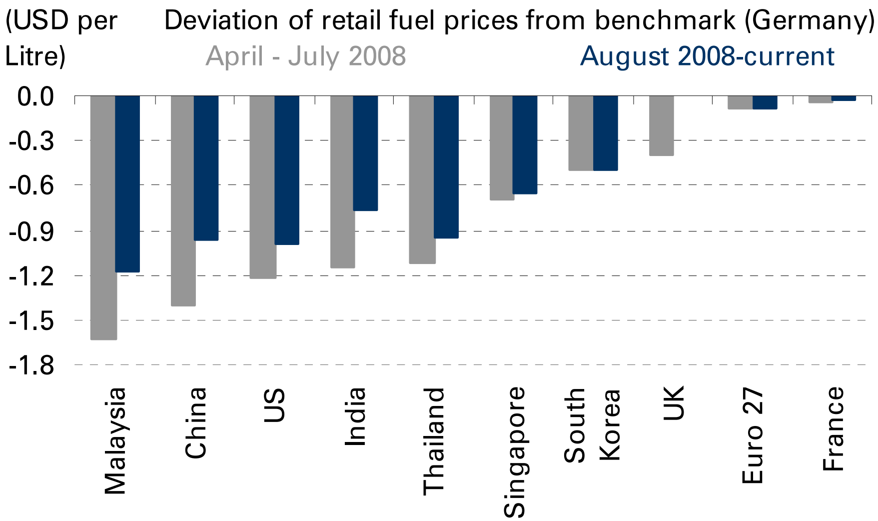
Source: Bloomberg, ICICI Bank Research

Thus, a reversal in commodity cycle would help pull down prices



Source: IMF, ICICI Bank Research

Mitigated need for subsidies would alleviate fiscal strains too…



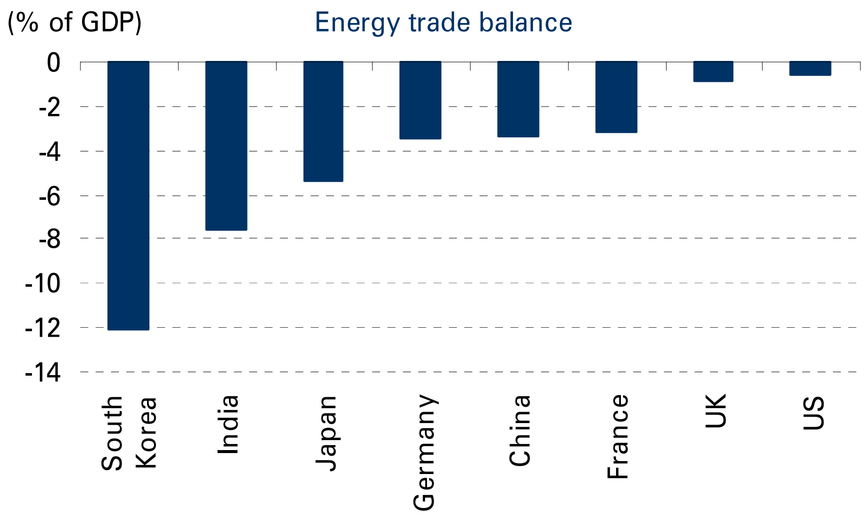
Source: Bloomberg, ICICI Bank Research

…preparing the ground for massive policy stimulus

- Times have changed with the world, which harped on inflation worries not long back considering deflation as a possible theme for the coming year
- Most factors that engineered the boom in commodity prices earlier, including supply side constraints, excess liquidity, a weak dollar as also strong demand from China, have faded into insignificance as global recessionary fears take grip
- Cooling crude prices would help reduce oil subsidy bills, hence easing the pressure on fiscal balances. In India, INR 681 bn of oil subsidy has been earmarked in the form of oil bonds and cash. Easing crude prices would reduce the pressure on fiscal deficit and divert resources for more productive investments

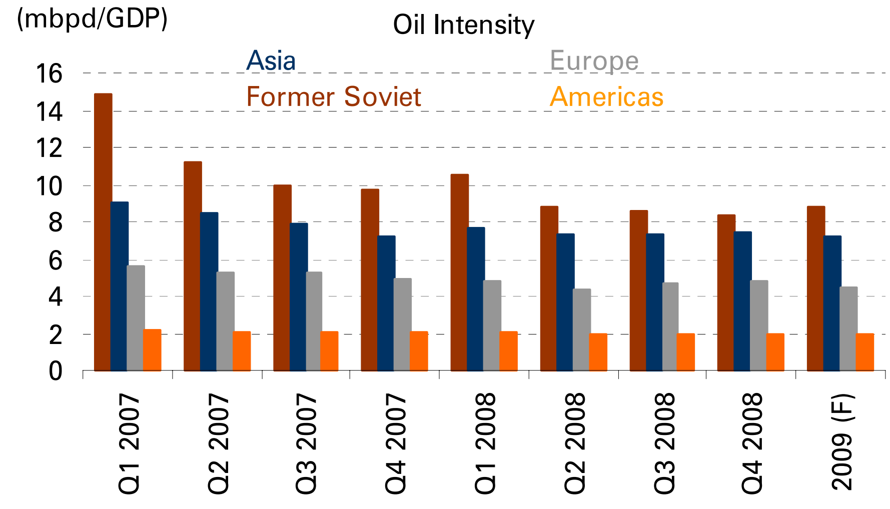
Shrinking oil import bill to counteract plummeting exports

Oil purchases constitute significant chunk of import needs globally…



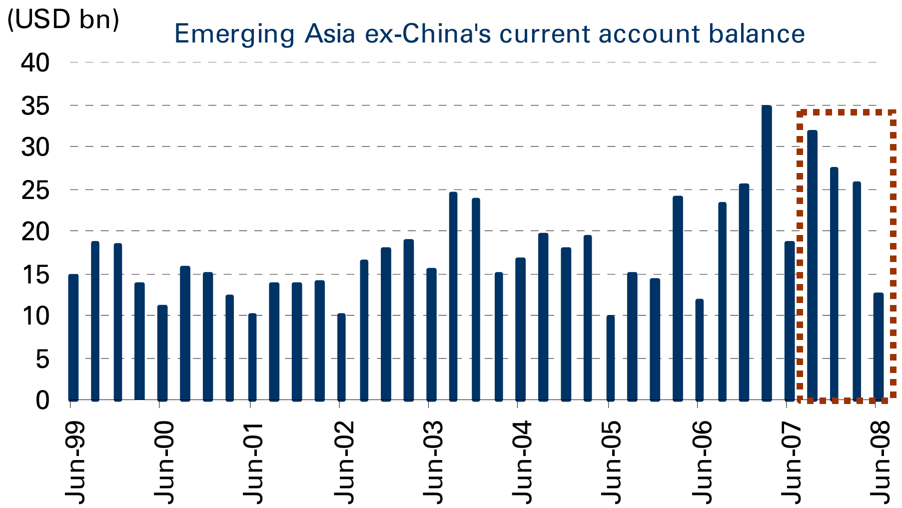
Source: Bloomberg, ICICI Bank Research

…especially for emerging Asian's that have higher oil intensities



Source: EIA, Bloomberg, ICICI Bank Research

Cool-off in oil prices would thus help correct these trade imbalances …



Source: Bloomberg, ICICI Bank Research

…as reducing oil import bill would offset deteriorating exports

- Substantial cool off witnessed in oil prices would aid in improving the current account balances globally
- While declining oil intensity and a rather steady pace of increase in oil prices has enabled emerging Asia to grow at a fast pace in past decade, consumption per unit of output still remains high, and a moderation in prices would thus be beneficial in arresting a steep deterioration of the current account positions due to declining exports
- Moderation in inflation, improvement in fiscal and current account positions would together reduce the macro risks for these emerging economies and prove fruitful in enabling them to weather the current credit shock in western nations

Odds of a challenge to Dollar strength re-emerging

Long-term dollar cycles have outweighed the impact of past US recessions

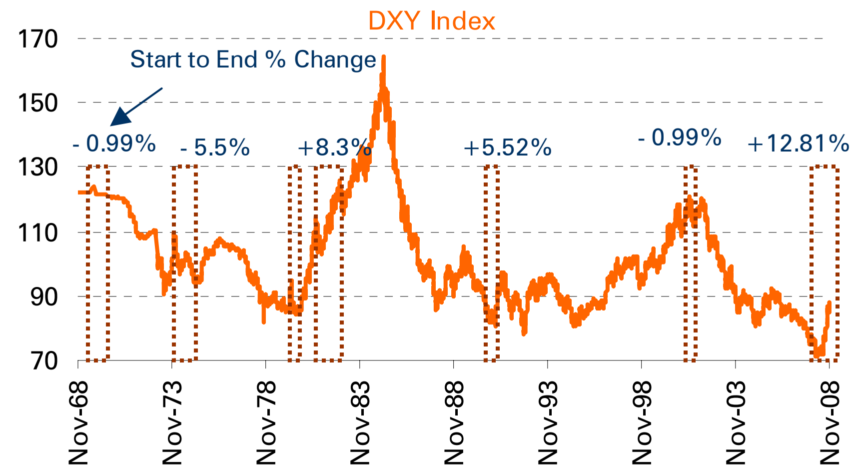
Surging fiscal cost likely to be a major destabilizing factor for Dollar in 2009

Fed’s shift in policy focus to Quantitative Easing could weigh further on the Dollar

Despite myriad challenges, a debasing of dollar is unlikely to be imminent

Recessions have had no clear impact on long term dollar cycles

Recessions have had no clear impact on long term dollar cycle



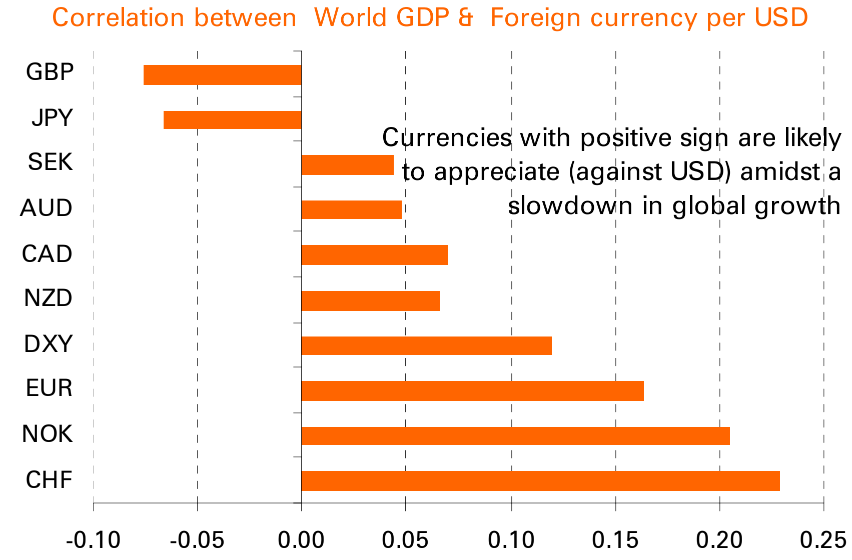
Dotted box indicates recession periods

Source: Bloomberg, ICICI Bank Research

Dollar movement in 2009 would depend upon several key factors

Stabilisers	Destabilisers
Risk aversion sustains as capital losses and fallouts continue	Risk appetite returns on the back of stabilisation in financial markets
Home bias and repatriation of money to US continues	High fiscal deficit prompts an aversion to hold dollar amidst flattening of the yield curve
Inflationary expectations continue their Southern ride	Quantitative Easingis is likely to increase the supply of dollar thereby devaluing its price
Continued weakness in oil prices	Weaker dollar being used as growth promoter
Supremacy of the dollar persists , remains world's preferred reserve currency	Dollar share in official reserves drops significantly on fall in yield differential

World GDP growth, an important driver of USD



Currencies with positive sign are likely to appreciate (against USD) amidst a slowdown in global growth

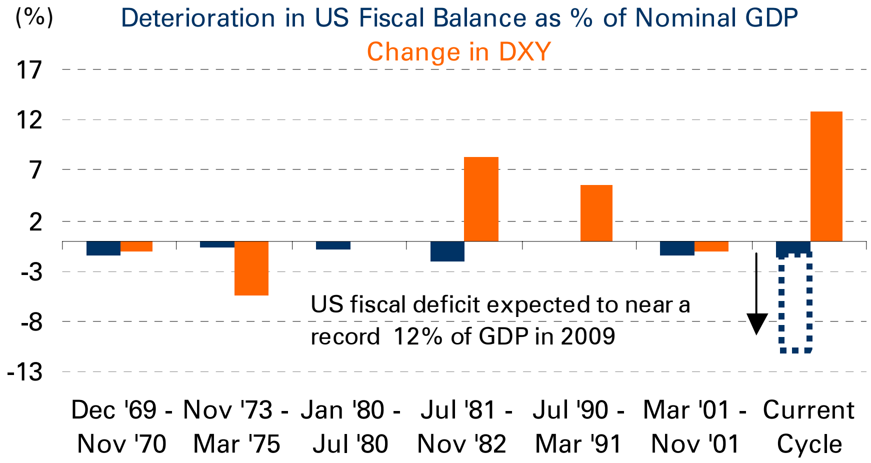
Source: Bloomberg, ICICI Bank Research

Dollar faces myriad downside risks in the coming year

- Historical observation suggests that long term dollar cycles have been more important in determining dollar movements than the impact of recession
- US recessions have taken place in both, the up and down cycles of the dollar and across various stages of those cycles. Within recessions though, when measured on a peak-to-trough basis, the magnitude of average dollar surge (17.8%) has far exceeded the average dollar decline (6.8%)
- Risk aversion dynamics, pressure on reserve rebalancing, the commodity cycle as well as surging fiscal debt would play a prime role in determining dollar movements in 2009
- The sensitivity of US dollar to world GDP growth is found to be largely positive, but not robust

Ballooning fiscal deficit to weigh heavily on dollar in 2009

Fiscal balance expected to deteriorate beyond 10% of GDP in 2009…



US fiscal deficit expected to near a record 12% of GDP in 2009

Source: Bloomberg, ICICI Bank Research

… thanks to massive spending on TARP and fiscal stimulus package

US 2009 Federal Budget Deficit Estimate (Cash basis)

		USD bn
CBO's baseline budget projections for 2009		
	Revenues	2720
	Outlays	3158
Deficit(-) or surplus (A)		-438
Adjustments:		
Additional Outlays(B)		
	TARP spending	700
	Fiscal Stimulus*	600
Additional discretionary outlays for 2009 already included in CBO estimate (C)		75
Revised deficit(-)	(A-B)+C	-1663
Percentage of GDP		12
*Estimate by Obama advisor Pelosi		

Historical fiscal cost of crisis hitting global economies

Gross Fiscal Cost of Past Financial Crisis

Country	% of GDP	Start Year
United States	3.7	1988
Argentina	6	1989
Russia	6	1998
Argentina	9.6	2001
United States(Est)	**12.8**	**2007**
Brazil	13.2	1994
Japan	14	1997
Malaysia	16.4	1997
China	18	1998
Mexico	19.3	1994
Uruguay	31.2	1981
Korea	31.2	1997
Turkey	43.8	2000
Thailand	43.8	1997
Argentina	55.1	1980
Indonesia	56.8	1997

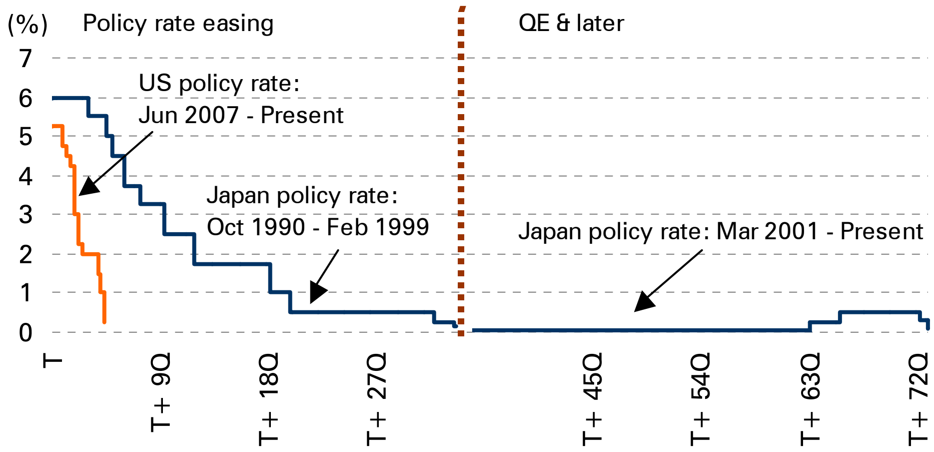
Source: Laeven and Valencia, 2008, "Systematic Banking Crisis: A New Data Base", IMF Working Paper, ICICI Bank Research

High fiscal cost likely to be a major destabilizing factor for dollar in 2009

- Fiscal Balance as % of GDP has been found to have both negative correlation (1973-1988) as well as positive correlation (1988 till data) with dollar
- However, with the US fiscal deficit expected to balloon beyond 10% of GDP in 2009, worst in past recessions, it could be a major destabilizing factor for the dollar in 2009
- Moreover, the government’s debt limit has been increased to USD 11.3 tn from USD 10.6 tn, the gross U.S. debt, (debt held by the public and by government agencies), in light of the high fiscal deficit expected in 2009
- The burgeoning fiscal deficit would weigh heavily on the dollar in 2009 in light of increased treasury issuances
- Against this backdrop, investors would either want a rise in yields or a depreciating currency to buy increased supplies

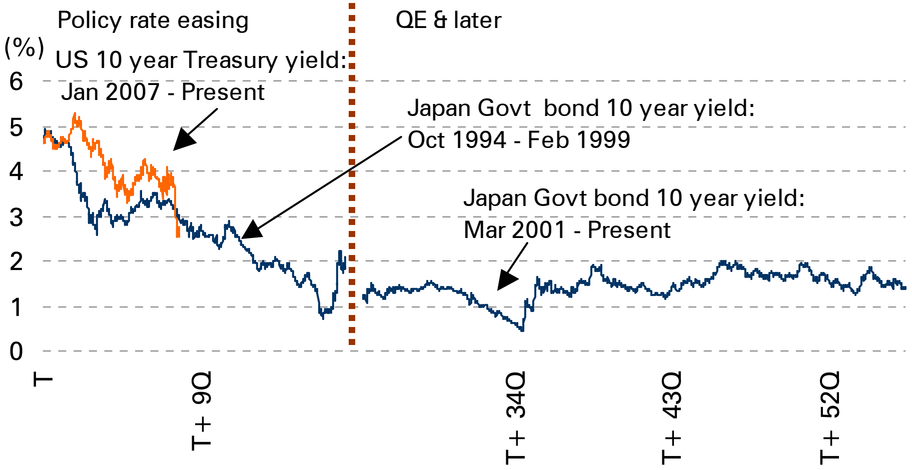
QE could also be dragging Dollar down, as seen in Japan

Pace of rate reduction in US has been faster than Japan



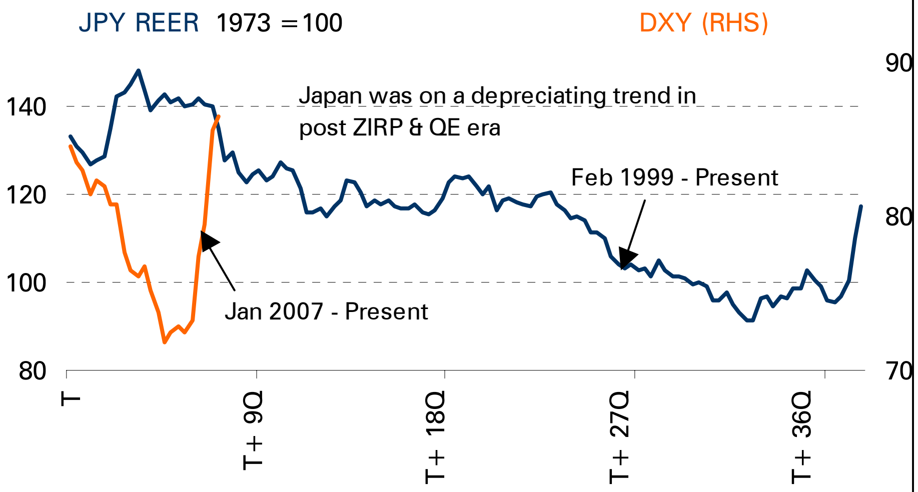
Source: Bloomberg, ICICI Bank Research

US Treasury yields closely depicting JGB yields during rate easing era



Source: Bloomberg, ICICI Bank Research

USD not following JPY movement in ZIRP & QE era



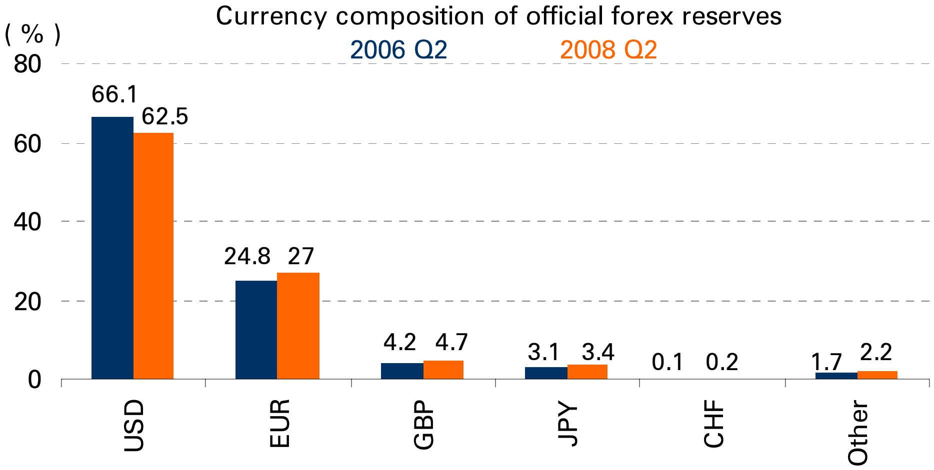
Source: Bloomberg, ICICI Bank Research

QE might prove to be Dollar negative

- Japan introduced QE in Mar 2001 in an effort to end deflation after rates were reduced to zero in Feb 1999. US Fed has followed suit by committing to target the amount of banking sector liquidity and keeping exceptionally low interest rates for sometime
- QE led to large purchase of JGBs by BoJ, thereby leading to a sustained fall in yields. A similar fate of USTs will lead to fall in their attractiveness
- In contrast, DXY doesn't seem to be following the JPY movement during the ZIRP & QE era. But this might imply an even sharper correction for the Dollar
- Overall, flattening of yield curves, along with easing of Dollar shortage owing to extended funding facilities, does not augur well for Dollar going ahead

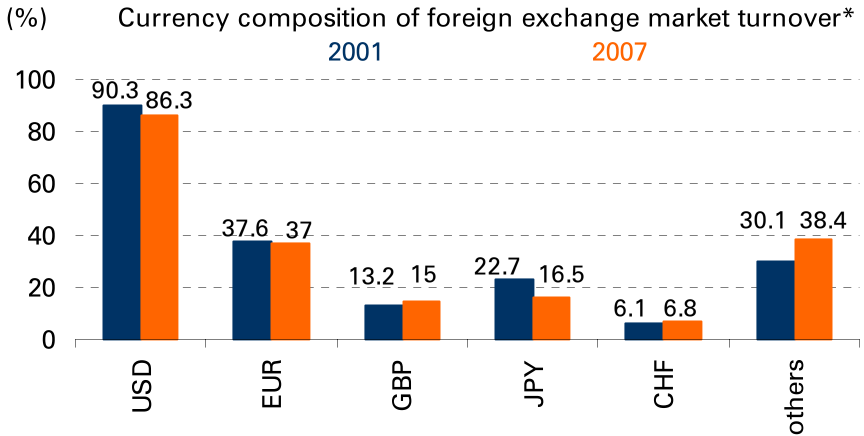
Still, Dollar’s global reserve currency role is largely unaffected

USD holds an important position in official reserves



Source: Bloomberg, ICICI Bank Research

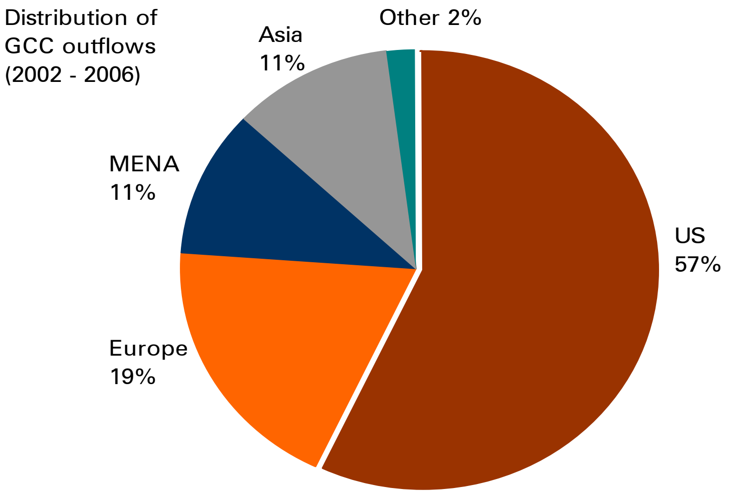
USD forms a significant proportion of foreign exchange market turnover



*Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%.

Source: BIS, ICICI Bank Research

US still remains the preferred GCC investment destination



Source: Deutsche Bank Research, ICICI Bank Research

Dollar would continue to be a predominant currency in global transactions

- The year 2009 might see the world questioning Dollar’s prime currency status, due to sharp Dollar decline
- However, the dollar still accounts for bulk of official reserves. It also dominates foreign exchange trading, with almost 86% of forex contracts last year being quoted with one leg as dollar. Sustained GCC outflows to US economy have been Dollar supportive
- USD plays a pre-eminent role in trade. Although, its usage has fallen since Euro’s birth in 1999, this decline remains confined to EU economies
- Though Euro has challenged USD in terms of share in debt securities transactions and OTC contracts, a complete debasing of the Dollar is unlikely to be imminent

Summary of Main Forecasts

Currencies

	Mar-09	Jun-09	Sep-09	Dec-09
USD/INR	49.25	47.00	45.00	43.50
EUR/USD	1.35	1.43	1.53	1.55
GBP/USD	1.39	1.44	1.52	1.56
USD/JPY	87	91	96	99
USD/CHF	1.14	1.10	1.07	1.05
AUD/USD	0.64	0.70	0.76	0.80
NZD/USD	0.57	0.60	0.64	0.66
USD/CAD	1.22	1.18	1.12	1.10

Policy Rates

	Mar-09	Jun-09	Sep-09	Dec-09
India	5.00/3.75	4.50/3.25	4.50/3.25	4.50/3.25
US	0.0% to 0.25%	0.0% to 0.25%	0.0% to 0.25%	0.0% to 0.25%
ECB	2.00	1.50	1.50	1.50
Japan	0.10	0.10	0.10	0.10
BoE	1.00	1.00	1.00	1.00
SNB	0 to 0.5%	0 to 0.5%	0 to 0.5%	0 to 0.5%
Australia	3.75	3.75	3.75	3.75
NewZealand	4.75	4.25	4.25	4.25
Canada	1.00	0.75	0.75	0.75

Yields

	Mar-09	Jun-09	Sep-09	Dec-09
India 10yr	4.50	4.00	4.50	5.00
US 10yr	2.00	1.80	1.60	1.80
Japan 10yr	1.20	1.15	1.15	1.30

LIBORs

	Mar-09	Jun-09	Sep-09	Dec-09
USD 6M	1.40	1.20	1.00	0.80
JPY 6M	0.95	0.85	0.85	0.85
CHF 6M	0.75	0.65	0.60	0.50

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