The Sub Prime Financial Crisis and its Impact of India

MBE Public Lecture Series
Department of Business Economics
S.P.Jain Auditorium
University of Delhi South Campus
3.30 PM, Friday September 12, 2008

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Secretary
Economic Advisory Council to the Prime Minister

2003/04 –2007/08 'INDIA' Growth Story

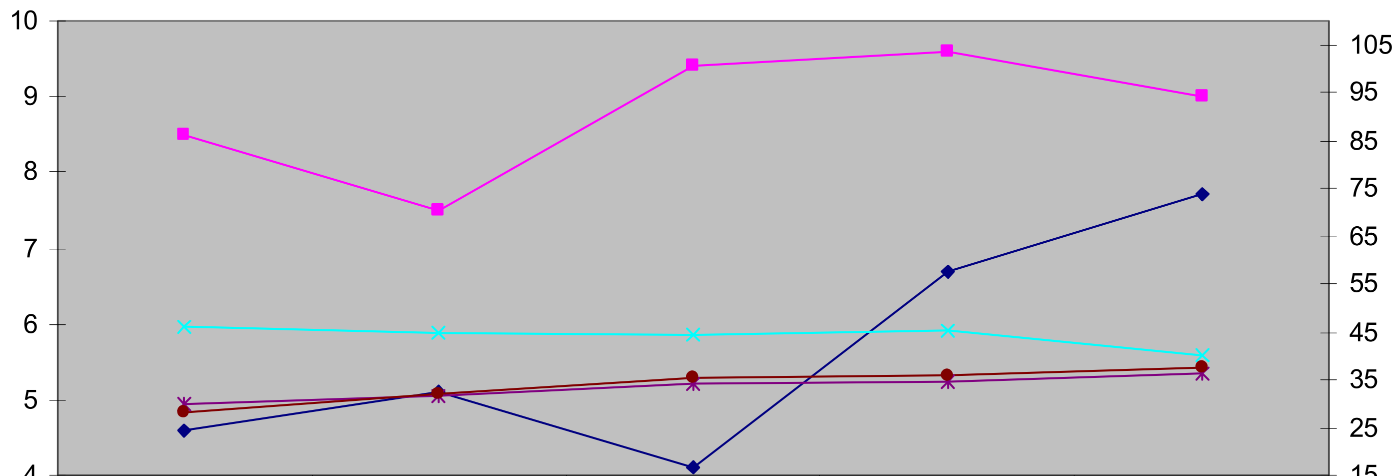
- 9% growth rate
- Savings-Investment rose from under 30% to over 35% of GDP
- 5-7% WPI inflation and muted inflationary expectations
- Current Account deficit 1-1.5% of GDP. Tsunami of capital inflows
- Favourable external environment

But…………………..

Central Bank was battling on two interrelated fronts

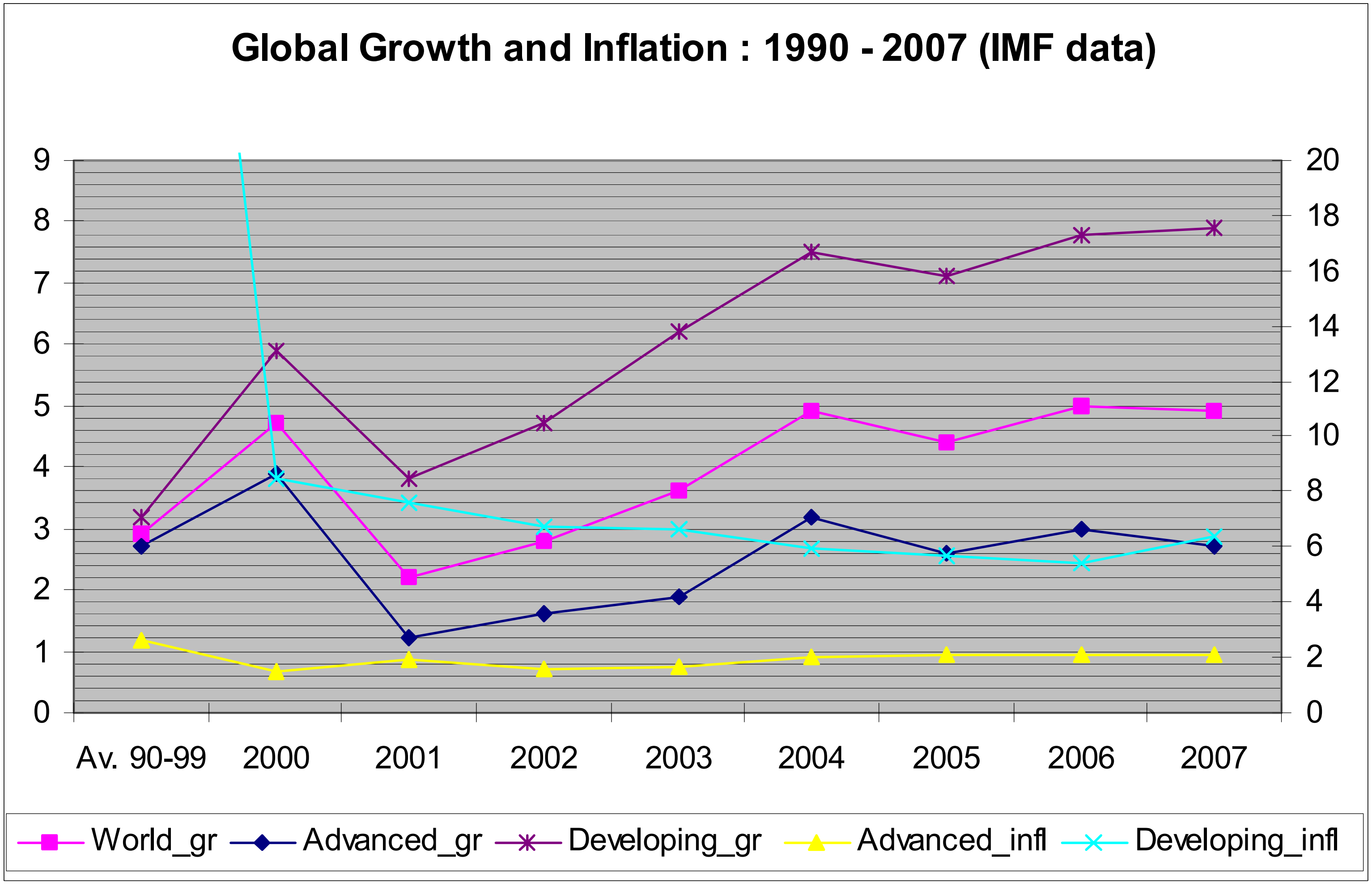
- Rupee appreciation
- Sterilizing the reserves to manage money supply

India : Growth story



	2003/04	2004/05	2005/06	2006/07	2007/08
GDP	8.5	7.5	9.4	9.6	9
WPI_infl	4.6	5.1	4.1	6.7	7.7
Res_accretion	107.4	26.2	15.1	36.6	92.2
X_rate	45.95	44.932	44.273	45.28	40.24
savings/GDP	29.8	31.8	34.3	34.8	36.2
investment/GDP	28.2	32.2	35.5	35.9	37.4

Benign External Environment



2007 – The silent storm

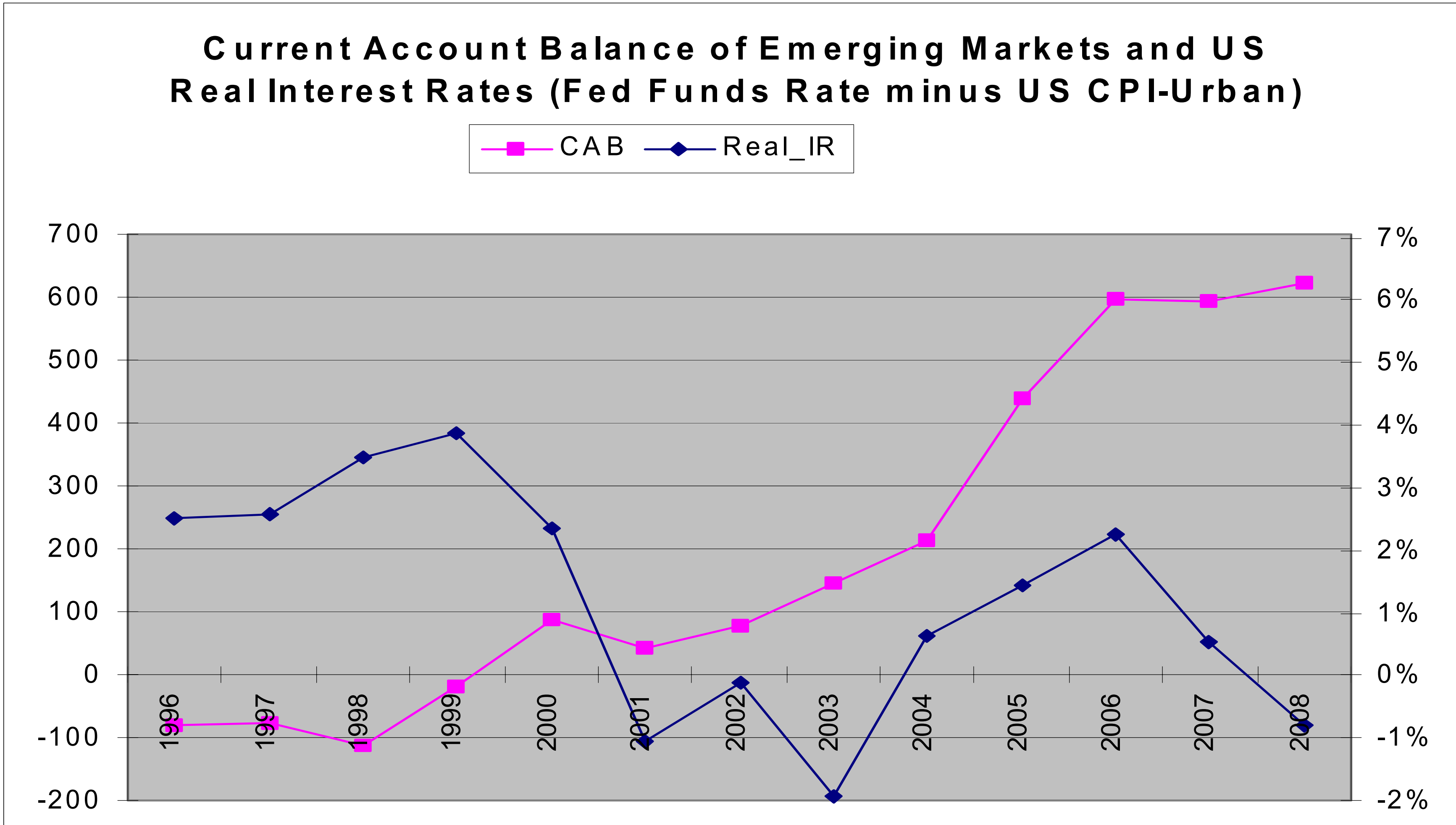
Meanwhile, a silent storm was brewing in international financial markets with

origins in the US housing market

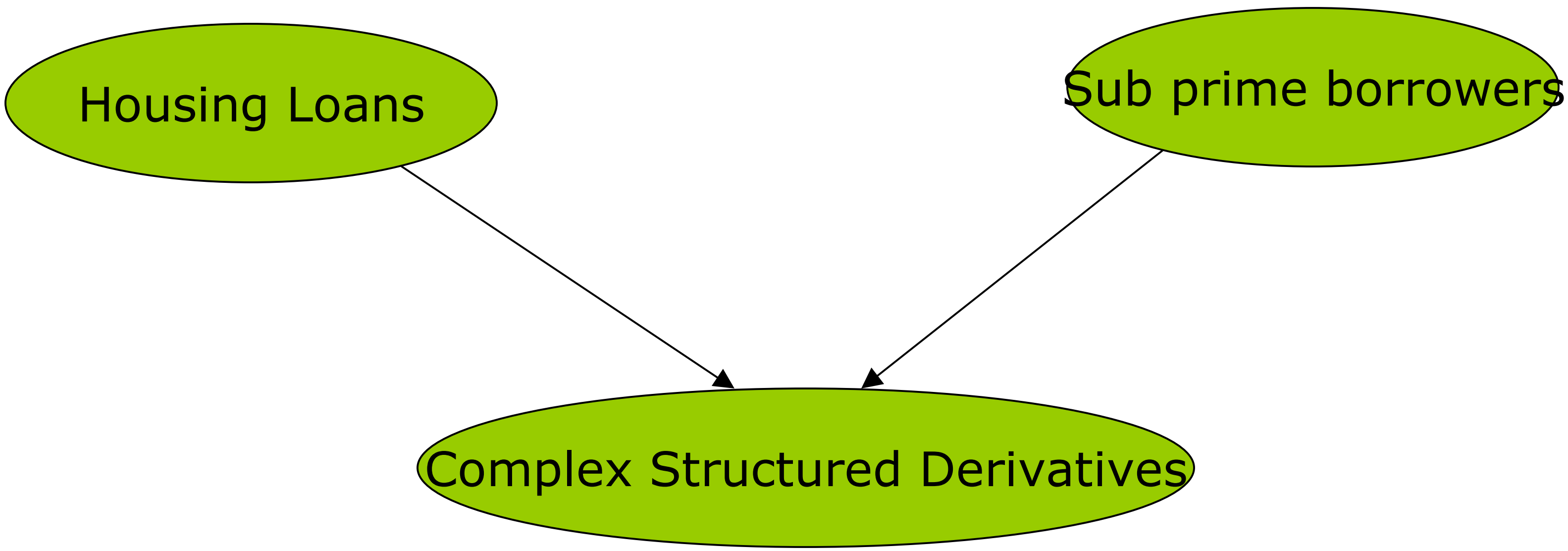
- Housing market
  - Mainstay of household demand in OECD countries including US
  - Unprecedented boom since 2001
  - Fed on excess liquidity generated by global imbalances and financial innovation
  - Real interest rates in US were negative
  - High levels of leverage

The boom was led by rising housing prices, low interest rates and exacerbated by financial innovation

Feeding the Housing Boom



Financial Innovation



- Housing loans offered at back loaded teaser interest rates
- Assuming that borrowers could refinance the sub prime loans through gains in home equity

But loan originating banks were smart…………………………………..

What did the banks do?

Offloaded the sub prime loans from their balance sheet through Instruments like

Collateralized Debt Obligations

Modus Operandi of banks (loan originators)

- Pool together mortgages, including sub prime loans, into CDOS
- Get top notch credit ratings for senior tranches
- Retain the highly rated senior derivatives through SIVS
- Repackage the lower rated derivatives to transform them into synthetic CDOs

Investors : Hedge funds, money market and pension funds

High Risk High Return in a low interest rate environment

Was the mantra which drove these investments

How did the investors buy?

- Hedge/money market/equity funds
  Accessed cheap short term funds through ‘carry trade’

- Pension and insurance funds invested because of top notch ratings

- Investment funds and investment banks invested their own funds through high leverage by recycling capital several times over on a thin capital base

Sharp rise in derivatives CDO and derivatives issuance

CDO	Derivatives Industry
2004 - $25 billion	2002 - $ 103 trillion (3 X Global GDP)
2007 - $186 billion	2007 - $ 450 trillion (9 X Global GDP)

The boom begins to unravel from …. 2004

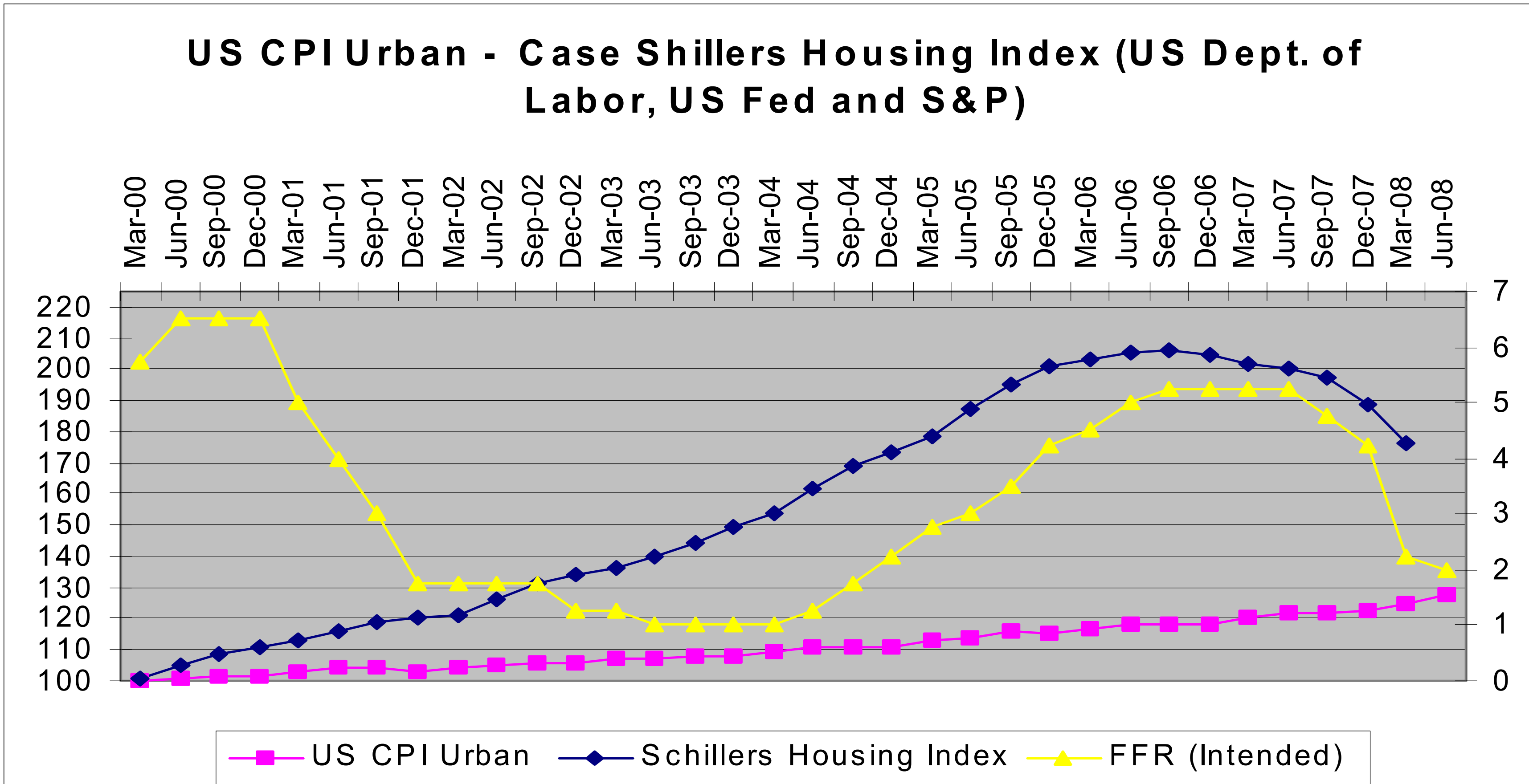
- US Fed reacts to rising consumer and asset prices by monetary tightening from second half of 2004
- Housing prices begin to fall by end of 2006
- Rising interest rates and falling housing prices lead to

Rise in sub prime mortgage delinquencies & foreclosures

US mortgages are non recourse

Difficulty in refinancing

The crisis deepens ………. 2007



The crisis deepens ………. 2007

Sub prime loans at $1.2 trillion - only 13% of total housing mortgages

but

- The complex structuring and repackaging created uncertainty
- Market could not pin point the delinquencies
- Heightened perception of counter party risk

Financial Tsunami – Aug 2007

- Price of & market for derivatives fell sharply because of fire sales
- Credit markets froze: 'Ted' and 'CDS' spreads symptomatic
- Banks take back illiquid assets on their balance sheets and book losses of $ 500 billion [IMF's estimate of total losses close to $ 1 Trillion]

The contagion spreads…..

- US Fed serially lowered interest rates, opened credit window to exposed investment banks and bailed out stressed FIs like Bears Stearns and more recently Fannie Mae and Freddie Mac. Lehman Brothers on verge of collapse.
- US Treasury provided fiscal stimulus of $ 150 billion tax rebates to sustain demand.

however

- In the US the housing prices and sales continue to plummet and foreclosures to rise after brief rallies following each intervention
- Ten US banks have failed – FDIC has put over 100 US banks on watch list
- Contagion spreads to both OECD countries and emerging markets
- The financial tsunami combined with a boom in commodity prices coalesce into a ‘perfect (stagflationary) storm’ that leaves central banks confused whether to tighten (Europe) or loosen (US) monetary policy.
- US Treasury takes over Fannie Mae and Freddie Mac and injects fresh capital of $ 200 billion
- Alt-A Loans collectively estimated at $ 1 trillion the new sub prime?
- Threat of spread of financial crisis beyond the housing sector to credit cards, auto loans, student loans, and to the real economy.

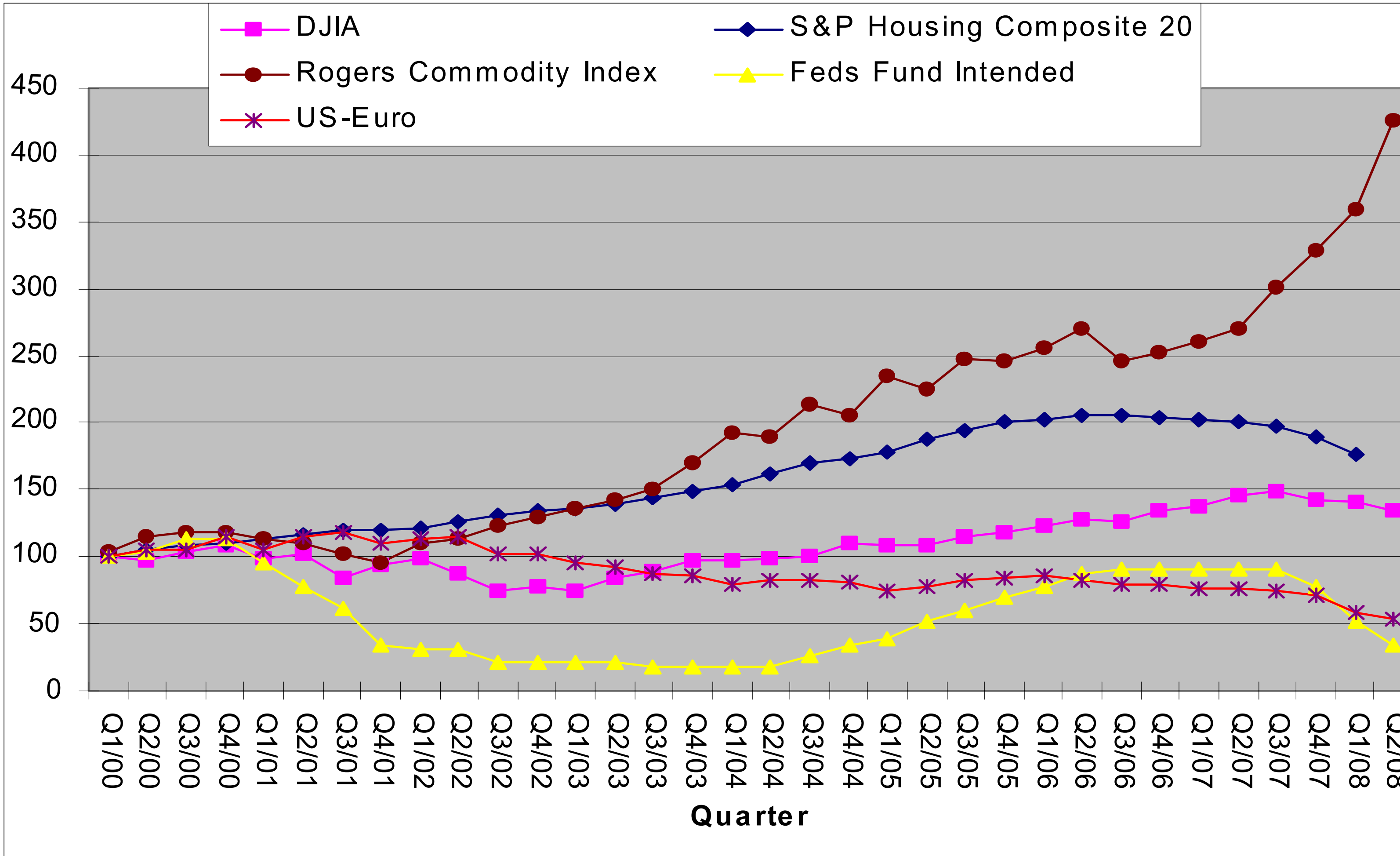
Credit Crisis – Commodity link

The link between the financial crisis and commodity prices (oil)

- **Commodity prices rising steadily from 2002 on account of above trend global GDP growth, especially in China and emerging markets**

- **Sharp depreciation of the '$'**
  - US $, already under pressure due to widening US trade deficit, plummeted as US Fed dramatically lowered interest rates while rest of the world was tightening monetary policy
  - $ is the currency in which oil is traded - as $ depreciates oil prices rise (subsequent decline in commodity prices was accompanied by a recovery in US $)
- **Plummeting real estate, stock and financial asset prices redirected excess liquidity towards commodities and oil – intensifying price rise after August 2007** (speculation in futures markets and shorting of financial stock to invest in commodities worsened the price rise)

Relative Asset Price Movement

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"I THOUGHT WE WERE JUST BUYING A HOUSE!"

Impact of Sub Prime crisis on India

No direct impact:

Structured finance undeveloped

No deleveraging

On the contrary India and China were seen as saviours of a ‘decoupling’ global economy

capital influx, currency appreciation, stock market boom

Impact on India – second round

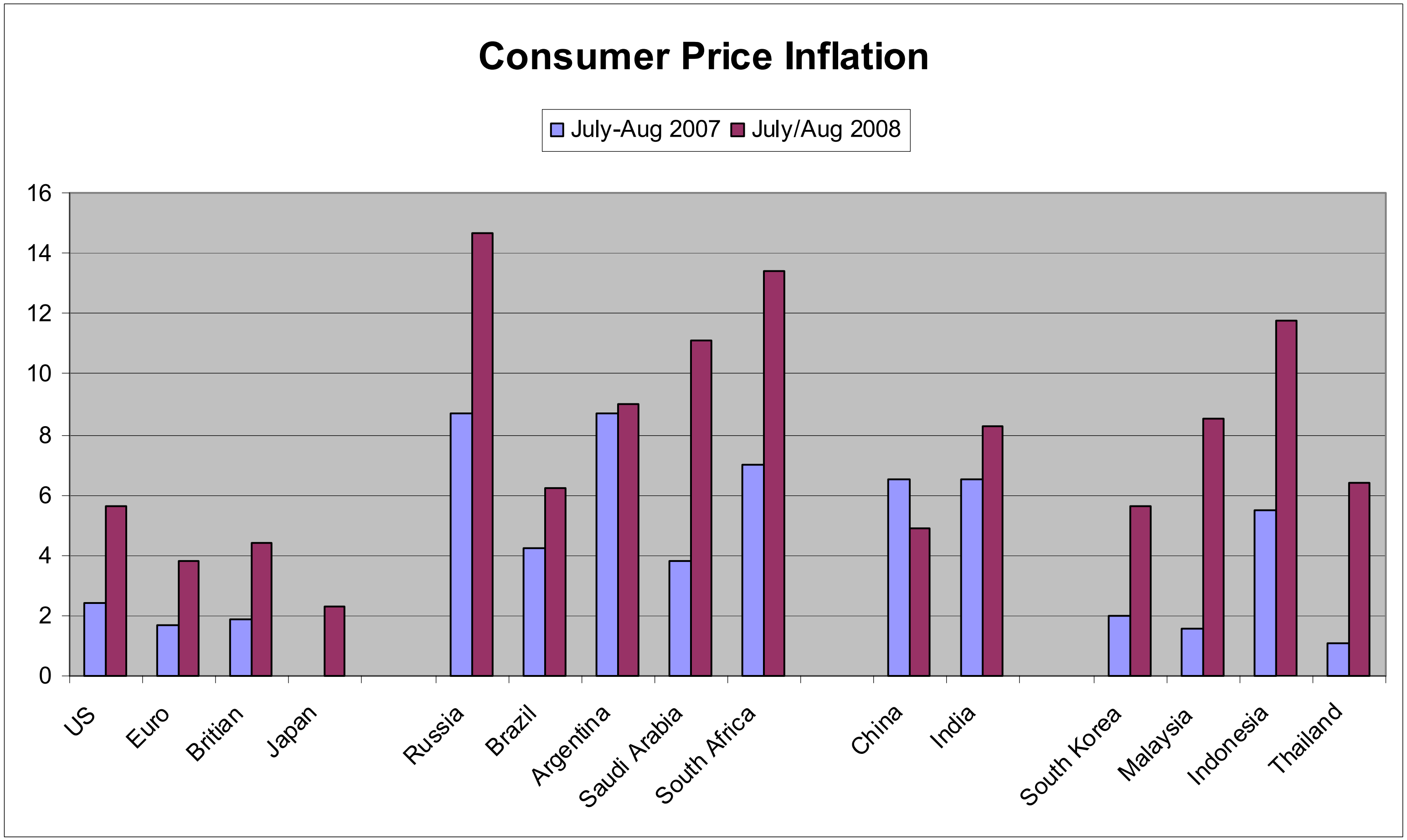
The second round effect of Sub Prime + spike in oil prices was devastating for Asian countries, including India

But for the macroeconomic cushion of low external debt Ratio and fiscal deficits and comfortable reserves this had the ingredients of a classic currency crisis

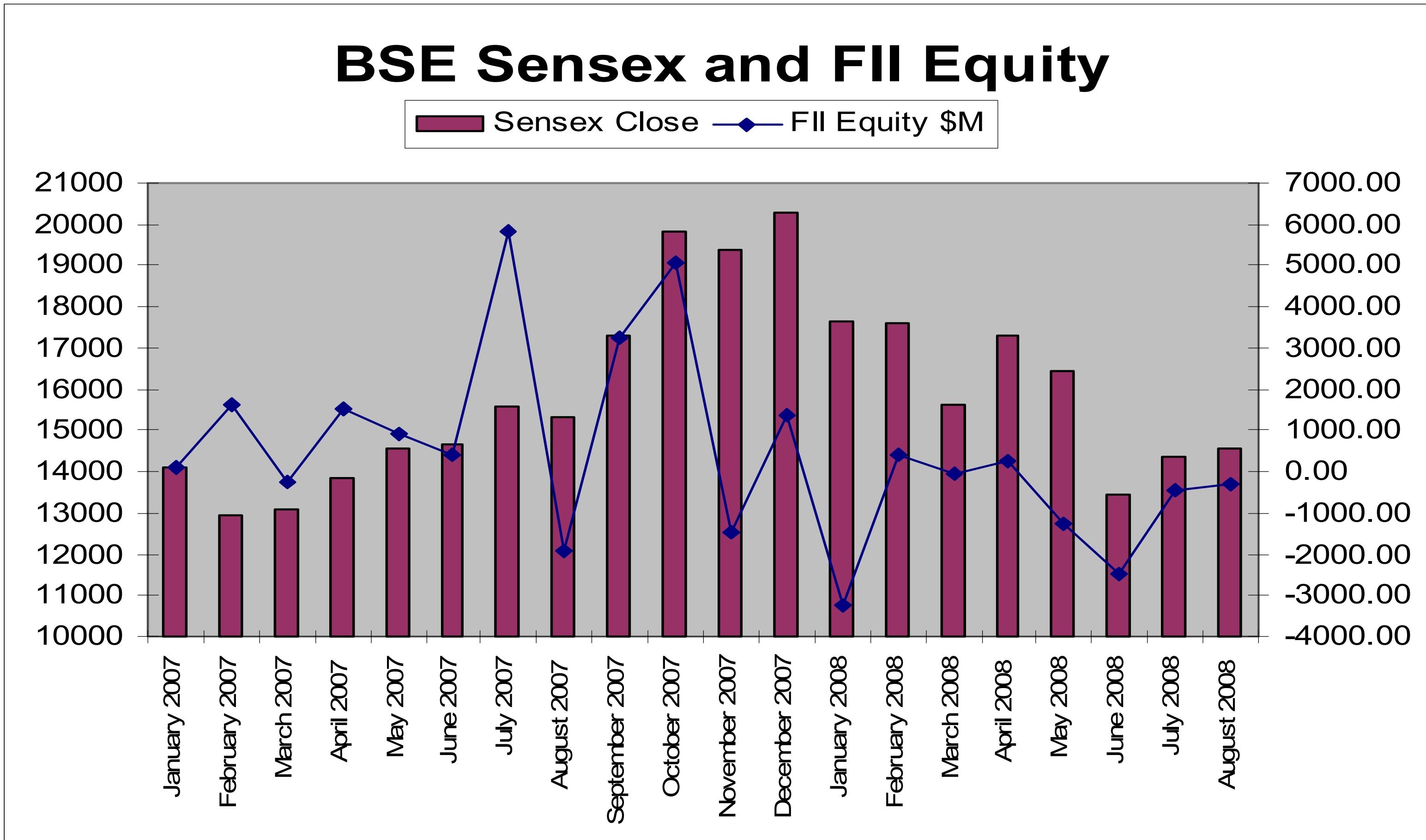
The devastation

- ***Oil shock – worsening current account balance***
  - India's merchandise trade deficit in April-July 2008 increased by 50%
  - BRIC may split – prospects of Brazil/Russia brightened& that of India/China darkened
- ***Sharp increase in inflation – food & oil the culprits***
  - Governments could no longer fully insulate consumers from increase in retail oil prices
  - Spike in food prices through biofuels link
  - Higher weightage of food and oil in the consumption basket of developing world
  - July 2008- CPI at 9.41% and WPI at 12%+
- ***Increase in fiscal deficit***
  - Government absorbed part of the increase in oil and food prices – lower savings
  - EAC's estimate of off balance sheet deficit on account of rising food and oil prices – 4.5% of GDP
  - Threat of credit downgrade
- ***Decline in Capital flows***
  - Sharp decline in stock market capitalization and bearish markets
  - Rupee under pressure – feeds inflation
- ***Decline in Growth [EAC's estimate for 2007-08 : 7.7%]***
  - Rising interest rates hurt consumption and investment
  - Rise in fiscal deficit and decline in corporate profits result in fall in savings

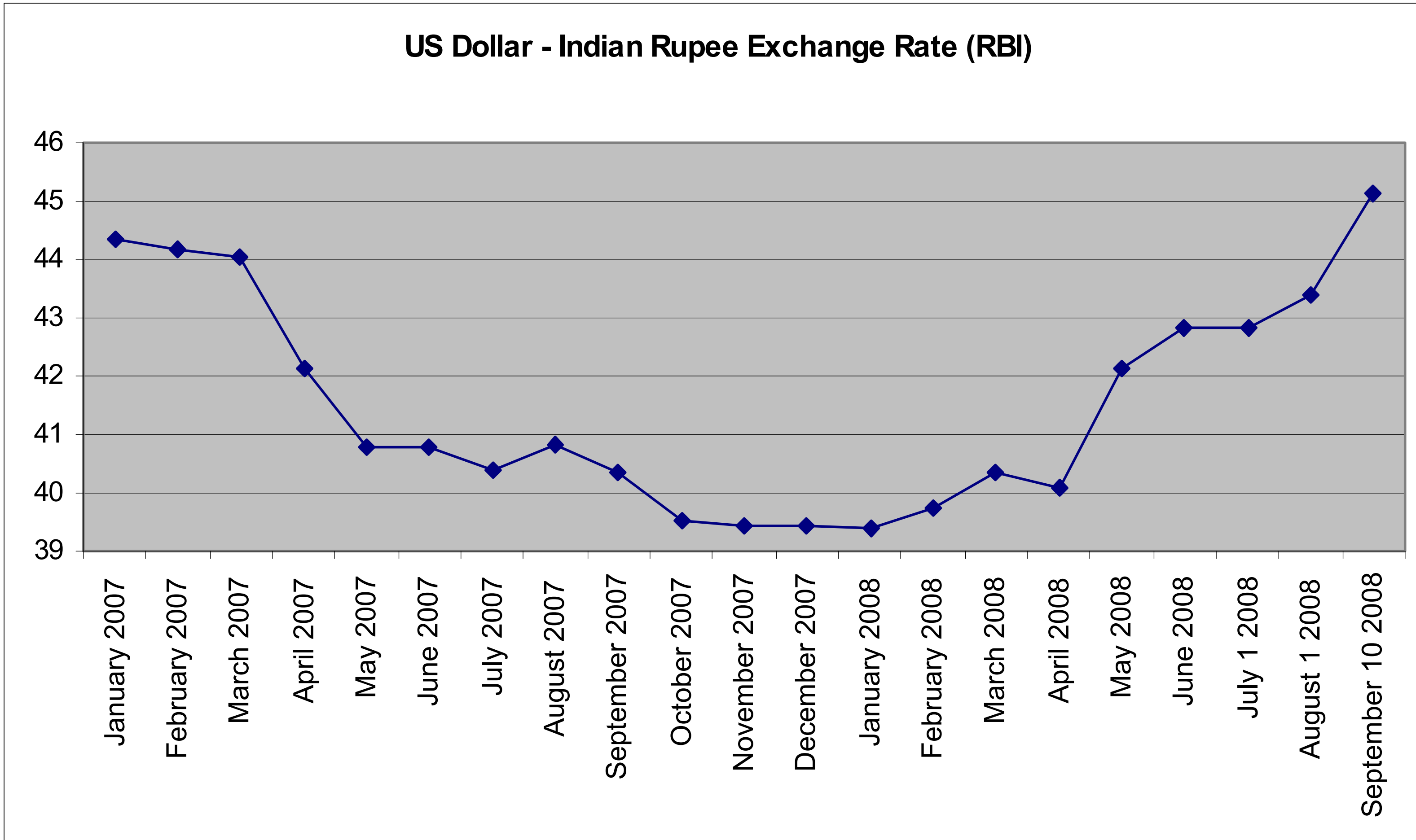
The devastating effect



The devastating effect



The devastating effect

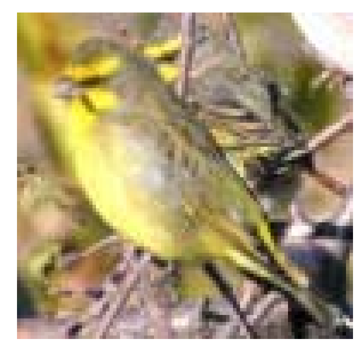


The domino effect

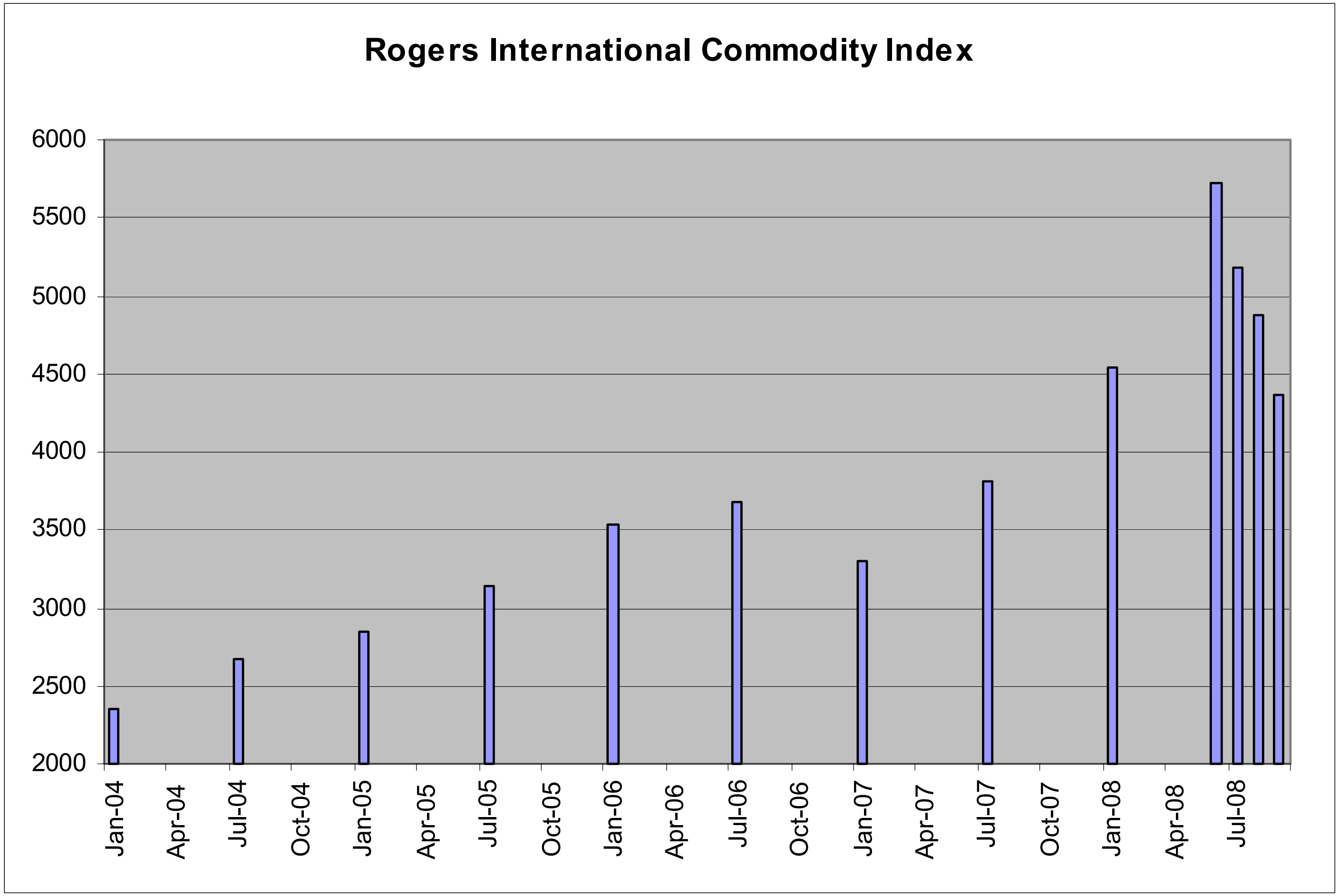
- Adjustments in financial sector immediate, in the real sector with a lag
- US growth negative in first quarter of 2008, Euro area and Japan little affected
- Second quarter low to negative growth in Euro area ignites fears of recession in Euro area and Japan because of contraction of US demand, high oil prices, deleveraging and tight monetary policy. Surprisingly robust annualized growth of 3.3 % in the US in the 2nd qtr because of loose monetary policy, export growth because of weak dollar [exports accounted for 3.1/3.3 % of growth] and fiscal stimulus. Unlikely to be sustained because of strengthening dollar, continued deleveraging, household demand destruction through negative housing equity and waning fiscal stimulus
- Emerging economies adversely impacted by demand destruction in 'global consumer of the last resort': US major trading partner for India (15% of exports), Brazil and China (20% of exports)

Crystal Ball Gazing

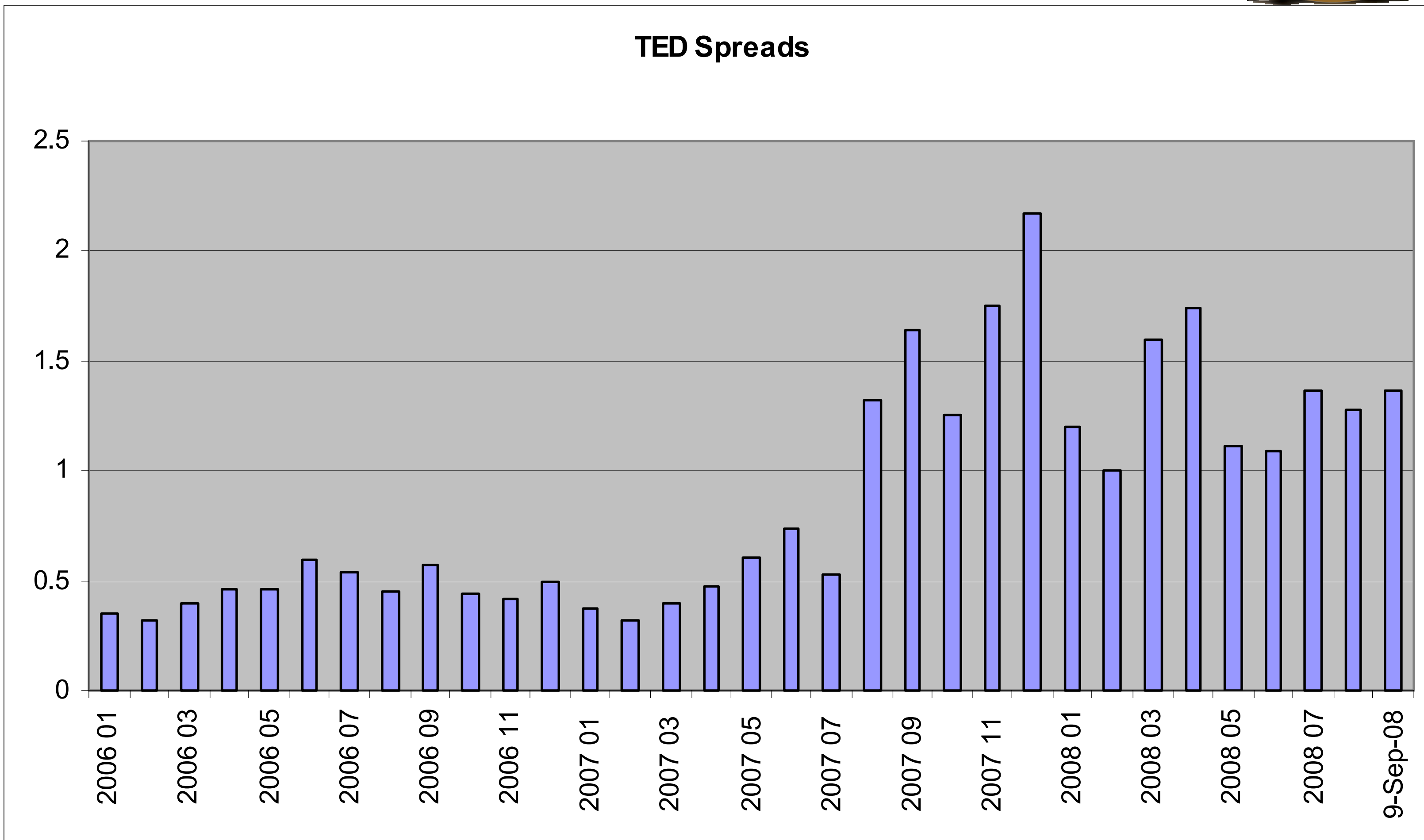
- Commodity prices falling since July 2008
  - A correction? Still 50% higher than January 2007
  - Pricking of a financial bubble?
- Credit crisis and Deleveraging persists, but the global imbalances that inflated the sub prime bubble intact
  - Will they go into dollar assets [treasuries] because of global uncertainties?
  - Or back to emerging Asia if commodity prices soften and growth prospects brighten?
- Two canaries to watch in the gold mine
  - commodity prices
  - TED spreads



Commodity Prices



TED Spreads



TED Spreads
2.5
2
1.5
1
0.5
0
2006 01
2006 03
2006 05
2006 07
2006 09
2006 11
2007 01
2007 03
2007 05
2007 07
2007 09
2007 11
2008 01
2008 03
2008 05
2008 07
9-Sep-08

Can India and China rescue the world?

Emerging markets have borne the brunt of the second round impact and are themselves bearish

Lessons of the sub prime crisis for India

- You cannot decouple from the world's biggest economy in a fast integrating world

- Sophisticated structured finance products can become 'weapons of mass destruction'
- Moral hazard and financial sector liberalization
- Rethinking Universal Banking
- Focus on 'Credit Discipline' as a corrective to financial inclusion
- Reconsider basing monetary policy entirely on movements in consumer prices alone

Thank You