CENTRAL BANK OF THE REPUBLIC OF TURKEY

Bubbles, Crises, and Central Banks: Lessons to Be Drawn

Dr. M. İbrahim Turhan

Deputy Governor

The Central Bank of Turkey

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Central Banking in Historical Perspective

If the evolutionary criterion of success for an entity is to spread around the world through proliferation and adapt to changes over time, central banks definitely succeeded in this perspective.

(Capie et al, 1994: pp.91)

It is alleged that people draw lesson from the past... What a fairy tale!

Did stories of the past five thousand years give something at all?

So defined history as always repeats itself;

Would it have been the case, if any lesson had ever been learnt?

Mehmet Akif Ersoy

Central Banking in Historical Perspective

- The fundamental rationale behind the emergence of central banks: Necessity to have a “lender of last resort” in a paper-money system.

- The core motive of establishing central bank for governments is the desire to finance budget deficit by monetization. Several central banks like in England, France, Finland, Netherland and Portugal were established during the war times.

- Private commercial banks were held responsible for preventing economic downturn by playing role in credit market and financial system during crisis period. These banks turned into leading position concerning balance of payments and placed in the core of banking systems.

Central Bank Independence

- Central Bank independence have emerged as a major point of discussion in economic policy globally during the last 25 years.
- Furthermore, this concept has a background up until the beginning of the 19th century sharing a background equivalent to the history of the central banking.
- Concept and implementation of independence have followed a course depending upon the current economic conditions and conjunctural cycles and not a linear and uninterrupted one.
- Although it has been widely accepted by most experts in academic and practical fields, Central Bank independence is still criticized both explicitly and implicitly while proposals to limit independence come to order.

Central Bank as a Stabilizer

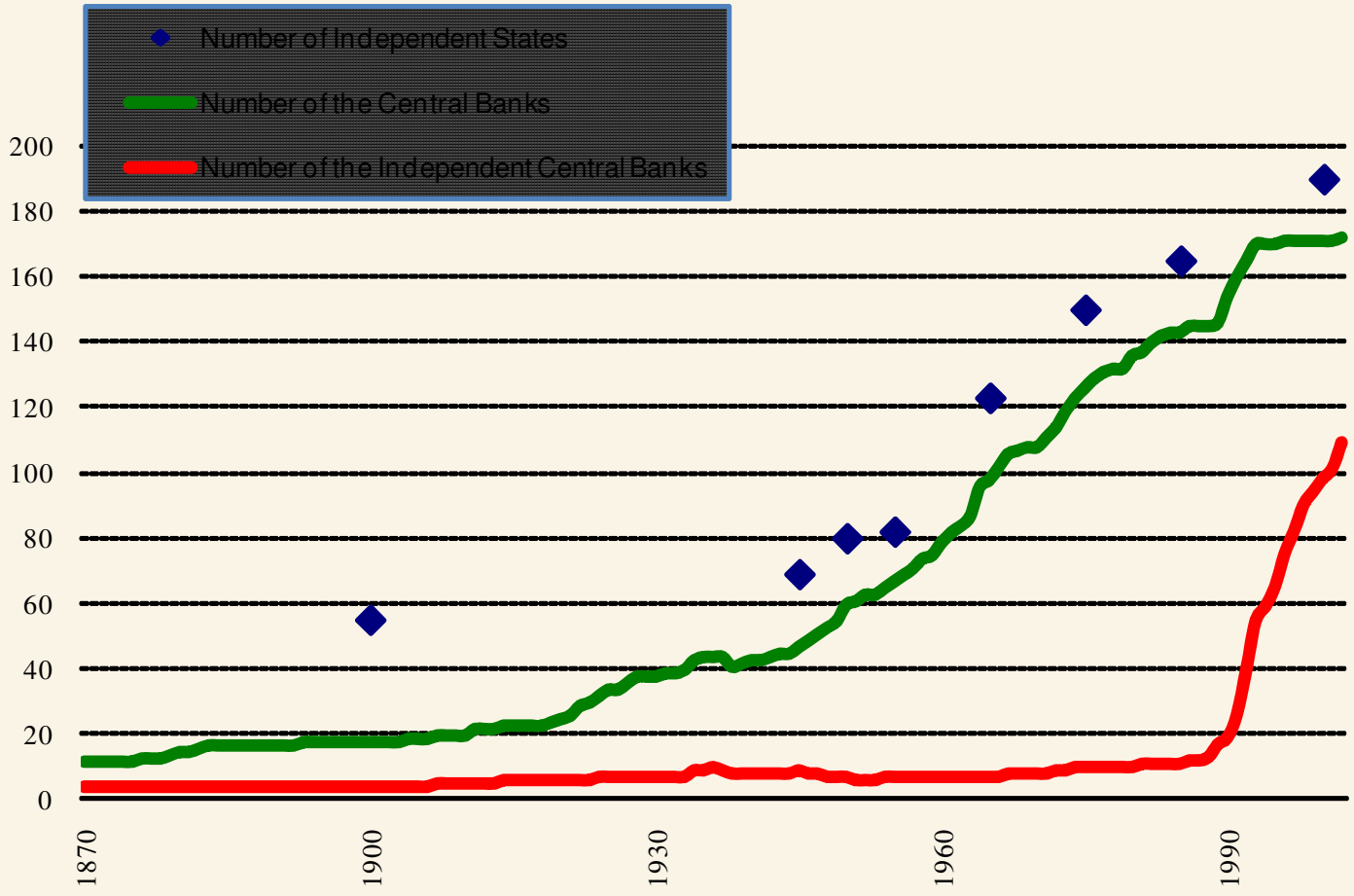
- Recessions and crises during late 1700s, 1820s and 1860s called for a stable international monetary system.
- Central Banks have gained credibility and the concept of independence have strengthened.
- "If Government wanted money, it should be obliged to raise it in the legitimate way; by taxing the people; by the issue and sale of exchequer bills; by funded loans; or by borrowing from any of the numerous banks which might exist in the country; but in no case should it be allowed to borrow from those who have the power of creating money."

Ricardo, 1824

Central Bank Independence

- 1870s-1900s: Belle Époque, Monetary laissez-faire , Central Bank Independence “Status Naturalis”
- Bagehot says (1873) “Bank of England is the most isolated bank in the world from the influence of politics and finance.” Lévy (1911) mentions “the theory of decoupling of central banks and governments”.
- 1920s: Second Gold Standard, Fundamentals of Modern Central Banking. Gold Standard (“Great Depression” due to Central Bank independence and fixed exchange rate regime)

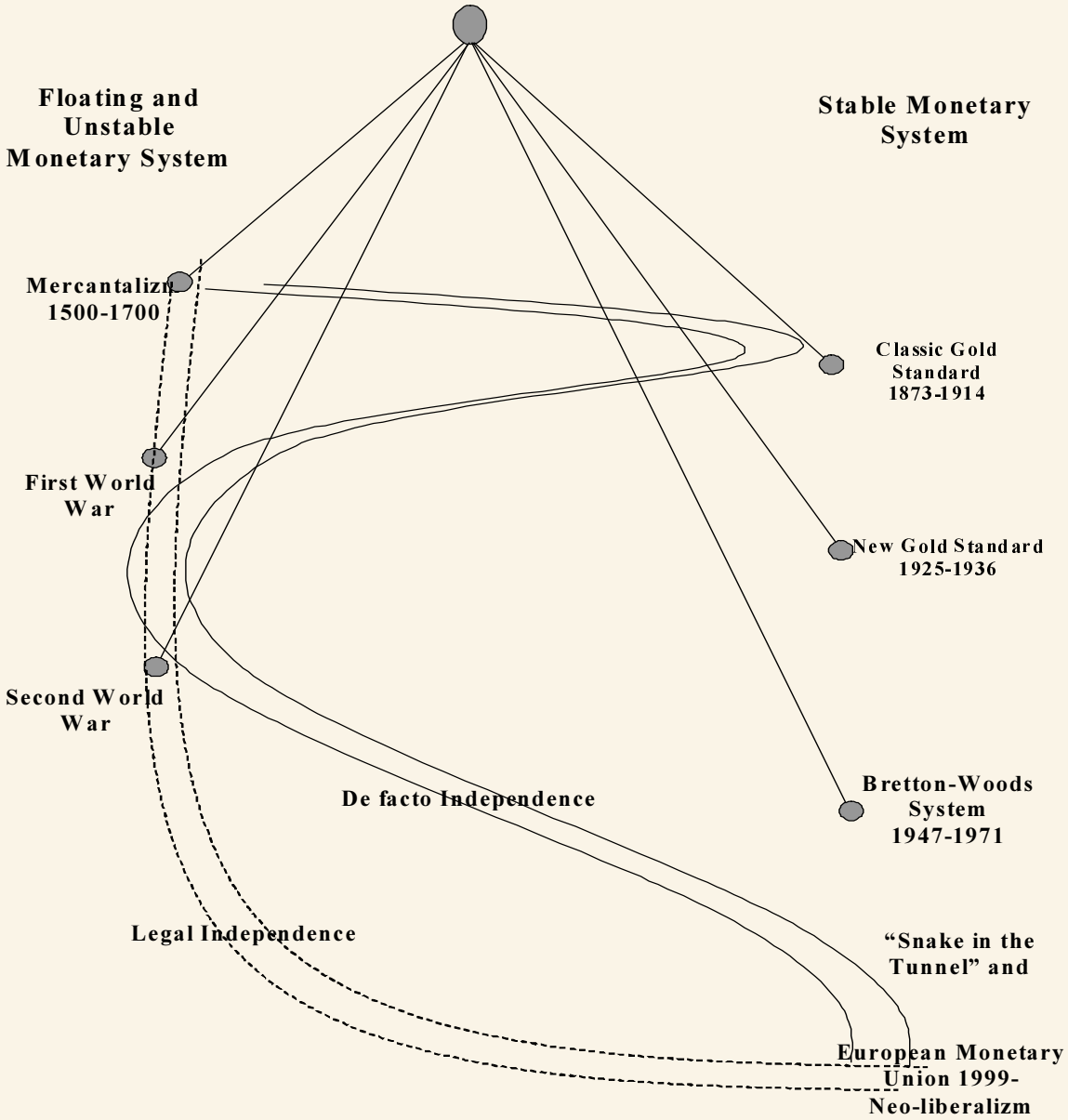
Central Bank Independence



Central Banks and Economic Policy Cycles

- 1950s-1960s: Keynesian Economics, Managed Accommodative Monetary Policy. Inflation, stagflation, Demise of Bretton-Woods system
- 1970s: Floating Exchange Rate Regime, Monetary Targeting, Economic Crisis
- 1980s: Rise of Neo-liberalism, Market Fundamentalism (Reaganomics, Thatcherism), Internationalism, Combat against Inflation
- 1990s: Washington Consensus, Globalization, Central Bank Independence and the end of Cold War have contributed to lowering budget deficits and stronger central bank independence.

Central Banking in Historical Perspective



“Single Mandated” Central Bank

- Price stability’s being as the main and primary objective of central banks is one of the rare cases that economists agree upon.
- The hypothesis of “the only sustainable contribution of monetary policy to the public prosperity in the long term is through price stability”, is considered as a basic creed by “new consensus macroeconomics” which is the monetary policy views of the synthesis of neoclassical school and new Keynesian school.
- Great Moderation proved the legitimacy of “single-mandate” central banking

Have Central Banks Forgotten Their "Raison d'Être?

- *"… the general view nowadays is that central banks should not try to use interest rate policy to control asset price trends by seeking to burst any bubbles that may form. The normal strategy is rather to seek, firmly and with the help of a great variety of instruments, to restore stability on the few occasions when asset markets collapse."* Ms Kerstin Hessius, Deputy Governor of the Sveriges Riksbank, October 1999 (BIS Review).

- Asset price cycles and the role of monetary policy ?

Central Banks and Economic Policy Cycles

- Boom and bust cycles: Asset prices soar, first rally in bullish markets, finally the bubble bursts, asset price reversals are followed by crises and protracted recessions
- Tightening monetary policy in an asset market boom → Insurance against the risk of real and financial turmoil (obviously not free)
- Kaminsky and Reinhart study a wide range of crises in twenty countries, including five industrial and fifteen emerging ones. A common precursor to most of the crises considered is financial liberalization and significant credit expansion.
- Demirgüç-Kunt and Detragiache study fifty-three countries during the period 1980-95. They find that financial liberalization increases the probability of a crisis by stimulating credit growth.

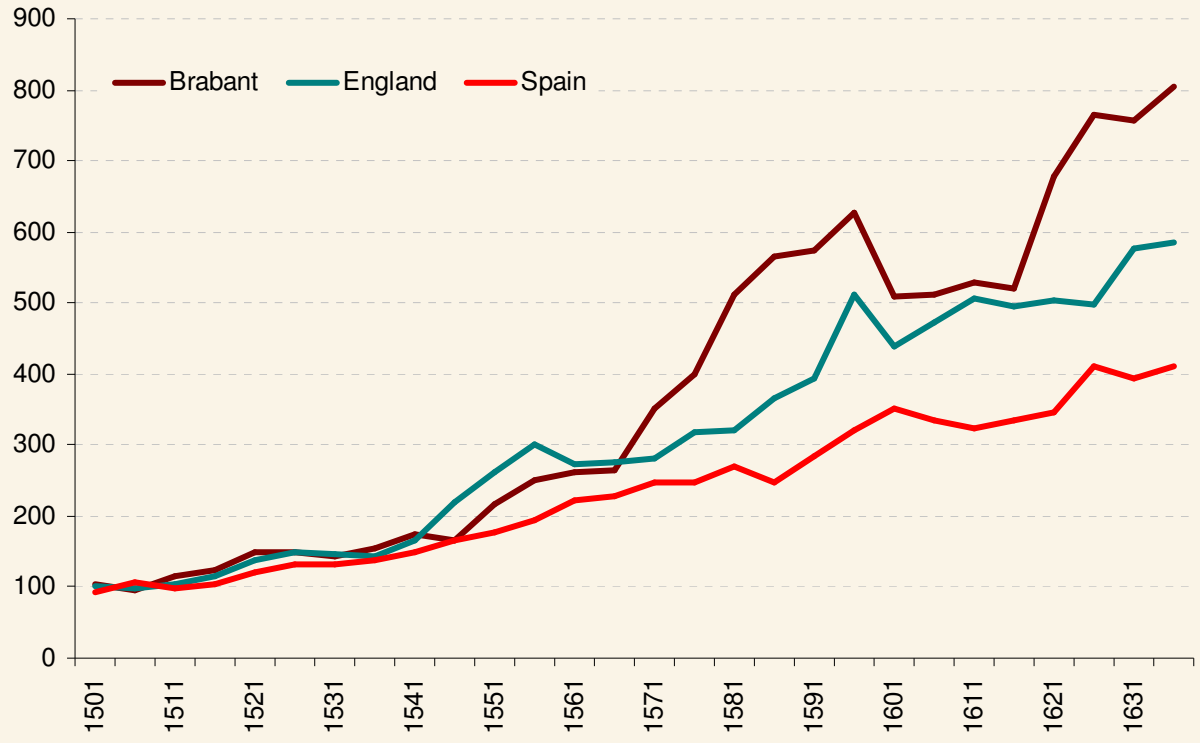
Crises and Monetary Policy

The General Crisis of the Seventeenth Century: A movement from feudalism to capitalism; from the political and economic ascendency of the South to that of the North; from a "natural economy" based on the self-sufficient household and barter to the use of markets and money; from separate deals to continuous trade on bourses. The crisis was particularly acute between 1619 and 1623. Following a sizeable monetary expansion during sixteenth century due to the influx of large quantity of Spanish-American silver, the fall off of silver imports to Europe from Spanish America after about 1600, inadequately compensated for by the gradual rise of credit. This resulted in a series of debasement in order to extract more seignorage. Finally From 1618 to 1623 average price of cereals raised seven folds.

Crises and Monetary Policy

Composite Price Indeces for Brabant (Pays-Bas), England and Spain

(1501-1631, 5 year mean, 1501-1510=100)



Crises and Monetary Policy

In the 17th century, Amsterdam merchants could establish control over the financial flows of the world- economy because of their monopoly over Baltic supplies and fine Asian spices through which they appropriated the bulk of precious metal coming into Europe from Iberian America. Sitting on of such magnitude, Amsterdam became the major entrepot of precious metal. Merchant-bankers established the Wisselbank, the institution that controlled monetary flows.

A new asset in Dutch markets, along with the dramatic extension of practices of shareholding and trading and the associated in- flux of new investors led to the speculative boom

Monetary expansion + Structural shift / financial innovation

→ Price increase → Crisis

Crises and Monetary Policy

The South Sea Company's planned conversion of government debt from a mass of highly illiquid annuities into modern securities along with the influx of a mass of investors were both quantitatively and qualitatively a new phenomena

the French and British governments sought to swap the bulk of their outstanding debt for equity in large joint-stock trading companies with monopoly privileges – the Mississippi Company (Compagnie des Indes) in France and the South Sea Company in Britain. Both efforts had the full support of the government currently in power, and both were successful ultimately in reducing the respective debt burdens, at the expense of debt holders who delayed converting their debt holdings or who failed to sell out

Law (1705) sketched a monetary theory in an environment of unemployed resources. He argued an emission of paper currency would expand real commerce permanently, thereby increasing the demand for the new currency sufficiently to preclude pressure on prices. To finance a great economic project, an entrepreneur needed only the power to create claims which served as a means of payment. Once financed, the project would profit sufficiently from the employment of previously wasted resources to justify the public's faith in its liabilities.

Crises and Monetary Policy

- 1873 crisis in US railroad securities. The railroads, which had previously provided only locally integrated systems of transportation, were being forged into a nation-wide network. Railroads were the most visible industry in the economic expansion and stock market between 1867 and 1873. Railroad investment hit a peak in 1871-72, as did stock prices.

- The Great Contraction in the U.S 1929-1933 is often associated with a classic boom and bust episode in the stock market. The boom, focussed on the 'new economy' stocks such as GE and RCA, according to legend began in 1926, turned into a bubble in March 1928 which burst on October 24, 1929

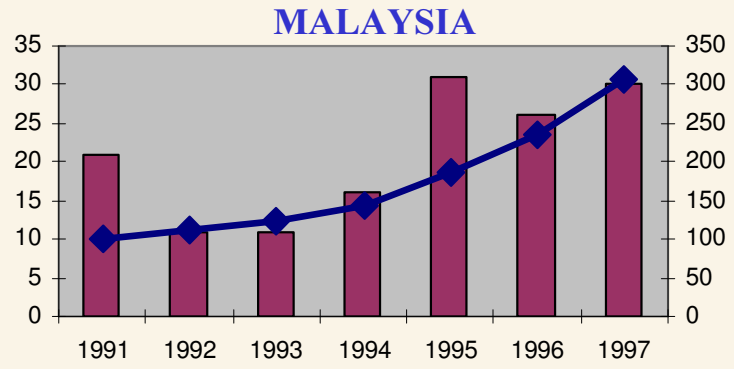
- The Japanese boom- bust cycle began in the mid 1980's with a run-up of real estate prices (see figure 4) fueled by an increase in bank lending (figure 6) and easy monetary policy.

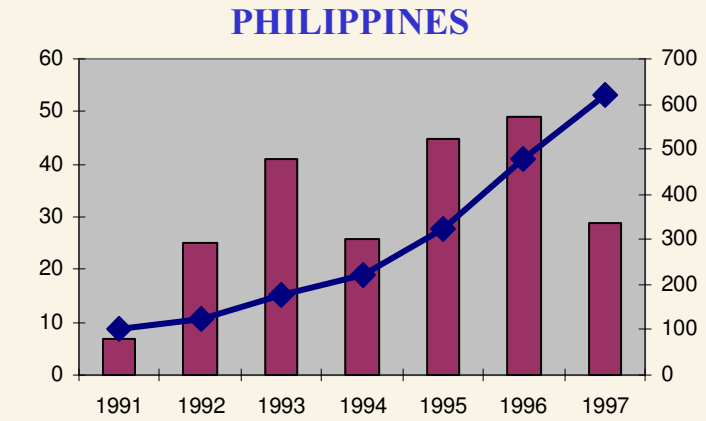
Crises and Monetary Policy

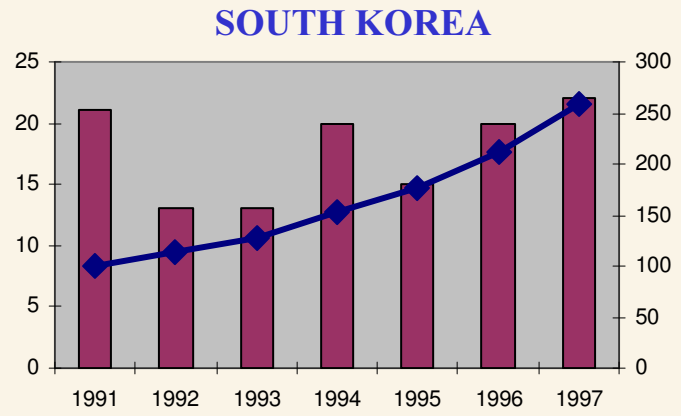
Stock Market Index and Credit Growth in the USA During Early 20th Century

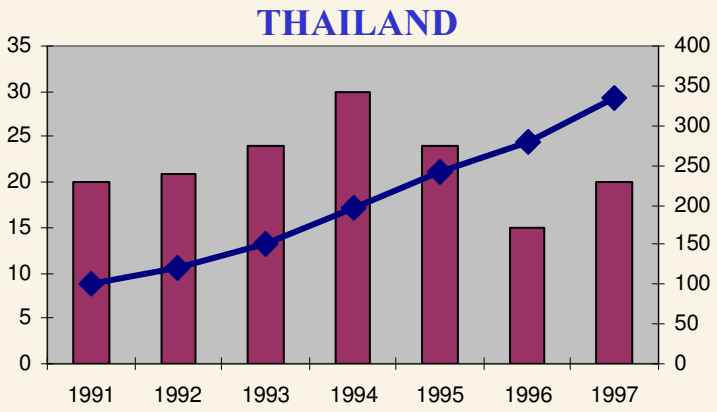
Source:
Historical Statistics of the United States: Millenial Edition (2003).

BANK LENDING and STOCK PRICES





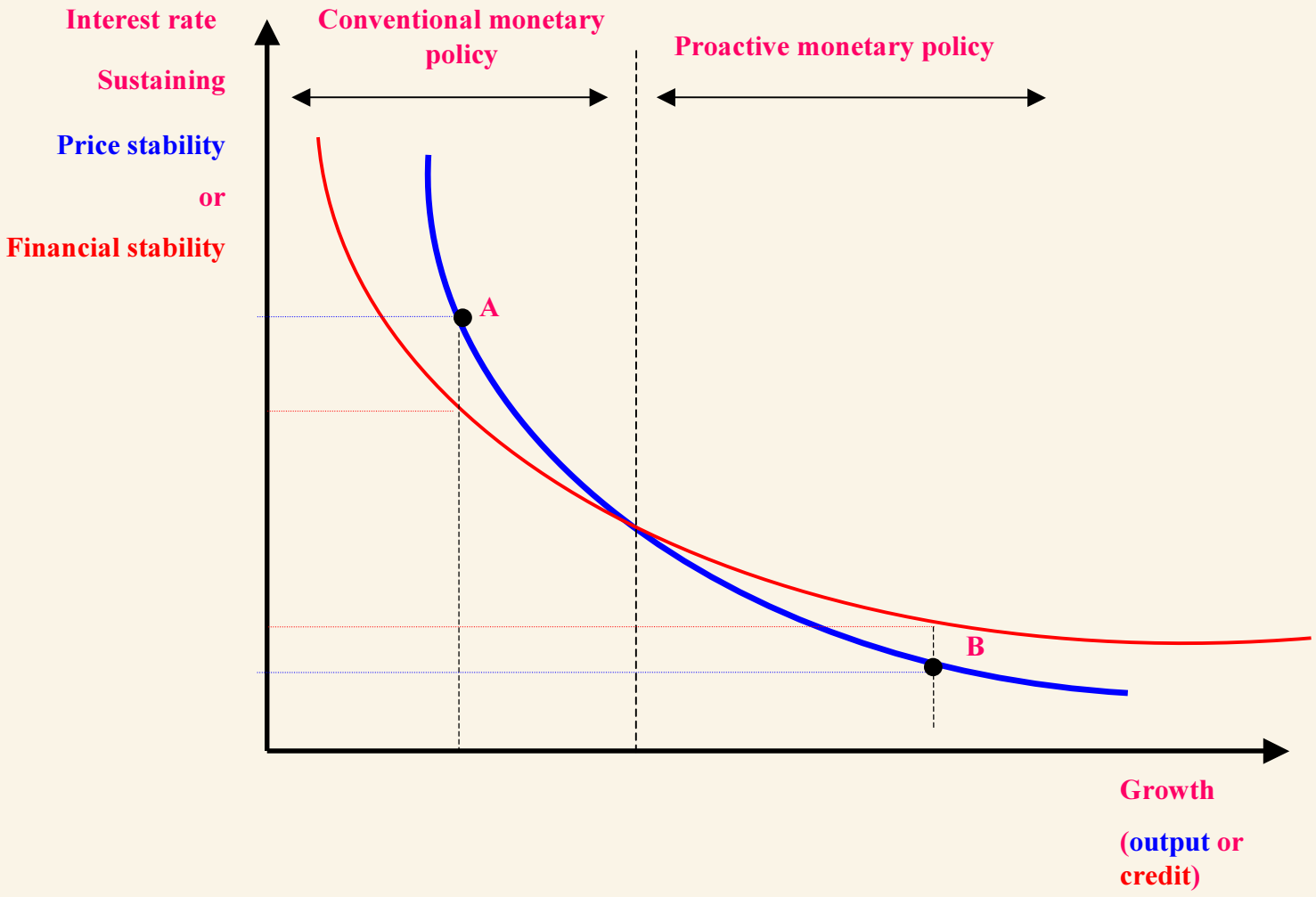




Percentage Growth in Bank Lending to the Private Sector

Stock Market Price Indexes - rhs (1991=100)

Crises and Monetary Policy

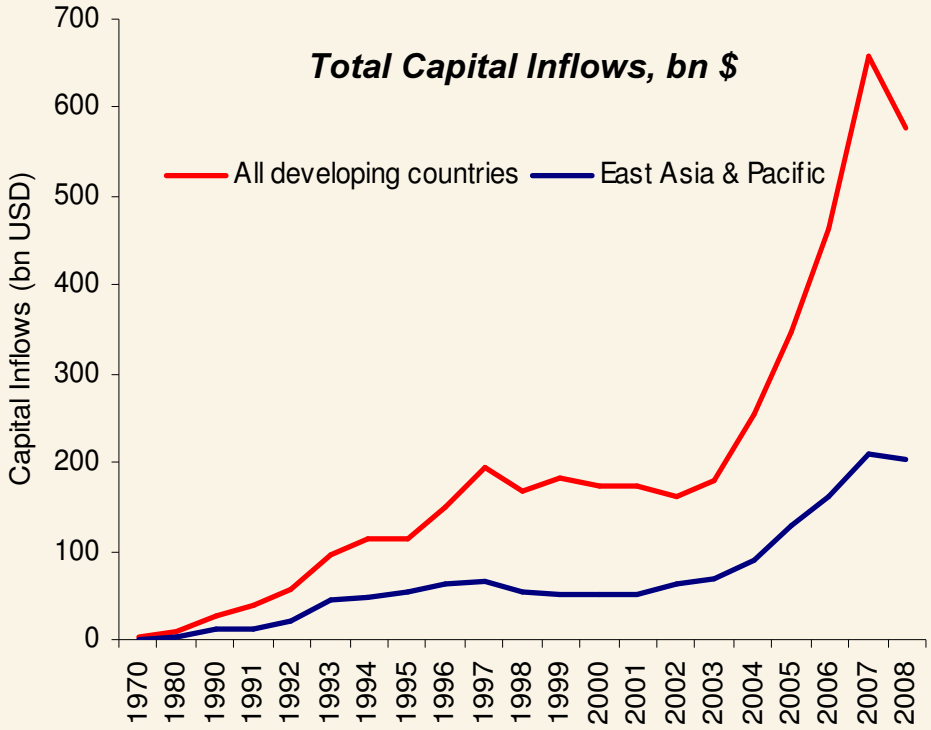


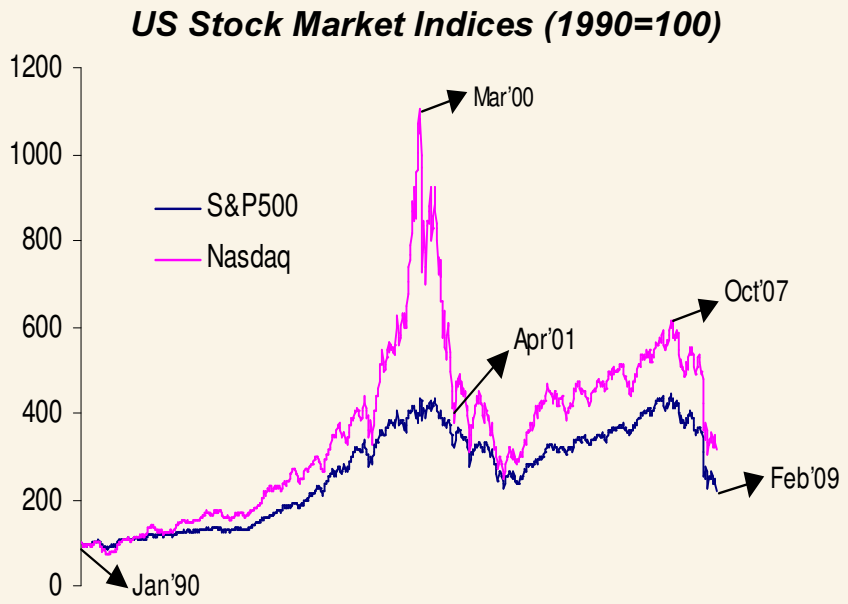
Sources and Dynamics

The role of globalization and international monetary system in each crisis have always been questioned and discussed.

- **Developing countries debt crises in 1982,**
- **The Mexican crisis in 1994**
- **The East Asian crisis in 1997**
- **The Russian crisis in 1998**

This time, the bubble occurred in financial services sector, which has experienced higher productivity with higher investment expenditures, along with the real estate market, similar to the 1990s IT sector boom.





Source: WB

Sources and Dynamics

Macro-structural Dynamics

- *Monetary policies (Great Moderation)*
- *Global imbalances and exchange rate regimes*
- *Global integration and interconnectedness*

Micro-structural Dynamics

- *Financial innovation,*
- *Change in risk taking behaviour and*
- *Deficiencies in financial regulation*

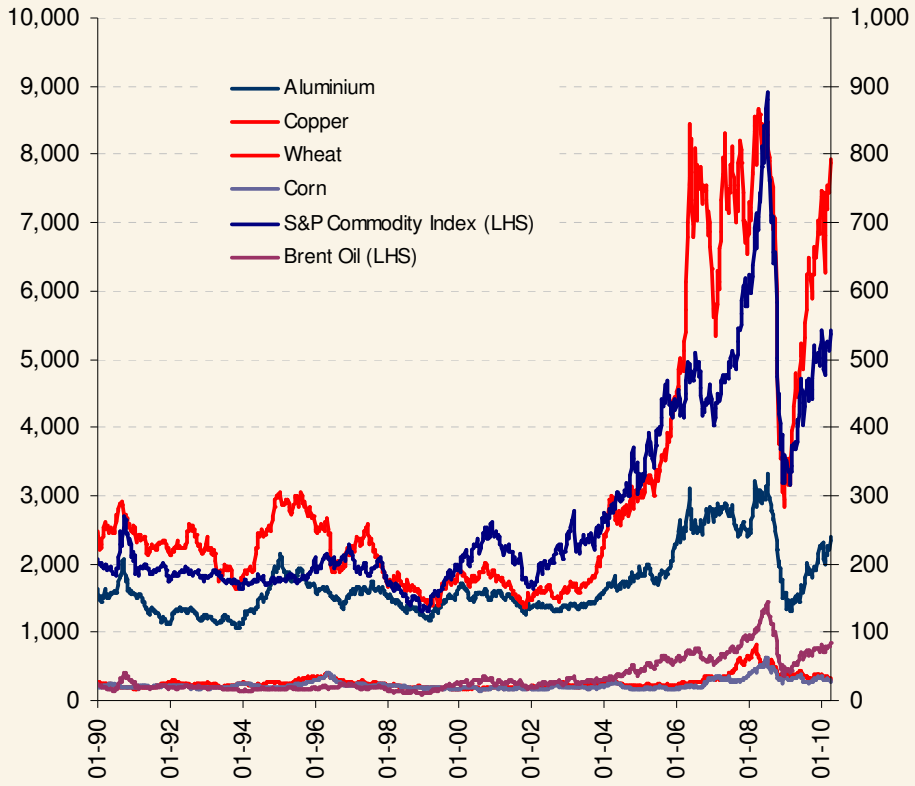
A Perfect Storm

PERFECT STORM: Refers to the simultaneous occurrence of weather events which, taken individually, would be far less powerful than the storm resulting of their chance combination. Since the non-fiction book written by Sebastian Junger, and the 2000 movie by the same name, the phrase has gained popularity and grown to mean any event where a combination of circumstances will aggravate a situation drastically

THREE FACTORS CAME TOGETHER:

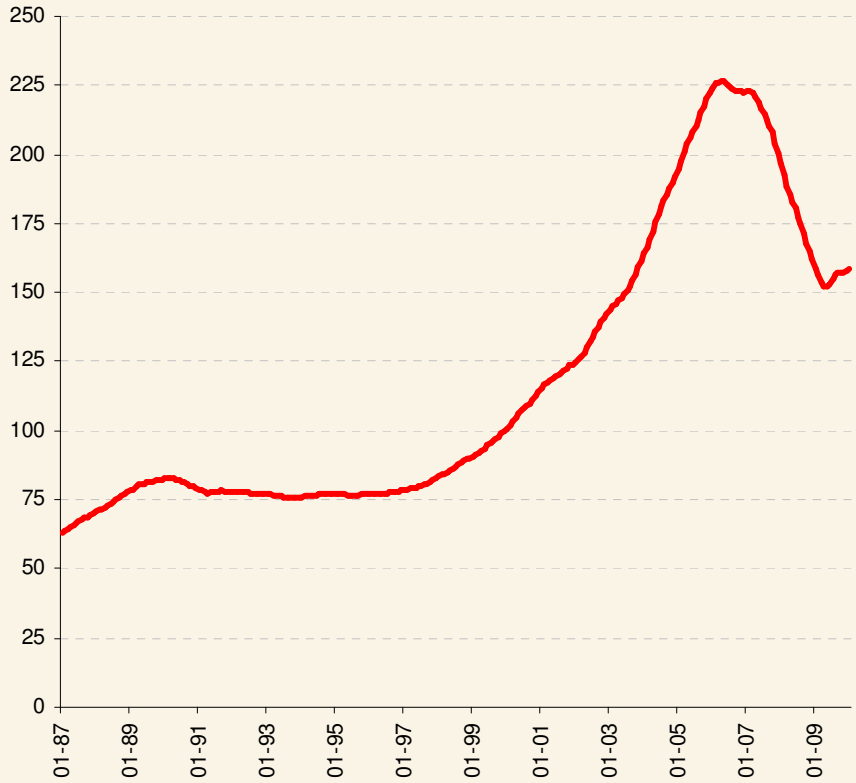
1. **Monetary accomodation-Financial engineering**
2. **Foreign exchange regimes-Global imbalances**
3. **Financial globalization-Reinvesting in reserve assets**

Commodity Prices
(1990-2010)

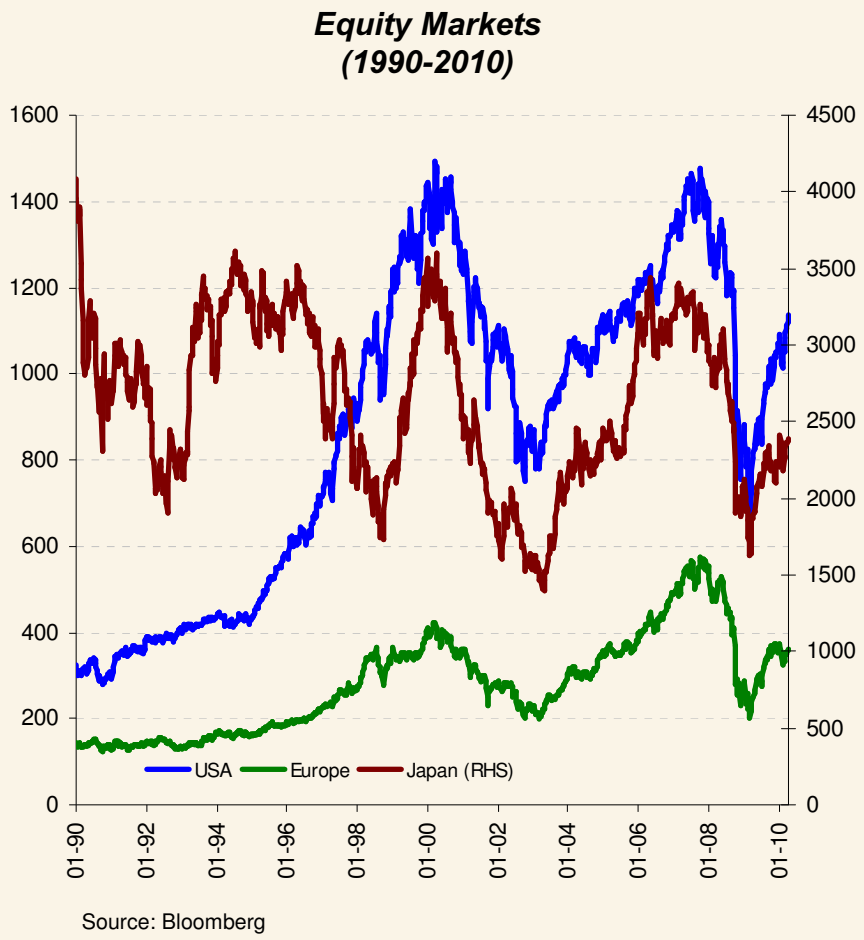


Source: Bloomberg

S&P / CS Home Price Indices
(10-City Composite, 1987-2010)



Source: Bloomberg



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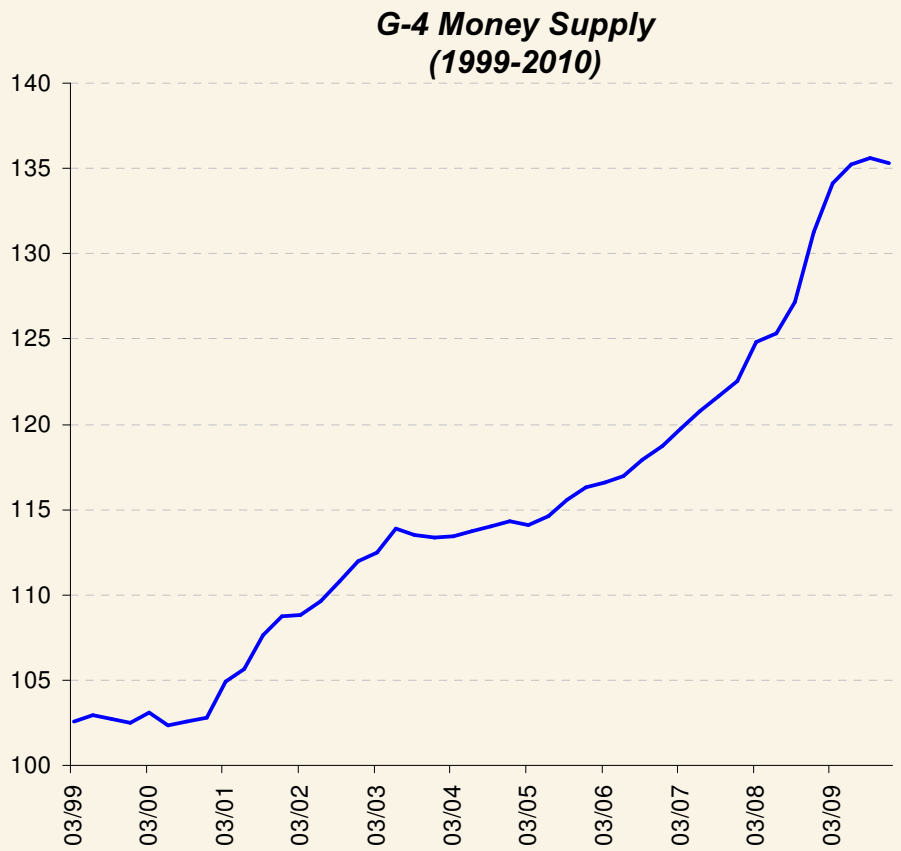
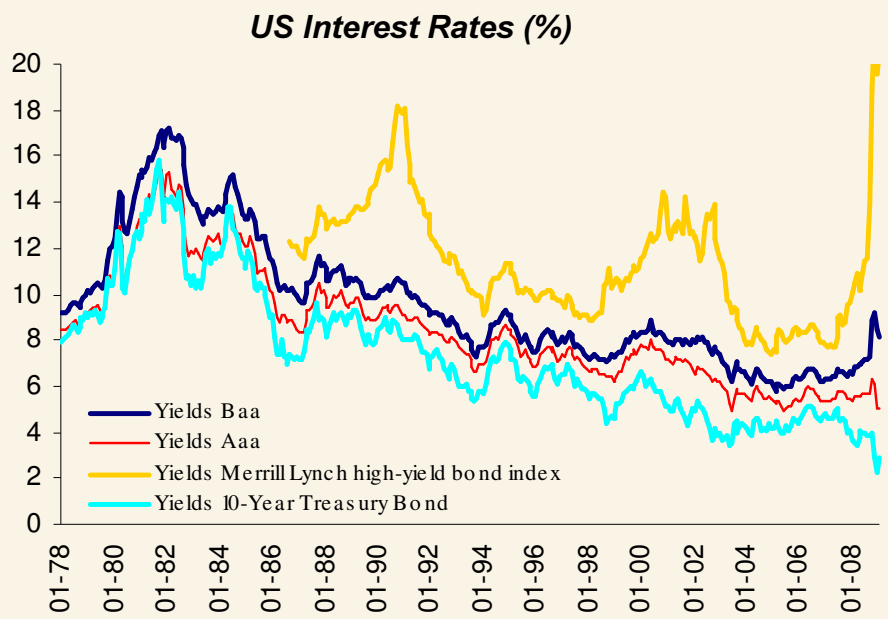
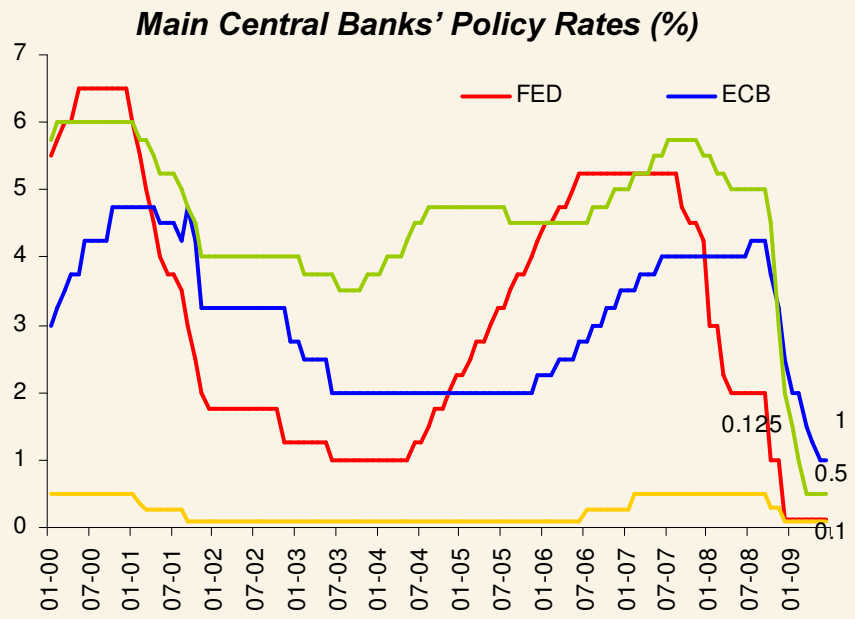


Source: Bloomberg

A long period of low interest rates





Source: Bloomberg

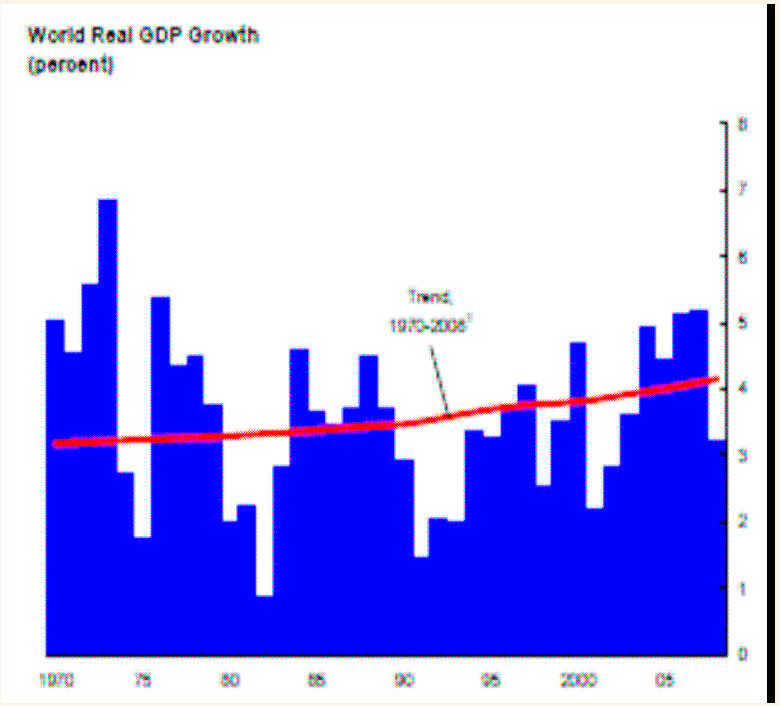
Asian crisis, Russian crisis and its contagion, euro adoption adversely affected global demand.

Late 1990s, Fed's policy moved to a tighter stance, and monetary tightening ended up bursting, the dot-com bubble in 2000-01. A fear of deflation following a series of above mentioned crises between 1997-2001, led policymakers to keep short-term real interest rates low. Abnormally low real interest rates:

- **Decreased cost of capital and supported risk appetite**
- **Greased the wheels of financial engineering**

Great Moderation

Benign Macroeconomic Conditions



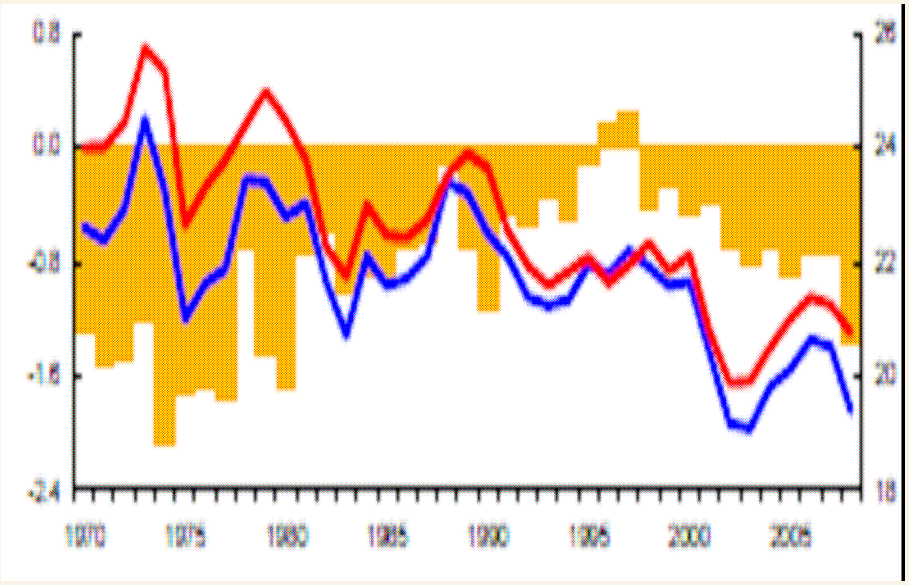
Source: IMF

Source: IMF

Improved policies, which stabilized inflation and better anchored inflation expectations, are an important reason for loose monetary policy amidst high growth; structural changes in the economy such as deregulation, improved inventory control methods, and better risk-sharing in the financial markets also contributed

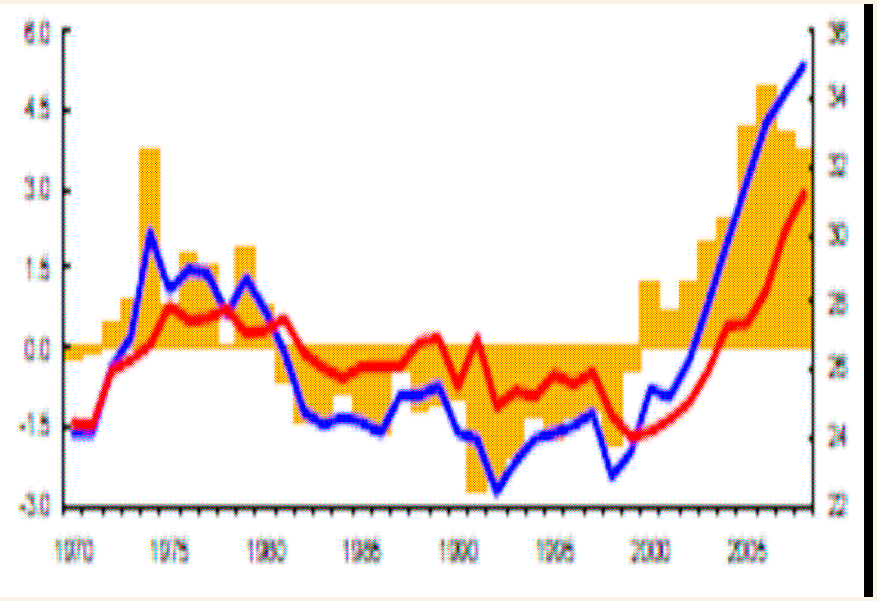
Global Saving, Investment and Current Accounts

Advanced Economies



Source: IMF

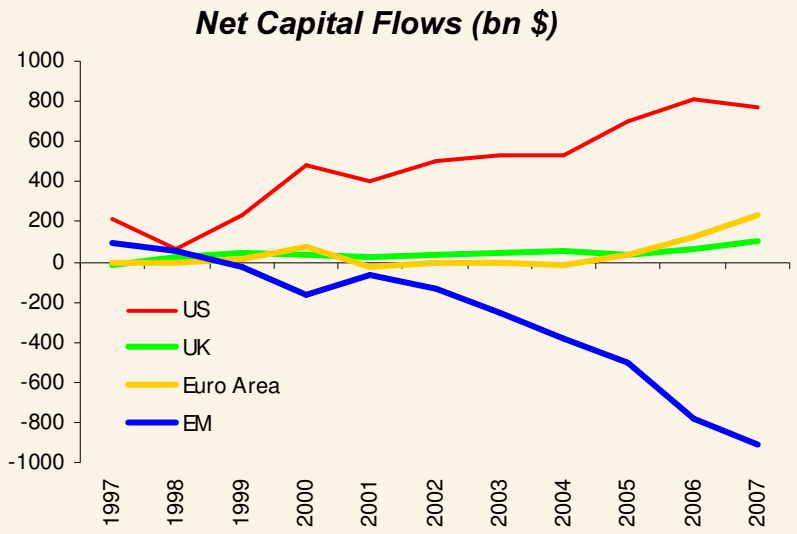
Emerging and Developing Economies



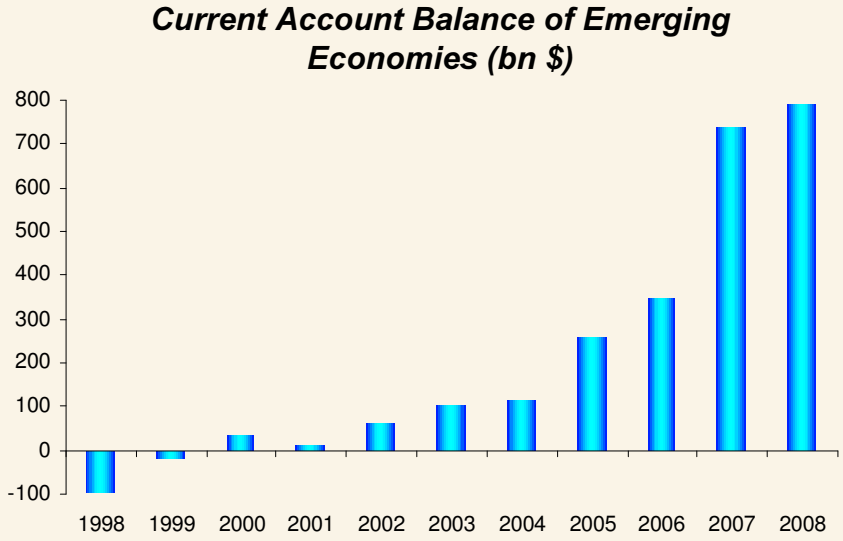
Source: IMF

- **Various factors contributed to this so-called "savings glut." In emerging Asia, the main contributor was a steady increase in private savings.**
- **High levels of corporate saving and strong precautionary motives for savings in the absence of a well-working system of social insurance, rapid rise in public savings in Middle Eastern oil exporters as a surge in oil prices, general trend towards higher public savings as governments took advantage of strong revenue growth to consolidate fiscal positions**

Global Imbalances and Exchange Rate Regimes



Source: IMF



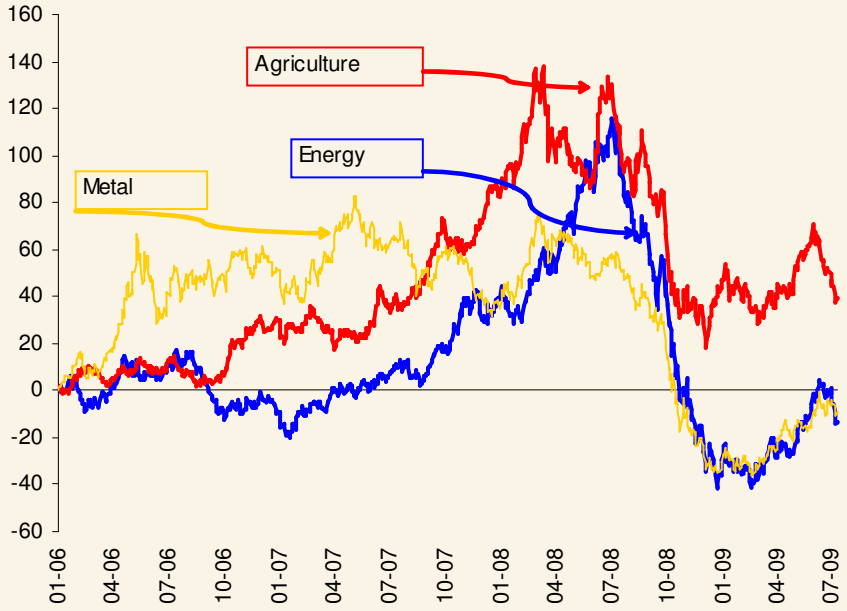
Source: IMF

- **The high level of the saving rate in the emerging economies and its low level in the United States were associated with the large current account deficits and surpluses resulting in capital flows from emerging economies to developed economies.**
- **Developing countries hold massive dollar reserves in return of their exports and reinvest these reserves into US financial markets.**

→ Breakdown in macroeconomic adjustment mechanisms

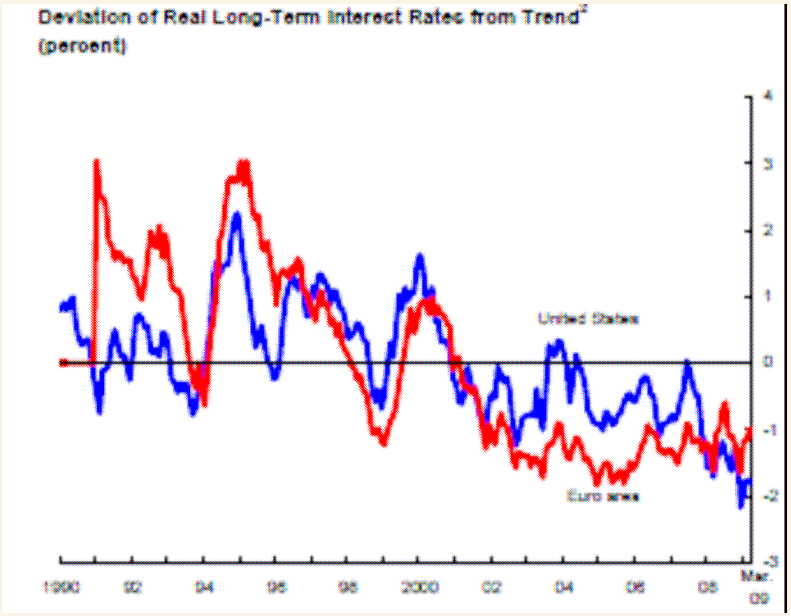
Asset Price Boom

Commodity Prices(03.01.2006=0)



Source: Bloomberg

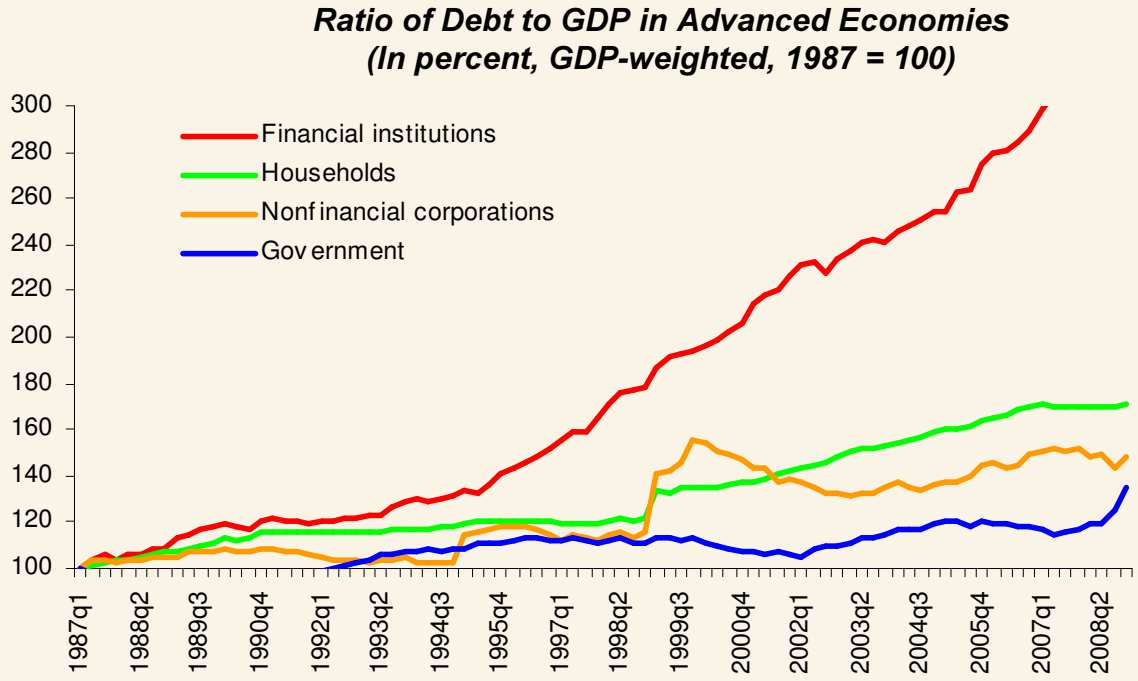
Monetary Accomodation



Source: Office of Federal Housing (OFHEO)

- **First, low interest rates led to a credit boom in major economies.**
- **Second, low interest rates were the main reason to drive up asset prices. Housing boom and continuous rises in stock markets are the main examples.**

What makes the difference: Leverage



Source: IMF

- **Most importantly, low interest rate environment has changed the risk taking behaviour of the financial institutions and laid down the foundations of the current crisis.**
- **For the sake of higher returns, financial institutions have distorted their risk perception, and the risk management strategies in the financial sector were totally changed. This also led to acceleration of financial innovation.**

Is the History Simply Repeating Itself?

Triffin Dilemma

- **The use of a national currency as global reserve currency leads to a tension between national monetary policy and global monetary policy**

  e.g. 1982 Third World Debt Crisis

Gambling with the Future or Adaptive Behavior

- **Dutch Tulipmania (1634-37)**

The immense expansion of commerce [in the Netherlands] encouraged gambling upon profits to be made from speculation in all kinds of products

- **Great Depression**

"Buying now and paying later" or "telescope the future into the present"

Between 1925 and 1929 the total amount of outstanding instalment credit more than doubled, by 1928, with over 21 million cars on the roads, there was roughly one car for every six Americans

→ car, steel and metal, fuel, textile

→ construction industry grew nearly 50%: house (suburbs), hotels, factories

Micro-structural Dynamics

Financial innovation

•*As massive capital inflows to the US had been financing its current account deficits, financial institutions intermediated the vast liquidity into consumer credit and mortgages, which have converted into mortgage-backed securities (MBSs) and CDOs.*

Change in risk taking behaviours

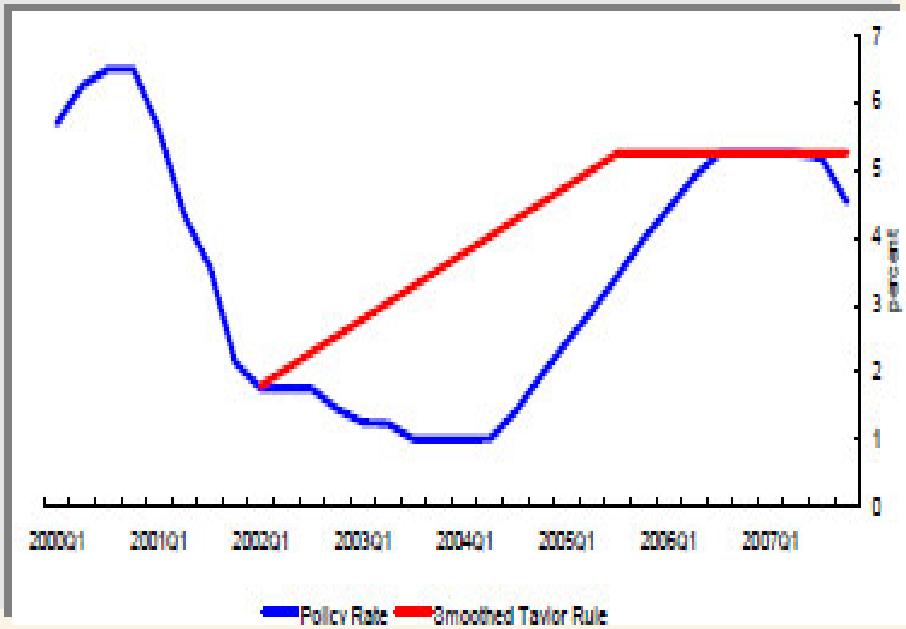
•*Fast growing financial innovation in instruments, such as CDSs named as an insurance against risk, and the regulatory framework of the financial system caused deterioration in risk perception of the market players. As optimism in financial sector prevailed due to ongoing higher global growth, investors depended too much on credit ratings in risk evaluations, rather than deeply examining themselves the nature of assets they bought. No direct monitoring between lender and borrower, misallocation of loanable funds.*

Deficiencies in financial regulation

•*Regulation arbitrage opportunities in terms of (1) countries, and (2) instruments*

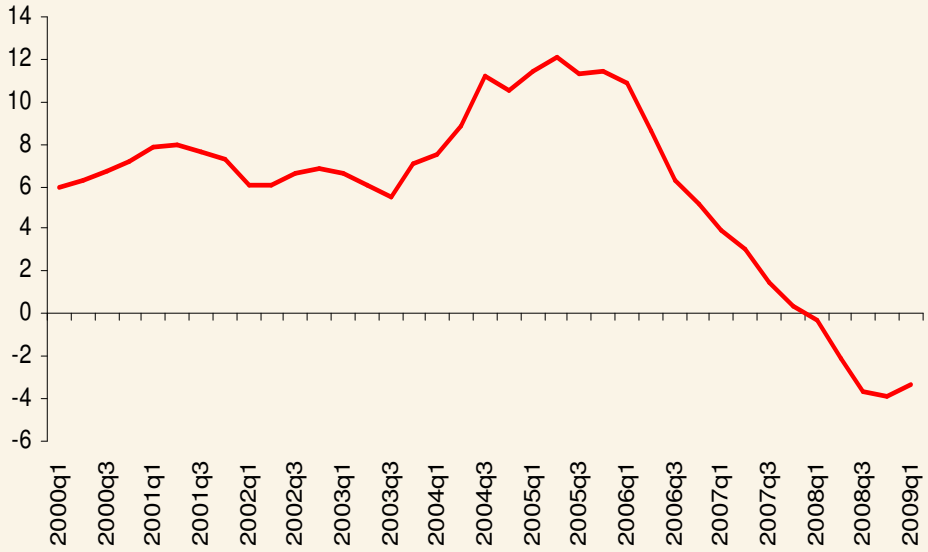
Monetary Policy

FED Funds Rate and Taylor Rule Path



Source: Taylor (2008)

US House Prices (yoy, % change)



Source: Office of Federal Housing (OFHEO)

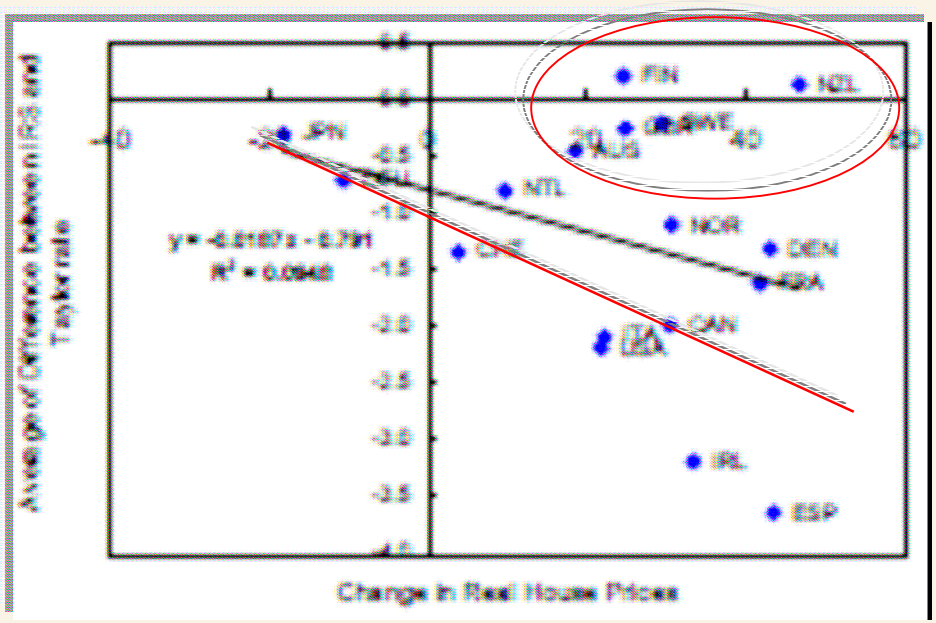
Taylor (2008) argues that monetary policy was too loose in the United States over 2002–04 as interest rates were lowered further even as the economy seemed to be turning around after the "dot-com" recession of 2001.

However; the optimality of the imposed rule is to be questioned and

Between 2002–04 deflationary pressures were greater than conventional output gap estimates, natural rate of interest is uncertain and subject to debate.

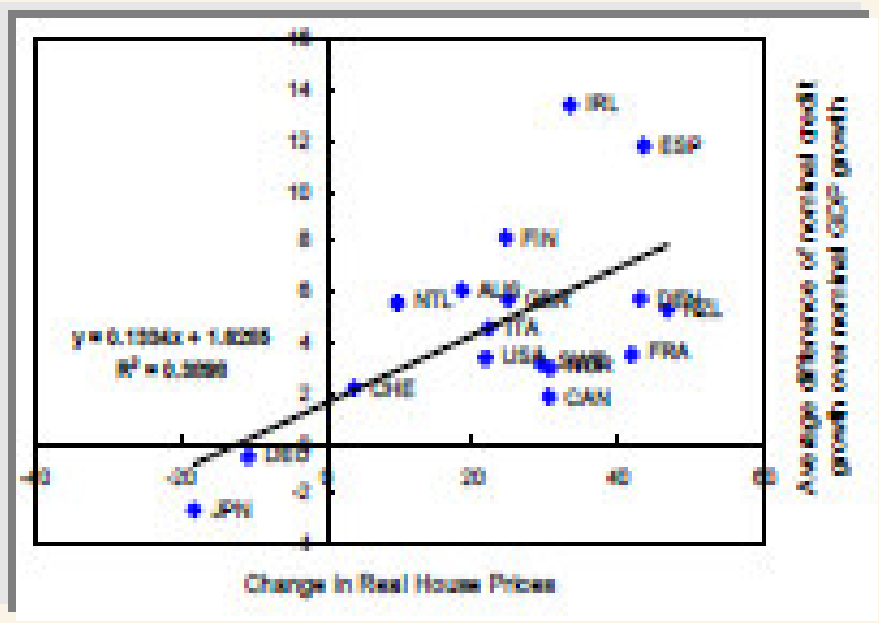
Monetary Policy and Credit Boom

Real House Price and Taylor Rule Residuals



Source: IMF

Real House Prices and Excess Credit



Source:IMF

Taylor rule residuals for 17 advanced economies and changes in real house prices over the period 2003:1 to 2006:4 show that looser monetary policy is associated with larger house price gains but the relationship is weak. However AUS, FIN, GBR, SWE, NZL excluded, it is more significant.

There is a very close relationship between house prices and the growth of money and of private sector credit. More evidence b/w monetary policy and asset prices through liquidity and credit

Shortfalls of Domestic Monetary Policies

UNCONTROLLABLE FACTORS

1. Globalization → Capital flows may weaken the effects of domestic monetary policy
2. Financial Innovation → Less effects of MP on structured products, private (outside) money

- ***Globalization led to a decline in the sensitivity of inflation to domestic output gaps and thus domestic monetary policy***
- ***Globalization reduced the scope for individual central banks to control domestic interest rates and so stabilize both inflation and output.***
- ***Effect of the interest rate channel on overall economic activity was diminished by greater trade integration as changes in domestic demand are offset by induced changes in imports.***

Global Crisis, Global Solution

MAIN CONFLICT/TENSION ARISES FROM THE DUALITY

CRISIS: GLOBAL

CRISIS RESOLUTION MECHANISMS: NATIONAL

TWO LAYERS CONCEPTUALIZATION

1. Globalization → global infrastructure.
2. Mechanisms → national superstructure

Global Crisis, Global Solution

Impossible Trinity of Economic Policies

First introduced by, Fleming (1962) and Mundell (1963)

Developed and applied to international trade theory by Obstfeld and Taylor (1998)

Frankel (1999) systematized and baptized as “impossible trinity” or “trilemma”

Under free capital movements

Either interest rate policy (independent monetary policy) or

exchange rate policy (fixed FX regime) is feasible

Global Crisis, Global Solution

Impossible Trinity of Economic Policies

Rodrik (Feasible Globalizations, 2002) established a similar methodology in order to discuss the problematic structure observed in global economic order.

Under the global economic integration

It is not possible to have both

full national independence/sovereignty and

democratic domestic policies

Conclusions

Acceleration of US productivity and the increase in household net worth mid-1990s, led an upward shift in private sector propensities to invest and to consume. The US monetary policy stance generally accommodated this development.

Expansionary monetary (and fiscal) stance sustained US domestic demand, contributed to a widening of the external imbalance, compensated by an imbalance of opposite sign in the external positions of major emerging economies

A number of countries that pegged their currencies to the US dollar accumulated very substantial official reserves. The investment of these in US Treasury paper contributed to lower long-term interest rates.

Low interest rates triggered a search for yield which, by squeezing risk premiums, tended to make financial conditions even more favourable for a broad range of borrowers. Low perceived risk, abundant liquidity and credit expansion, as well as regulatory failures in some markets, helped feed the asset price bubble.

Conclusions

Not a happy ending: Increased global demand and commodity supply constraints caused a global inflation, monetary policies were gradually tightened. At that point, the large risk exposures that had accumulated in the financial system suddenly became apparent, precipitating the turmoil.

Credit and money markets crashed. Contrary to previous expectations (i.e. a hard landing for the US economy originating from a correction of unsustainable US current account imbalance, through a disorderly dollar depreciation) USD appreciated due to huge develeraging efforts all over the world.

The task of monetary policy in this context is problematic. Asset price cycles tend to happen with large changes in indebtedness and increase financial vulnerabilities. Whether and how monetary policy should react to asset price misalignments and financial imbalances? Whether central banks must and can target, with just a single policy instrument, more than just inflation?

Conclusions

- *The policy issues in national level caused and will continue to cause cross-border financial and macroeconomic spillovers in an integrated world economy.*

- *Neither national nor international measures or institutions are enough.*

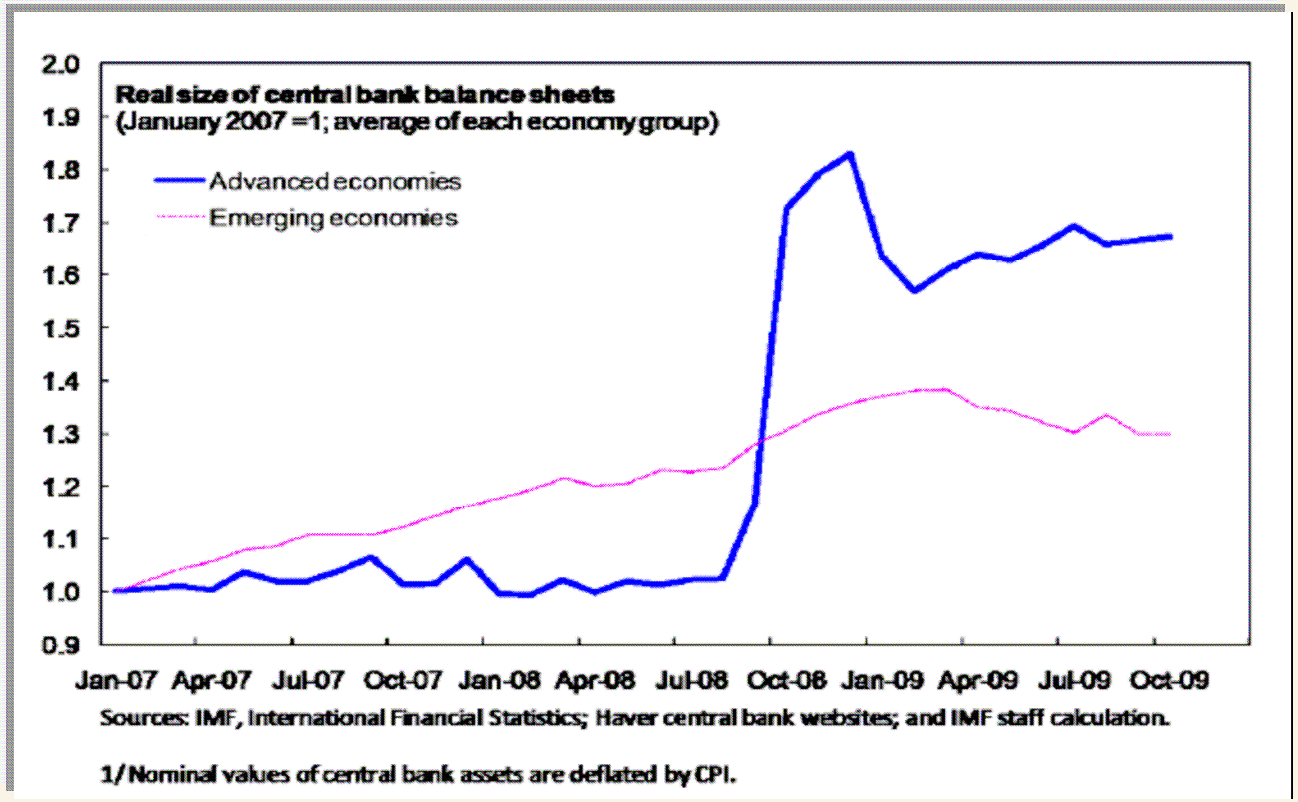
- *The concept of "international framework" should be substituted by "global framework". The solutions should be redesigned within the globalized risk environment.*

- *The impossible trinity of global economic order should be addressed.*

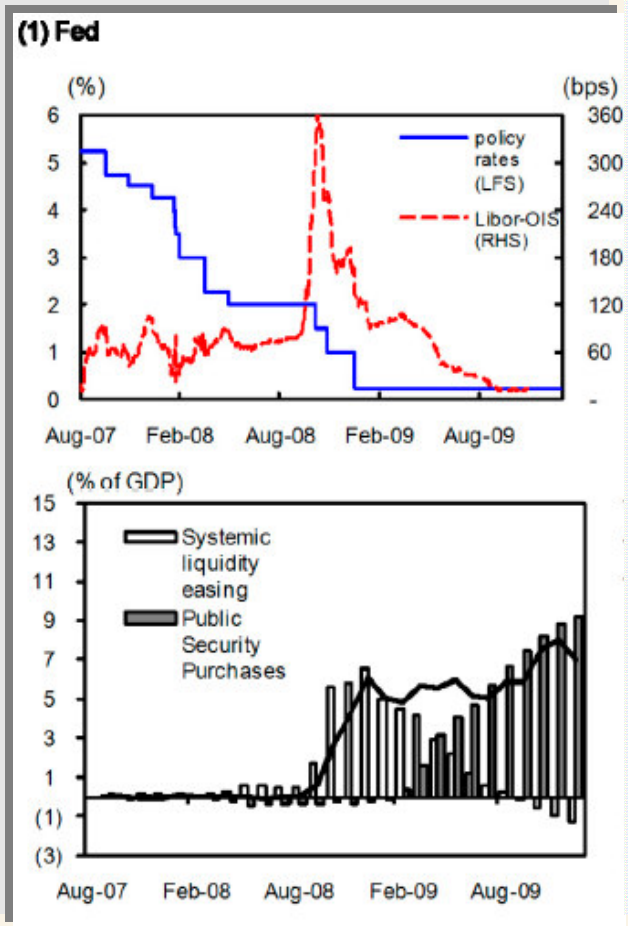
- *Since the financial, economic and political globalisation is irreversible, the legislation of globalization should be first agenda item. Legitimate and supranational mechanisms should be established to monitor the global benefits of the national states.*

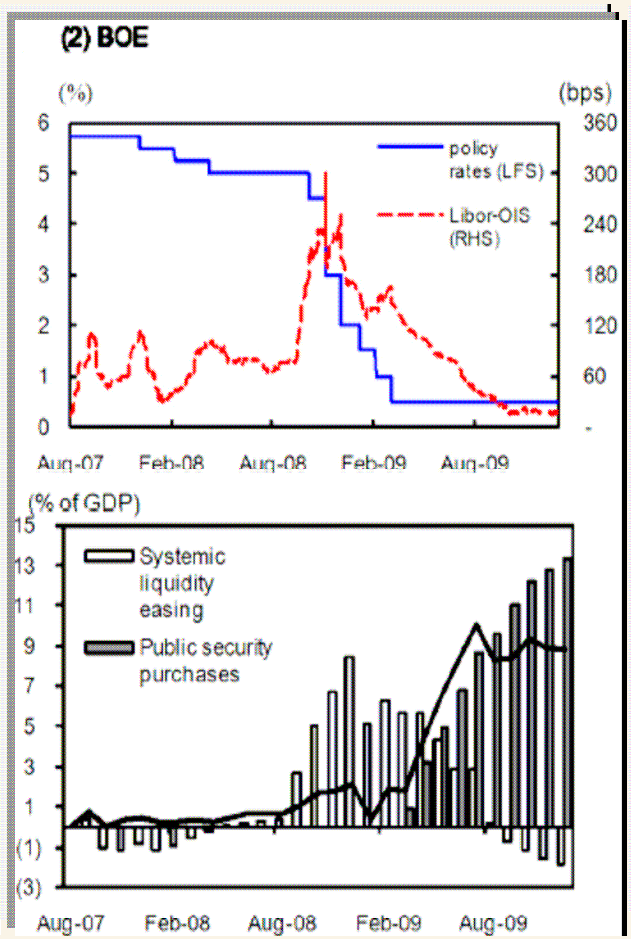
Monetary Policy Measures

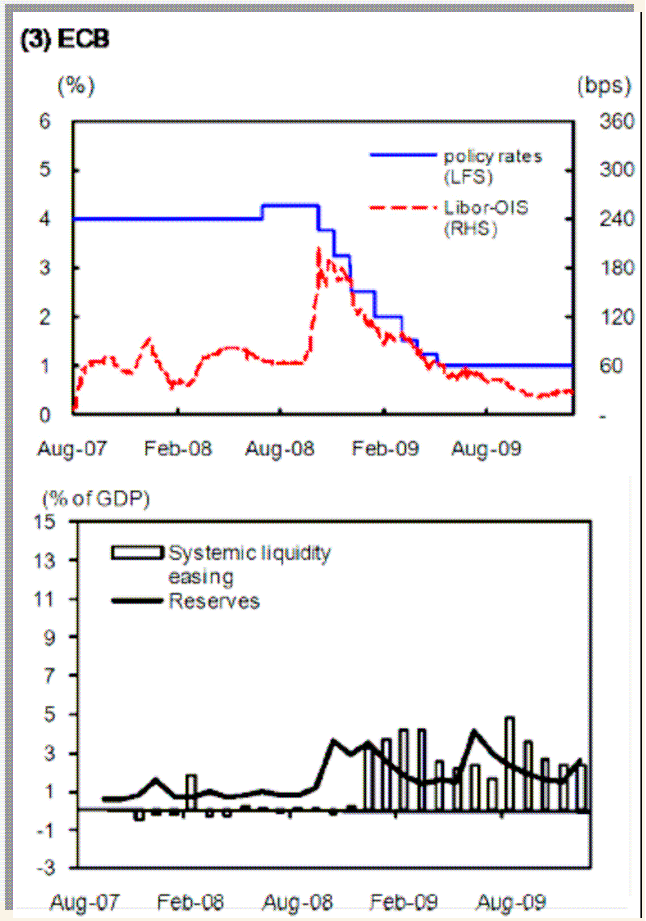
Advanced economy central banks introduced a wide range of intervention measures including not just substantial interest rate cuts but also "balance sheet policies."



Monetary Policy Measures







Monetary Policy Measures

Table 2. Asset Purchases by Central Banks and Market Size

(Billions of national currency otherwise noted)

	Target / maximum amount	Expiration date	Amount purchased by central banks (C) 3/	Amount outstanding (at end-2008) (A) 4/	Total issuance (during 2008) (B)	(C)/(A) (in percent)	(C)/(B) (in percent)
United States							
Commercial Paper Funding Facility		Feb 1, 2010	350	1,659	-	21.1	-
Term ABS Loan Facility	200	Mar 31, 2010 2/	48	1,506	N.A.	3.2	N.A.
Purchase of Agency MBS	1250	Mar 31, 2010	910	5,075	1,299	17.9	70.0
Purchase of US Treasury	300	Oct 30, 2009	300	3,913	1,037	7.7	28.9
United Kingdom							
Asset Purchase Facility (Commercial Papers)1/	50	No date	0	N.A.	N.A.	N.A.	N.A.
Asset Purchase Facility (Corporate Bonds)1/	50	No date	2	N.A.	108	N.A.	1.4
Asset Purchase Facility (Gilts)1/	200	No date	188	479	147	39.3	128.4
Euro Area							
Outright Purchase of Covered Bonds	60	Jun 30, 2010	29	1,667	388	1.7	7.3
Japan							
Outright Purchase of Commercial Paper	3,000	Dec 31, 2009	1,557	19,442	-	8.0	-
Outright Purchase of Corporate Bonds	1,000	Dec 31, 2009	-	54,792	8,843	0.0	0.0

Sources: SIFMA, Bloomberg, Haver Analytics, and central bank websites.

CONCLUSION

- Historically just like the present time, demands to limit independence of the central banks did not come only from politicians but also from financial sector, other market players and business world who seek to benefit from short term effects of the monetary policy.
- When we scrutinize the past episodes, we see that certain developments and economic conditions have gathered public and political support to the proposals to limit independence and led to compromises on the central bank independence
  - Political tensions and time of war
  - Times when protectionism was on the rise and policy makers endeavor to artificially maintain unsustainable economic imbalances engendered by structural weaknesses
  - End of irrational financial euphoria and deflating financial bubbles,

could be counted as a number of cases.

CONCLUSION

- Past experiences have shown that receding from central bank independence and attempting to change real variables through monetary policy amplifies the problems and deepens the crises. Covering out of control public spending through central bank resources leads to hyperinflation, efforts to solve recessions caused by real or structural setbacks through countercyclical monetary policies lead to more instability (Friedman, 1953), using monetary policy to correct imbalances those should be dealt with fiscal policy in order not to upset the voters causes foreign exchange crisis, supporting asset price bubbles with monetary policy leads to moral hazard and adverse selection and thus growing systemic financial crises.

CONCLUSION

- The current period resembles to some extent with the past episodes when rising trends impaired central bank independence.
  - The global disparity in north-south axis, climate of conflict based on “clash of civilizations”
  - Saving-investment imbalances between advanced and emerging economies
  - Efforts to meet public demands in election periods, protectionism (Demands to leave European Monetary Union is voiced over in Italy and France, who are founding members of the European Union)
  - Derivative products, soaring commodity prices and accommodative monetary policies implemented after 1999 to counter the recession and deflation threats have generated ample global liquidity. Recently, we see a contraction in the global liquidity conditions.
- Central Bank independence is at stake!
  - Bank of England, FED, and last but not the least ECB.
  - Either periphery or the independence of the ECB will be sacrificed. ECB may soon have to purchase worthless government securities.

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