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The World Crisis and the International Monetary System: Revisiting the Triffin's Dilemma?

WIIW Seminar Series

WIIW/JVI Joint Seminar

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What is the purpose?

- Global crisis commonly attributed to some "**systemic aspects**" of the market economy
- Mainly pointing to the financial sector and its lack of adequate regulation => subprime & excess of credit leverage => boom/bust
- Some minority views accuse either the Fed to have inflated too much (J. Taylor) or the so-called "**International Monetary System**" for having developed persistent macroeconomic disequilibrium with spillovers from national policies
- The purpose and scope of this presentation => to raise basic systemic aspects of international payments => to characterize the resulting architecture => to identify the failures => opening the debate about reforms

The amazing fact: IMS is not really questioned

- Amazingly the IMS aspects do not seem anymore a key-aspect of the debates
- G-20 and economist forum focus mostly upon financial regulation, and exchange-rate undervaluation of the Chinese currency (including the Chinese worries for their gigantic-strategic $ reserve)
- Difficult to understand from a methodological point of view why the economist community overlooks the IMS weaknesses and its possible link with monetary excesses as a cause of the crisis (and doing so for 5 decades!)
- If this thesis is right => more catastrophic crisis in the pipeline

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Overview

1) What is International Monetary System (IMS) ?
2) Were the IMS basic functions respected?
3) The basic logics of IMS
4) The “Bretton Woods I” system, and its 3 defects
5) The “floating dollar-standard” and its conditions
6) The move to a managed float under $ standard
7) The “Bretton Woods 2” system and the monetary wave before the crisis
8) The present global monetary wave: Bretton Woods 3
9) Proposals for reform?

1. International Monetary System or Anarchic Financial Architecture?

- Is there a system? Or an architecture? (Or an International Monetary Scandal?)
- It used to be a system: 1) metallic currencies and Gold-Standard (1870-1914) = world monetary union, 2) Bretton Woods I (1944-1973) with its general fixed-exchange-rate regime against the $ and limited capital flows
- Since 1973, almost “anarchic” international financial architecture has grown organically as the collective result of numerous individual choices, agreements between international economic actors spread over several decades, but without any single “system”

2. Were the basic functions of an IMS respected in the last decades?

"System" means an agreed and structured way for organizing international payments i.e. => including (i) providing adequate liquidity for fluctuating levels of trade and (ii) providing means for correcting smoothly global imbalances

=> set of rules, tools, policies and institutions providing the liquidity necessary to ease international trade of goods, services and capital (IMS = public good)

The existing architecture does not ensure well this function:

1) international liquidity expanded too much (no anchor),
2) global imbalances accumulated without adjustment,
3) no tool for adjusting: ex. China/Germany must consume more or the US/UK consume less? "saving glut" or too laxist monetary policies? Basic questions without answer!!

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2. Were the basic functions of an IMS respected in the last decades?

Amazing that economists do not actually raise the basic issue of the mechanical spillover of any national macroeconomic development => opposite changes in the Rest of the World S-I as well as R (n-1 degree of freedom)

But “n” economies => n-1 “degree of freedom” => need to find some institutionalized consensus and a nominal anchor.

This is the role of any IMS: for example, the Gold standard created a n+1 currency (Gold) for establishing “n” degrees of freedom in relative prices (exchange rates), Bretton Woods 1 used the $ as n+1 under the condition of abandoning any domestic objective => failure

But our present world has not yet given a rational answer to this elementary question

The recent "systemic crisis" is closely linked to these deficiencies in the IMS

Systemic combination of 5 factors:
1)Greenspan's Monetary expansion for sustaining US demand (kick-off cause)
2)=> worsening US over-consumption = pulling world demand = Global imbalances
3)Complicity of the Rest of the World accumulating excess reserves => world monetary base excess (Bretton Woods III)
4)Globalization = cheaper goods & services => inflation pressures deviated towards real & financial assets => search for yields => financial innovations reduce risk perceptions (at micro level) + links
5)Dogmatism of self-regulation and market efficiency: used for increasing leverages and for neglecting spillovers (inflation targeting at national level=> financial stability)
Result = credit boom => Bubbles/over-debt => high economic/social costs

The proposed thesis: present weaknesses of the IMS are not new, main root is the use of the US $ as the main international currency

- This combination of 5 factors mutually supportive relies upon the lack of adequate supply of international money
- This feature reflects both the lack of a nominal anchor and the asymmetry introduced by the use of the US$ - a national currency - as the key-currency: issuing reserve = running fiscal and BoP deficit without adjusting mechanism
- US monetary policy is managed as any small Central Bank does (i.e. for domestic reasons) without taking on board the spillovers of the US monetary policy stance and of the use of the US $ as the main international currency
- Amazing how macroeconomic theories remain unable to explain the international money, the need for an IMS and the asymmetries between economies and currencies

3. The basic logics of the IMS

- The need for international currency is the same as for national money: there is a demand for a liquid asset universally accepted for payments (easier to chose a 3rd)
- At national level, an inevitable process led to establish conventionally a “Central Bank” for ensuring the issuance of the universally accepted liquid asset. This asset = monetary base = debt of the “n^{th} agent” who accepts to back the net result of (n-1) other choices: CB is above all the banks for ensuring the liquidity (lender of last resort)
- Getting liquidity is conflicting: not all agents could get more if no one accepts to issue more liquid debts (not all able)
- This is valid for individual agent as well as any individual economy: there is a need for an n^{th} currency for clearing net conflicting decisions

The basic logics of the IMS

Indeed any BoP surplus implies equivalent BoP deficit for the Rest of the World

$$(Y - A)_i > 0 <=> (Y - A)_{n-i} < 0$$

- So international liquidity has to be created for easing international payments (preventing to become a zero-sum gain) but without exceeding real transaction needs (preventing monetary waves):
- Markets could create liquidity (issuing some highly-rated debts) but only autonomous institutions could improve its acceptance and allow for a “liquidity regulation”
- Historically the absence of common regulator => metallic money emerged as this n^{th} agent => non-currency system
- This “natural” solution makes liquidity dependent upon mineral output and geological surprise: in fact n+1 currencies

The basic logics of the IMS

- => Gold-exchange standard i.e. a dominant currency (£, $) complements metal stocks, giving flexibility to the supply of liquidity => national currency-based system
- This "system" is coherent if monetary policy for this n^{th} currency does abandon any domestic objective in order to be able to regulate world liquidity and ensuring international price stability: *external stability => internal one*
- This was the Bretton Woods I System (44-73): fixed parity of n-1 currencies against the $ (the n^{th}) combined with a fixed nominal price of gold in $ (anchor) = a genuine system with a common rule (fixity of parities), a common anchor upon the fixed price for gold through the $, a common set of rules (no beggar-my-neighbor policy, coordination) and multilateral institution (IMF) with tools (concessional loans)

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4. The Bretton Woods I (1944-1971/73)

The Bretton Woods Conference July 1944

- John Maynard Keynes main instigator, but White's plan took over Keynes'one for blocking a supranational key currency (*Bancor*)

Harry Dexter White (left) and John Maynard Keynes (right) at Bretton Woods

Although White had initially also such a multilateral standard (*Unitas*)

The US wanted the deficit countries to adjust, Keynes wanted both to sharing the adjustment burden

At the end Bretton Woods was not so new as a currency-based system

The main defect of national key-currency system: The Triffin Dilemma (1947, 1960)

Robert Triffin (Belgian, Louvain & Yale Universities) working for the Fed and the US Treasury, made clear since the beginning that the BW I would collapse soon or later for deep incoherence (lack of a supranational currency)

- ***Triffin Dilemma*** expresses the incompatibility between being a national currency and at the same time the key-currency: impossibility for a national currency to play efficiently its role as an international standard and to remain credible: *meeting the global demand for reserves is done through a permanent increase in US liquid indebtedness => BoP deficit destroying credibility as a key-reserve.* So it will have to chose between missing either credibility (meeting its international role by loosing it => inflation) or missing international role keeping credibility => deflation)

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Robert Triffin (1911-1993)

The second defect: the "*exorbitant privilege*" enjoyed by the $ (General De Gaulle, 1964)

- The other side of the coin of the Triffin's Dilemma is the faculty for the US economy to finance its growing external deficit by issuing its own currency which benefits from a huge demand as reserve assets by the rest of the world
- This automatic financing in its own currency transfers also the costs for exchange-rate risks to the creditors, contrary to the n-1 other economies
- => asymmetry: the US escapes external constraint, introducing a bias towards a US BoP deficit which could be inflationary for the world
- This raised also the issue of the distribution of the "seignoriage" perceived by the US for being the international currency
- This issue was revisited and extended to the "transformation" of short term US liabilities into long-term US external assets, with a systematic positive gap between (an intermediation "margin" like a bank)

The third defect: the asymmetric role of the $ upon world money supply

In the facts, the inflationary bias of the Triffin's dilemma won, the US being unable to respect the discipline imposed to the n^{th} currency (= renouncing to any domestic objective), => positive results, negative later

- => $ liquid liabilities > US gold reserves => abandon of the effective convertibility of the $ to gold at 35 $/ounce by steps (1961 London Gold Pool, 1968 end of de facto sales of gold by the US, 1971 Nixon's suspension of link of the $ to gold)
- => a first world monetary wave and inflation in the second half of the 60s

1. any excess of $ flew out of the US but (n-1) Central Banks were obliged to buy these $ (preventing appreciation of their currencies) => creating monetary base in non-US economies
2. But these $ were not sent back as a deposit to the Fed (as it would be for any other n-1 currency) they were held as reserves by buying US financial assets (T-Bills, certificates of Deposit on US banks) = maintained in the US economy = no decrease in US monetary base
3. Result = multiplication of world liquidity without automatic adjustment

The third defect: the asymmetric role of the $ upon world money supply

=> overheating => too lax budgetary stances (less constraint => structural budget in deficit)

- The BW peg-system => inflation transmission through money supply links i.e. *external stability* => *domestic instability* (perversion of the system)
- => move to the "floating regime" as a defensive way to cut this link, but presented by monetarist academics as a genuine "system"
- "Floating regime" (73-85) reversed the link: *external stability would result from domestic stability* => 2d Amendment to IMF statuses (Jamaica Agreement 1976, ratified in 1978 by all IMF members).
- However this would have been a genuine IMS only if strong conditions would have been met, but the $ asymmetry impeded them

5. The (strong) implicit conditions for a floating regime becoming an IMS

1. Pure floating across all the n currencies => total segmentation between the "n" money supplies, "*any policy mistake would remain domestic*"
2. Stable demand for domestic money (no impact of currency fluctuations) and no demand for international reserves (float makes unnecessary key-currency) for not creating links between currencies through their respective demands : this implies that big international portfolio adjustments would not affect any national demand for money!
3. Perfect symmetry among currencies (no key-currency, no fear-for-floating i.e. economies with similar weights and policy credibility)
4. No spillover effects from one economy to others (R supposes to internalize all), and no policy divergence or good policy coordination
5. Speculation would always be stabilizing (no herding, no self-validating speculation, no-chartist)

A pure floating IMS is an unrealistic doctrine (not for individual economies, but as a generalized "system"): markets cannot provide stability without institutions and rules, $ floating creates strong spillovers upon the world

The floating experience failure as a System: doctrinal illusion

- Pure Floating rate IMS could not eradicate nor the $ spillovers, neither the need for a supranational standard (for monetary symmetry)
- The experience of the "$ float" 1973-1985 demonstrated the existence of strong $ spillovers which explain world monetary waves:

1) Impossibility of a pure float: exchange-rate interventions by non-US central banks maintained money-supply-side links like in the BW1: $ fluctuations => debt values => "fear-to-float"
2) New links through national demands for money (Mc Kinnon): they are affected by currency substitution => money-demand-side links making impossible the full internalization through exchange-rate fluctuations
3) => Contrary to academic theory, the demand for international reserve increased with the floating regime; the floating did not internalize policy mistakes but increases spillovers and uncertainty
4) The international demand for money tends to be concentrated upon a single currency for operational reasons: monetary standard searches "external unity", but floating breaks this search (costly)

The persistent asymmetry of the $ standard under floating regime

- Under fixity of exchange rates there are 2 different demands for money: the domestic and the demand for $ liquid assets, CB stabilizes them
- Under floating ↗ currency competition/substitution => domestic and international demands are confused => ↗ uncertainty and ↗ demand for reserves as demand for money are unstable (R expectations)
- Mc Kinnon argument: when the $/DM was expected to depreciate, ↗ $ yields and ↘ DM yields => changes in both demands for domestic moneys: ↘ for $ ↗ for DM since interest rate moves make holders of $ liquid assets to ask for $ bonds (slowing upward adjustment of $ yields) and DM holders to sell DM bonds (slowing downward adjustment in € yields) => capital outflows from the $ to the DM equivalent to shift in domestic demand for money
- So this **money-demand-side link** acts in a destabilizing way: ↗ effective liquidity in the US and ↘ effective liquidity in the DM area => monetary management more difficult
- When the $ was up (1980-85), the restrictive US monetary stance was amplified in the rest of the world for the same destabilizing link

6. The pragmatic move to a managed float under a persistent dollar-standard regime

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As academic theories proved to be wrong and as the dollar remained dominant ("dollar-standard" regime) but IMS still incoherent (rather a "*non-system*") policy makers move to a complex architecture:

- After the failure of the floating-rates leading the world to a deep recession in 1981-82, the US recognized the need for interventions and coordination: Reagan II (James Baker) organized the first attempt of a collegial monitoring of world liquidity and exchange rates through the G-5/7 and 3 successive ad-hoc agreements: the "Plaza" (February 1985) G-7 Tokyo Summit (1986) and "Le Louvre" (February 1987)
- These 3 agreements put in place a "*multilateral surveillance*" with indicators through only peer pressures (in fact for isolating the German Bundesbank, the only independent Central Bank on that time)
- The IMS became so a "managed exchange-rate regime with soft target zones and policy mix coordination in a G-7 directory"
- The link was now two-ways: *external stability <=> internal stability* at the same time for being mutually supportive (like in the EMS since 1979)

7. The managed float remained asymmetric and destabilizing: a new monetary wave caused the Asian crisis 1997

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However, this new system failed too: the massive interventions for stabilizing the $ (Louvre) created a new international monetary wave in 1987 with a new world inflationary wave in 1989 (same link through money supplies as BW I), the Japanese financial/real estate bubble, and same pro-cyclical fiscal policies everywhere

- Furthermore, the fall of the $ exchange rate weakened the possibility of tightening by (n-1) economies, making clear the lack of nominal anchor but the remaining dominance of the US monetary policy => preparing the next monetary wave, with Alan Greenspan piloting it in a strengthened “Keynesian way”.
- The $ remained indisputably the major key-currency and the only one providing all the features for being the international money.
- The other reserves currencies (DM, FF, £, ¥, CHF) developed their financial shares but not the monetary one (insufficient scales)
- The emergence of the € has been changing this but very slowly and almost not in the monetary segment (exchange-rate markets)

7. The managed float remained asymmetric and destabilizing: a new monetary wave caused the Asian crisis 1997

- The Asian crisis = result of US monetary expansion evacuated towards Asian financial markets
- Since it affected both economies without sound policies and economies with sound fiscal and monetary policies => need for pilling-up reserves for preventing “sudden-stop” in capital flows and IMF conditionalities
- => demand for $ assets => maintaining a “BW 2” i.e. an amplification of money creation + exempting the “world’s banker” from any discipline (exorbitant privilege: external deficit financed with its own currency)
- => back to Triffin Dilemma again: world growing demand for US T-Bills =>debt overhang => destroying trust in $ assets
- + exorbitant privilege: US assets in foreign currencies but US debt in depreciating $ = net gain of $1 trillion (Clarida)

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This asymmetric system is not explained by economic orthodox theories: the Triffin's "International Monetary Scandal"

- It is amazing how macroeconomic theories were trapped under paradigms impeding to try to explain IMS defects of the "US overconsumption thanks to the savings from the poors" and creating recurrent credit-boom with consequent bubbles
- Both are at odds with the orthodox paradigm of rational expectations, efficient markets and optimizing agents (DSGE); academic research assumes credit/financial cycles away (ex. Modigliani-Miller theorem), there was an doctrinal obstruction for integrating credit cycles into macroeconomic frameworks and the need for an IMS
- Basic facts seem to support this hypothesis, at least visually….see next charts, but empirical works is still to be made…

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The solution: a symmetric system where a neutral standard (SDR) removes the perverse incentive of the dominant key-currency

- The present SDR is not adequate since it has nor market circulation neither market attractiveness
- However easy to transform present SDR basket into a genuine global money: merely a multilateral decision
- IMF could issue it and spur its use for international clearing while private sector would develop it
- The reason for private use is that the average would necessarily be better than the $ alone as key-currency
- The reason for public use (reserve and standard unit) is to be symmetrical, sharing better the exchange-rate risk between debtors and creditors, and to provide a tool for managing world liquidities (Back to Keynes 1944/Triffin 1960)

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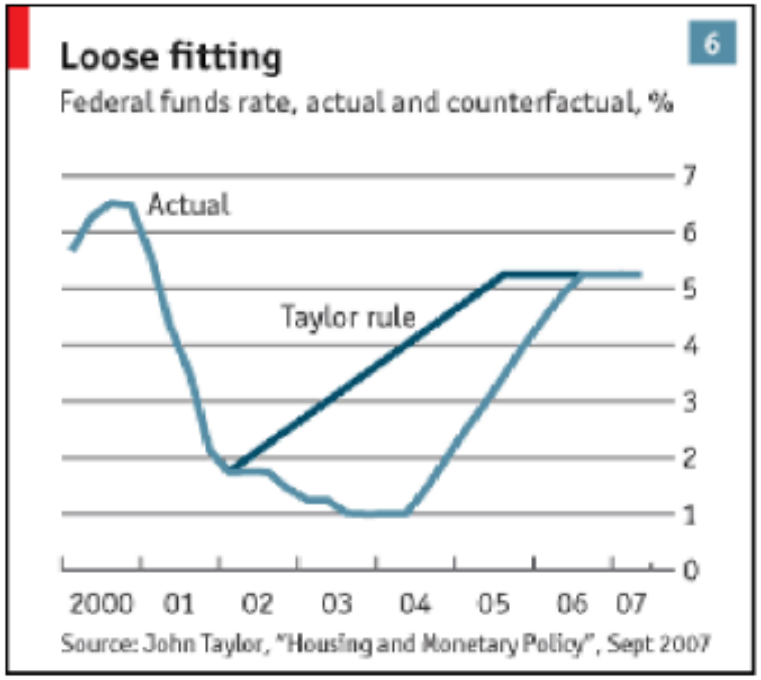
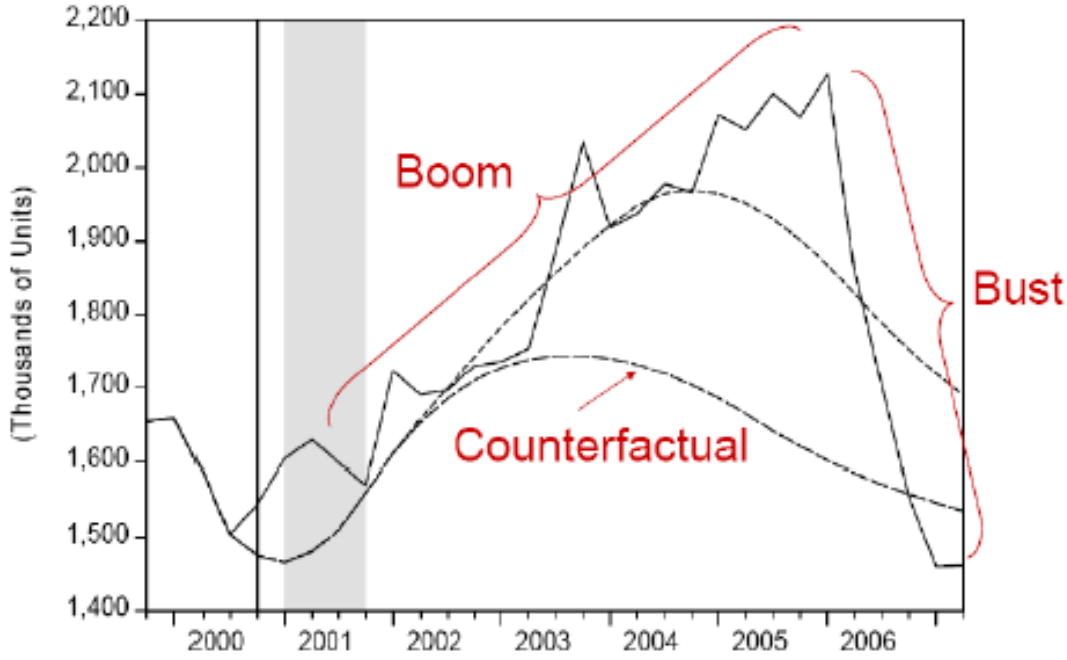
The 2 « Greenspan's bubbles » : Standard & Poor 1980-2008

J. Taylor: US Monetary Stance and Housing Bubble





Source: John Taylor, The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong, November 2008

J. Taylor: US Monetary Stance and Housing Bubble

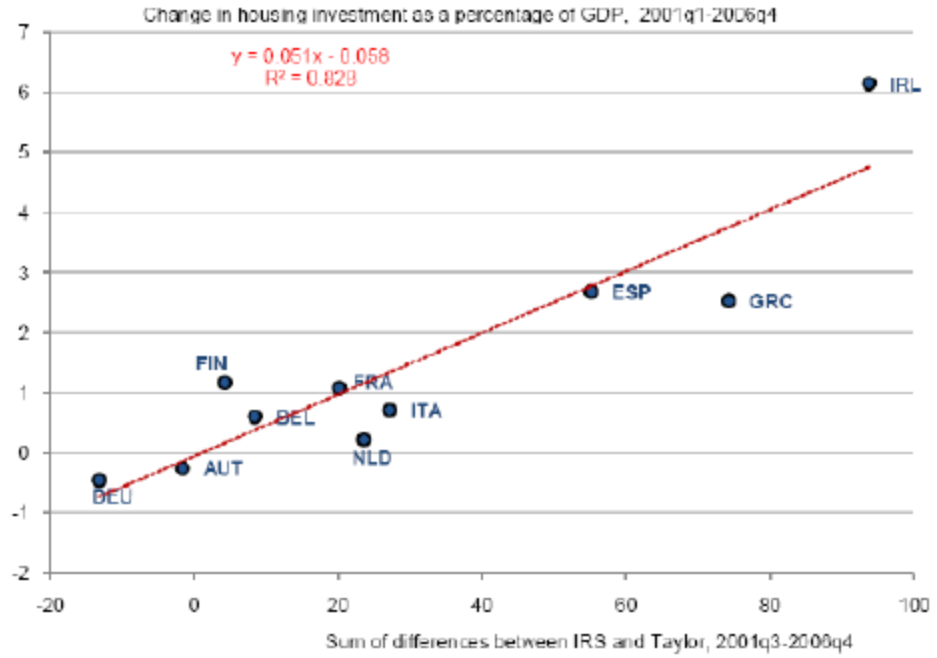
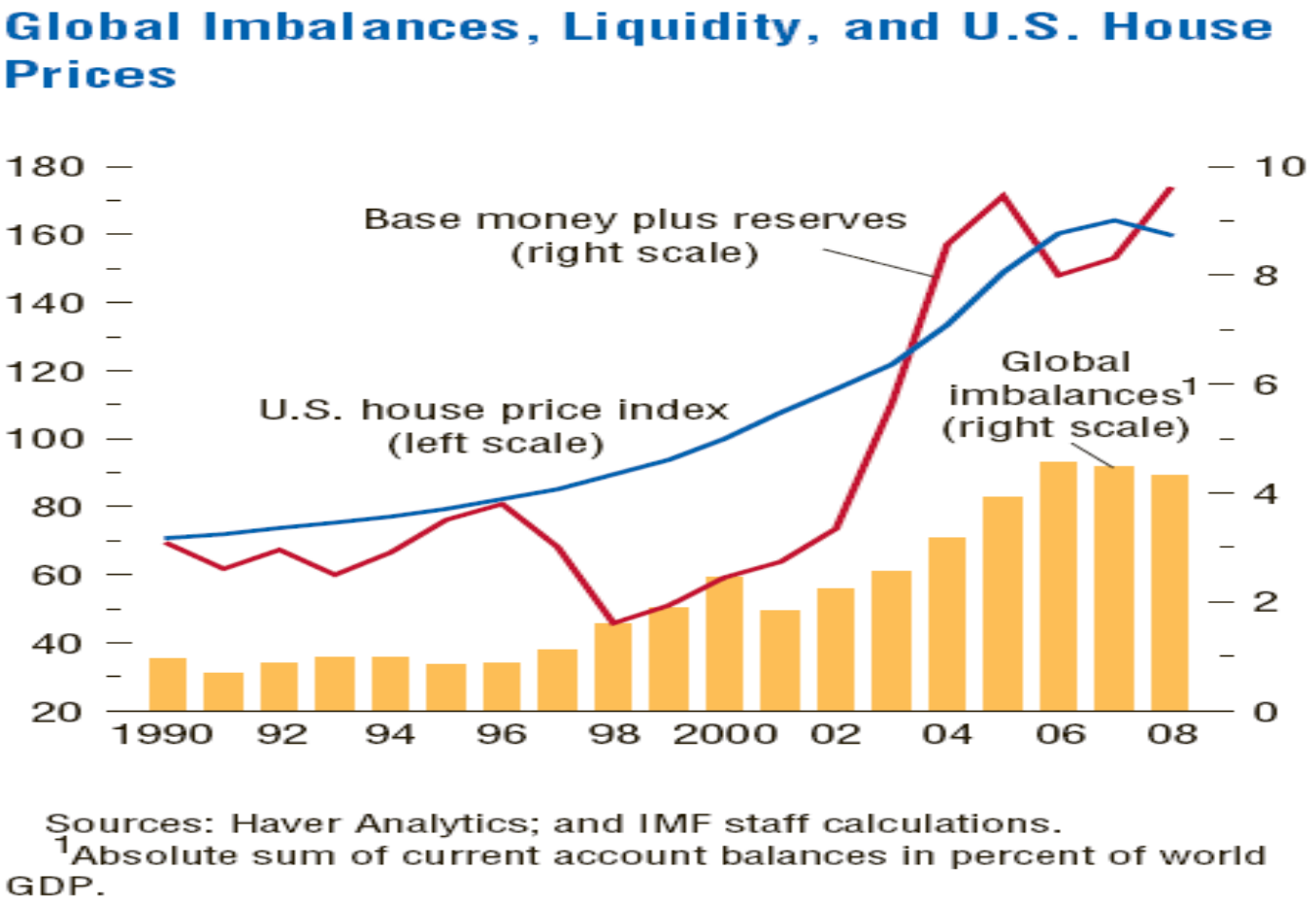


Figure 4. Housing Investment Versus Deviations From the Taylor Rule in Europe (Source: See footnote 3.)

Source: John Taylor, The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong, November 2008

Liquidity, Global Imbalances, Housing Bubble



Source: IMF WEO

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US long-term interest rates: Greenspan's stance

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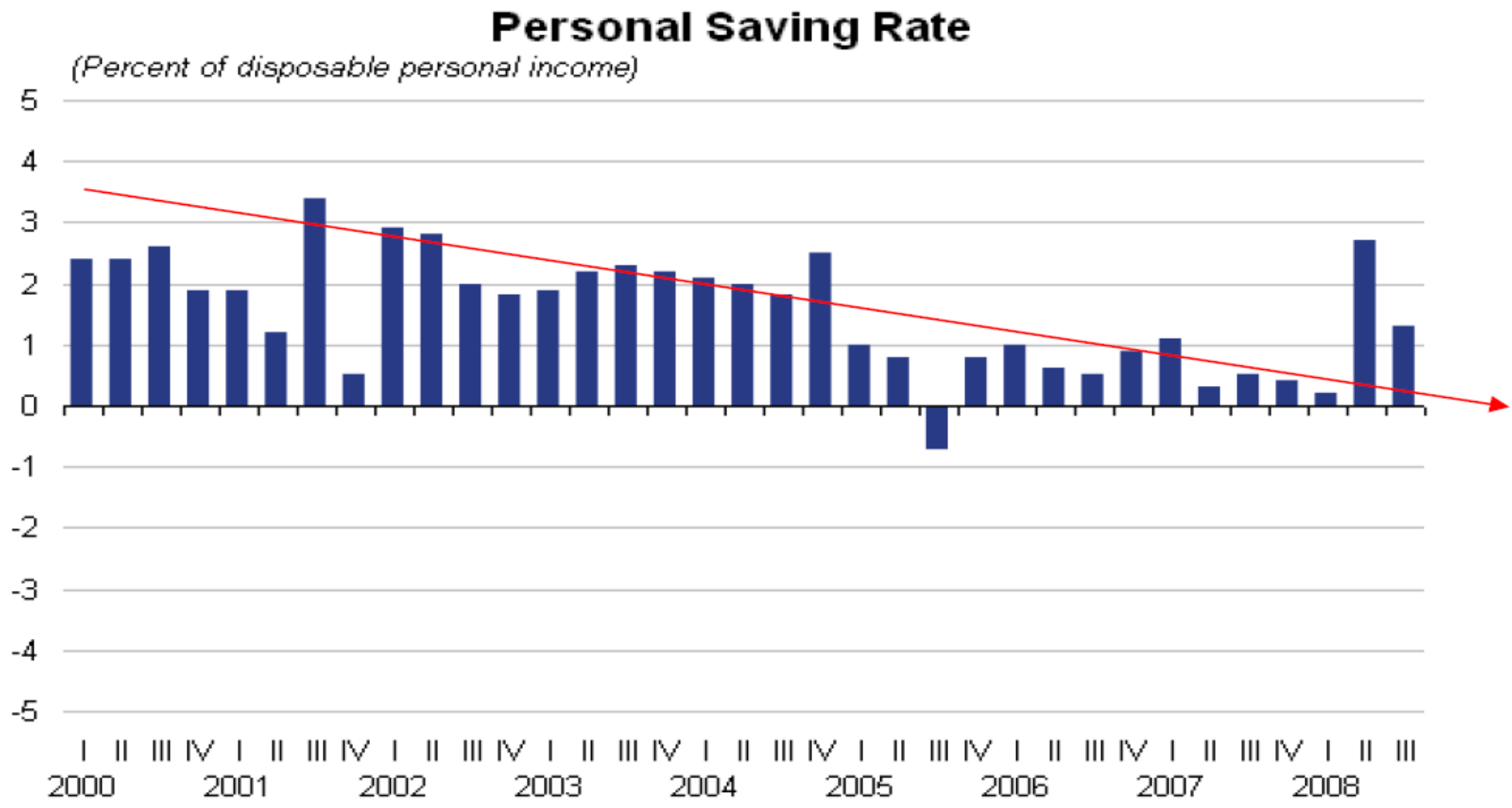
US households savings



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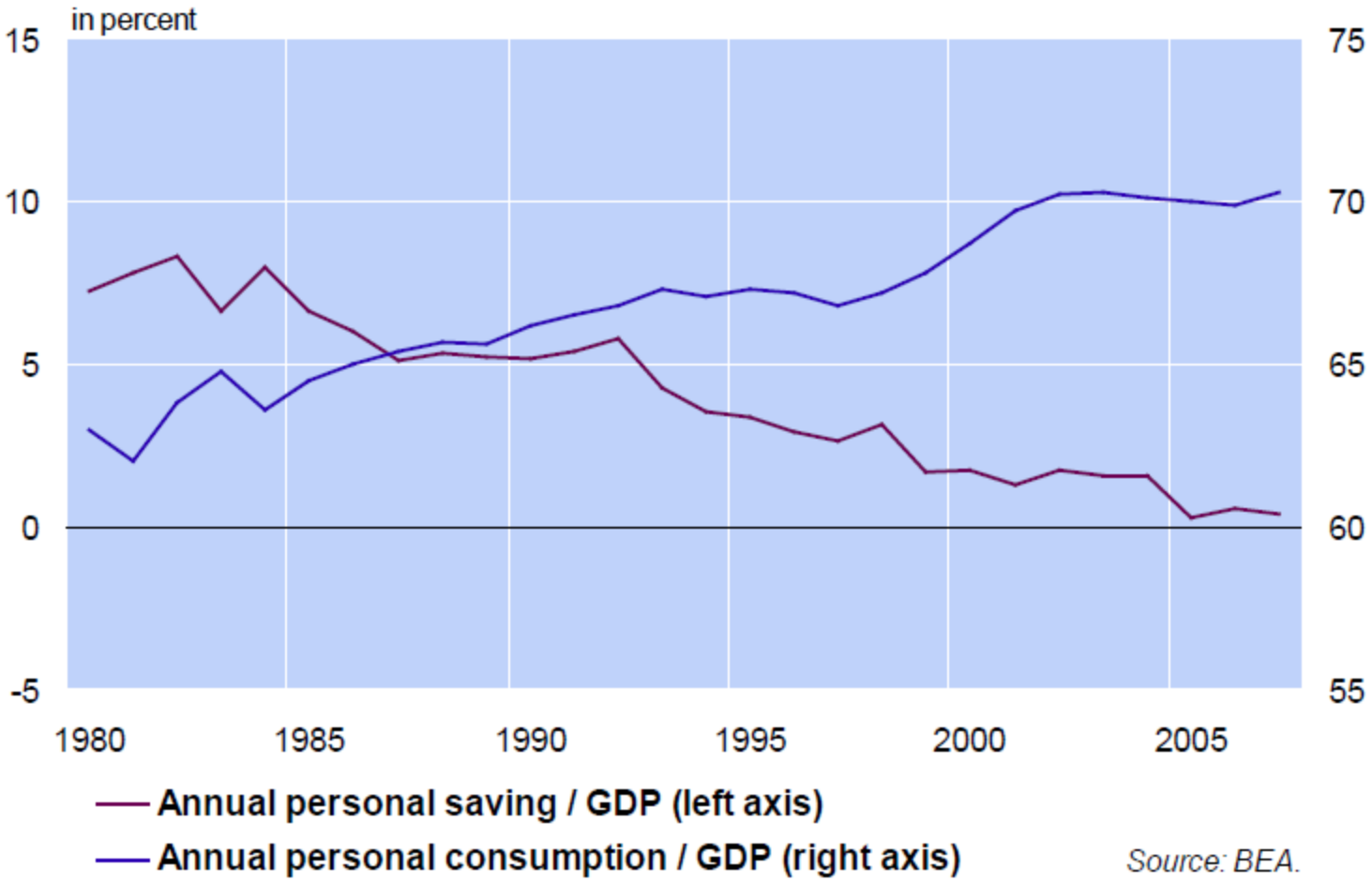
US Spending\Saving Relation

US consumption increased at expense of savings ratio



Source: BEA.

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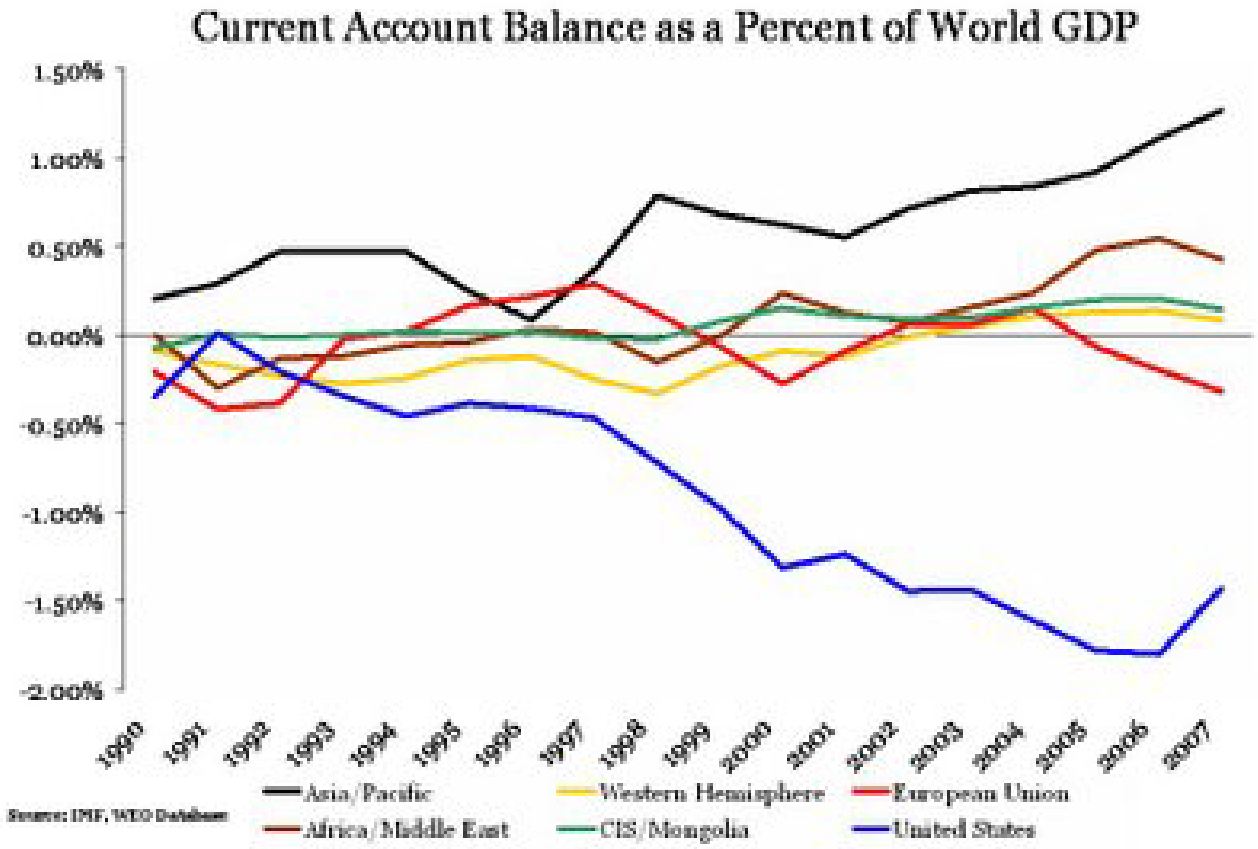
Evolution of the Global Imbalances



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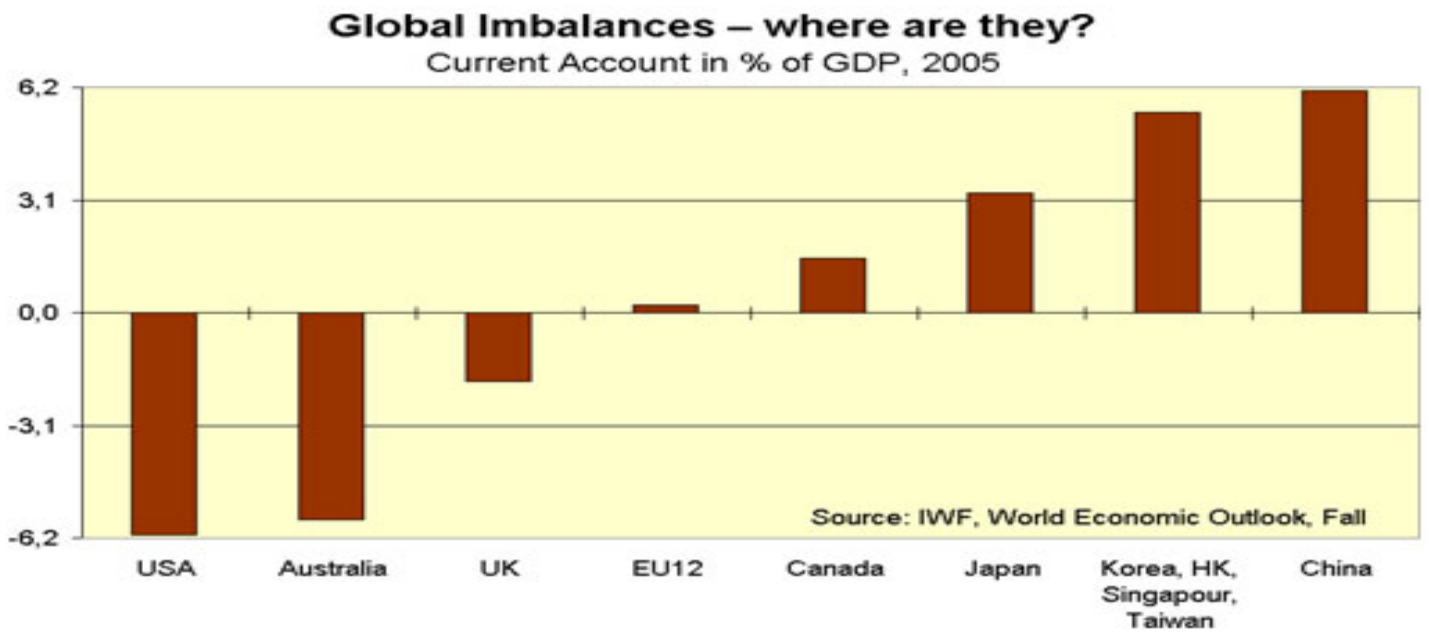
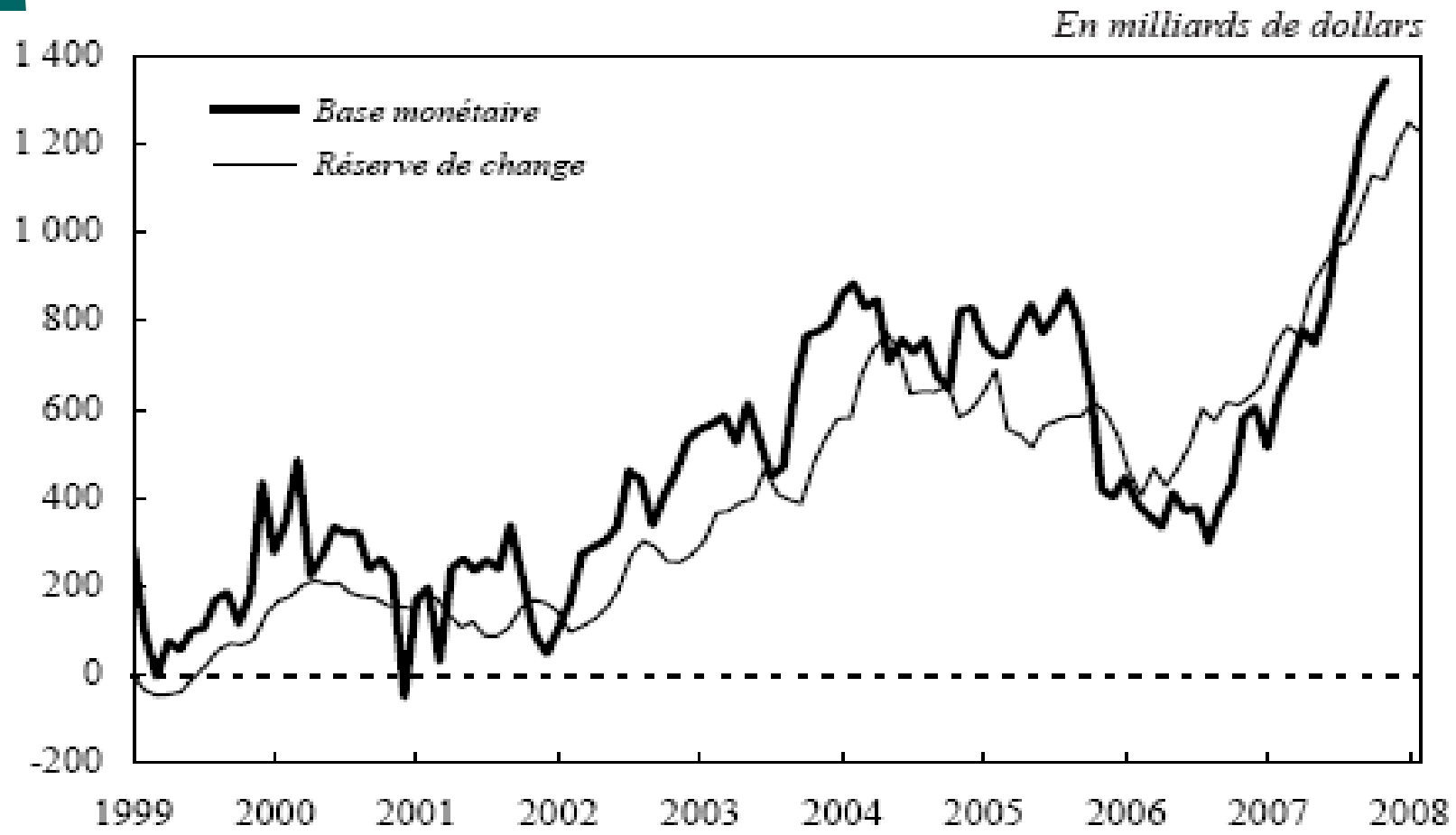
Global Imbalances



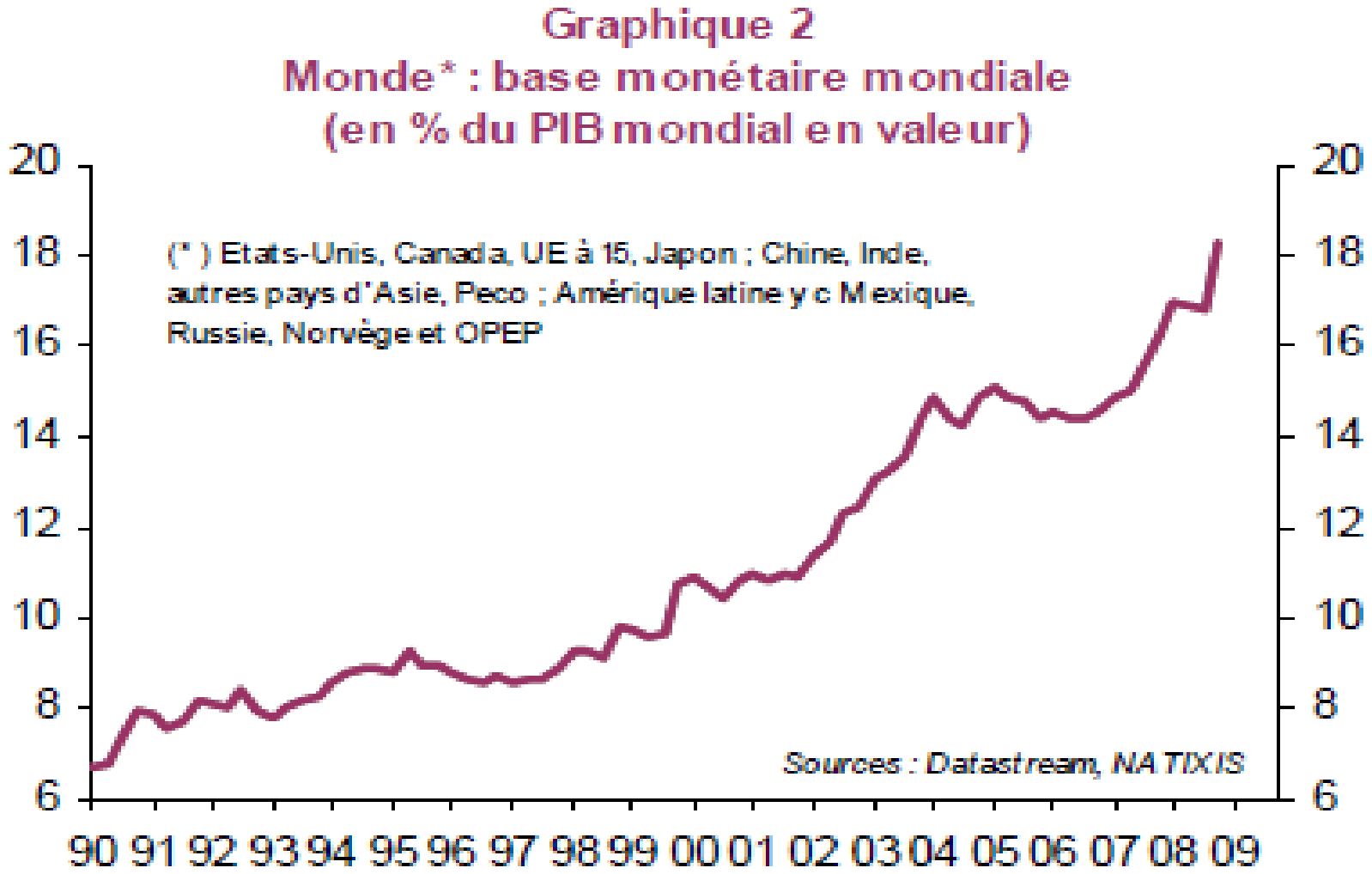
World liquidities and exchange reserves



Lecture : Variation sur un an de la base monétaire et des réserves de change (en milliards de dollars) : Etats-Unis, Canada, UE-15, Japon, Chine, Inde, autres pays d'Asie, PECO, Amérique latine y compris Mexique, Russie, Norvège et OPEP.

Source : Datastream.

Big expansion of World monetary base as % of GDP (x3)



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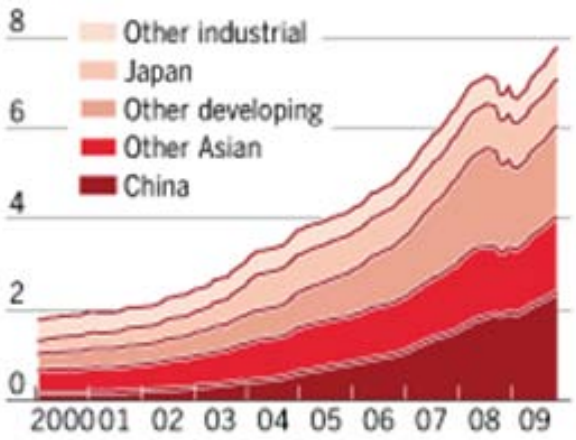
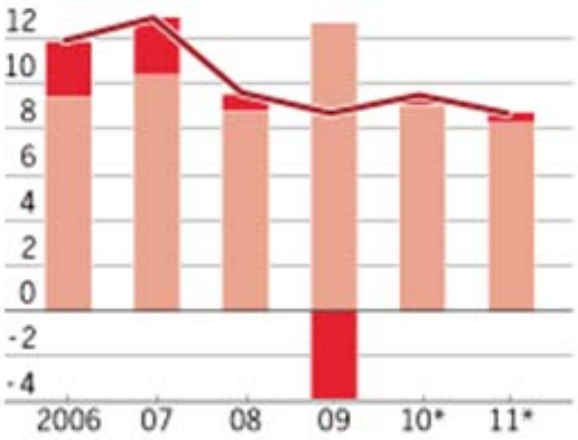
Global currency reserves

$'000bn



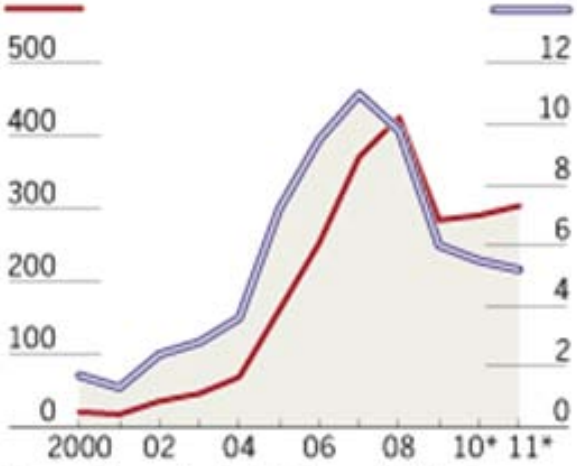
China's growth and its components

GDP (annual % change) — Domestic demand, Net exports (% point contribution)



China's current account surplus

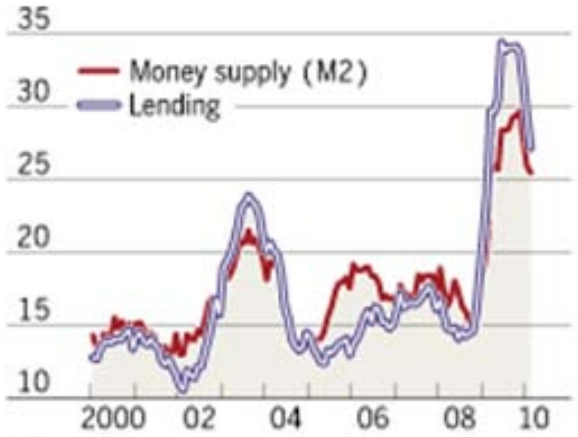
$bn — % of GDP



Sources: Thomson Reuters Datastream; World Bank

China's money supply

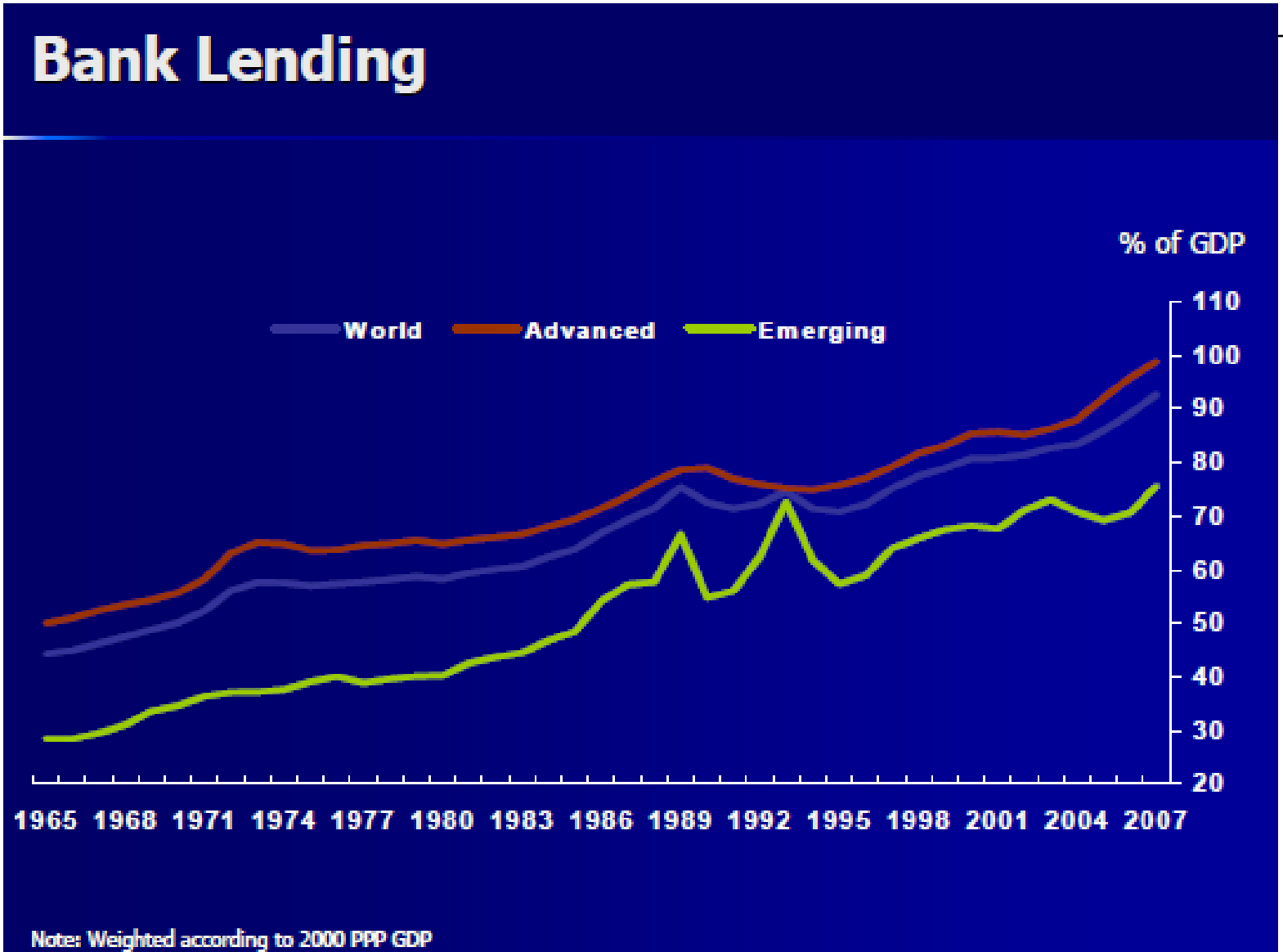
Annual % change



* Forecasts

Acceleration of long-run credit expansion

Source: (Hume & Sentence 2009, Bank of England, from IMF data)



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Acceleration of long-run credit expansion

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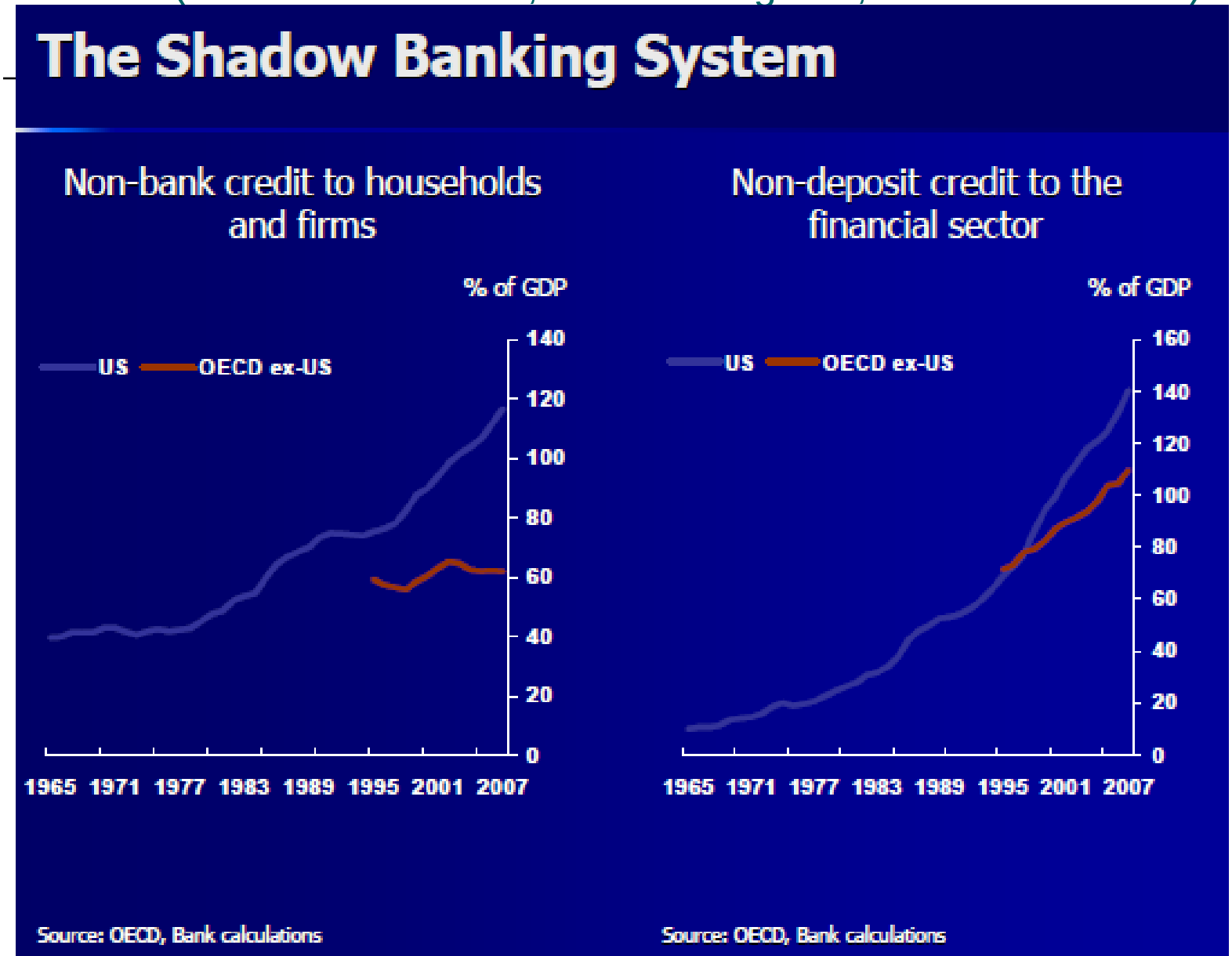
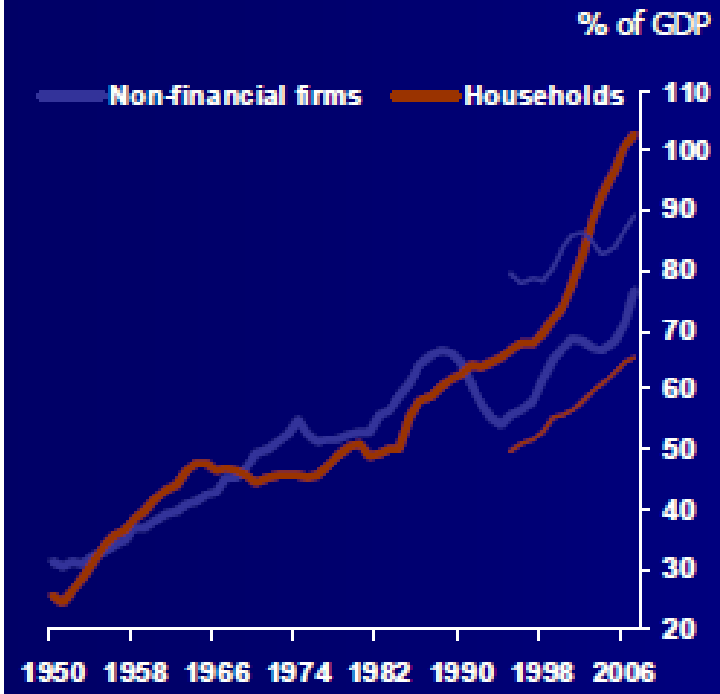


Global long-run credit expansion

Source: (M.Hume, Bank of England, from OECD data)

Households and Firms

Non-Financial Private Sector Credit



Note: Heavy lines are US data; light lines are OECD ex-US data

Source: OECD, Bank calculations

Non-Financial Private Sector Credit

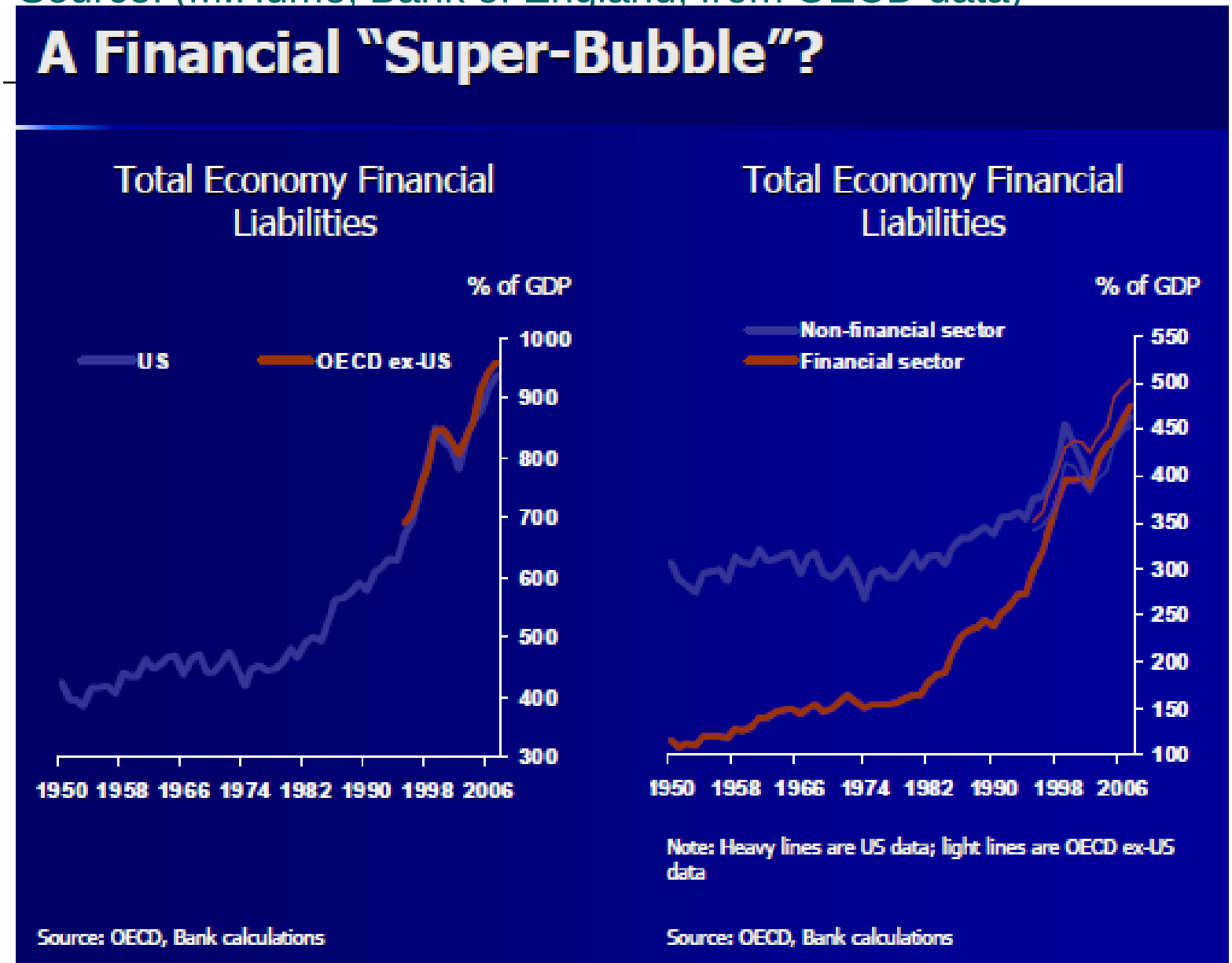
% of GDP, changes since 2000

	Households		Firms	
	pp	%	pp	%
US	29	32	9	11
Japan	-9	-11	-28	-18
Germany	-9	-12	-1	-8
UK	31	38	34	38
France	12	31	18	13
OECD	17	23	7	9
OECD ex US	10	16	5	4
OECD ex US/Jap/Ger	21	40	18	16
OECD ex Jap/Ger	26	35	14	16

Source: OECD, Bank calculations

Long-run credit expansion

Source: (M.Hume, Bank of England, from OECD data)



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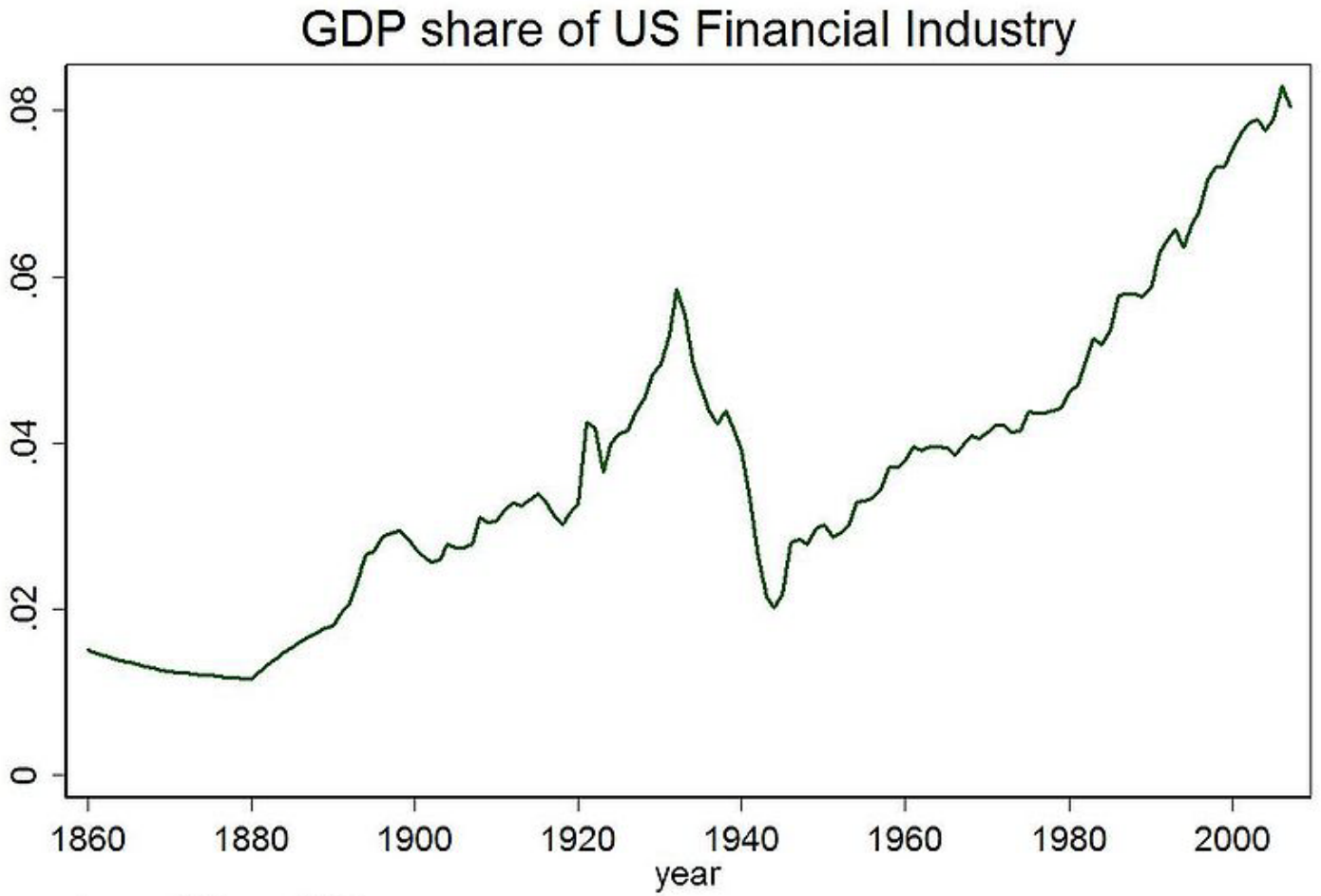
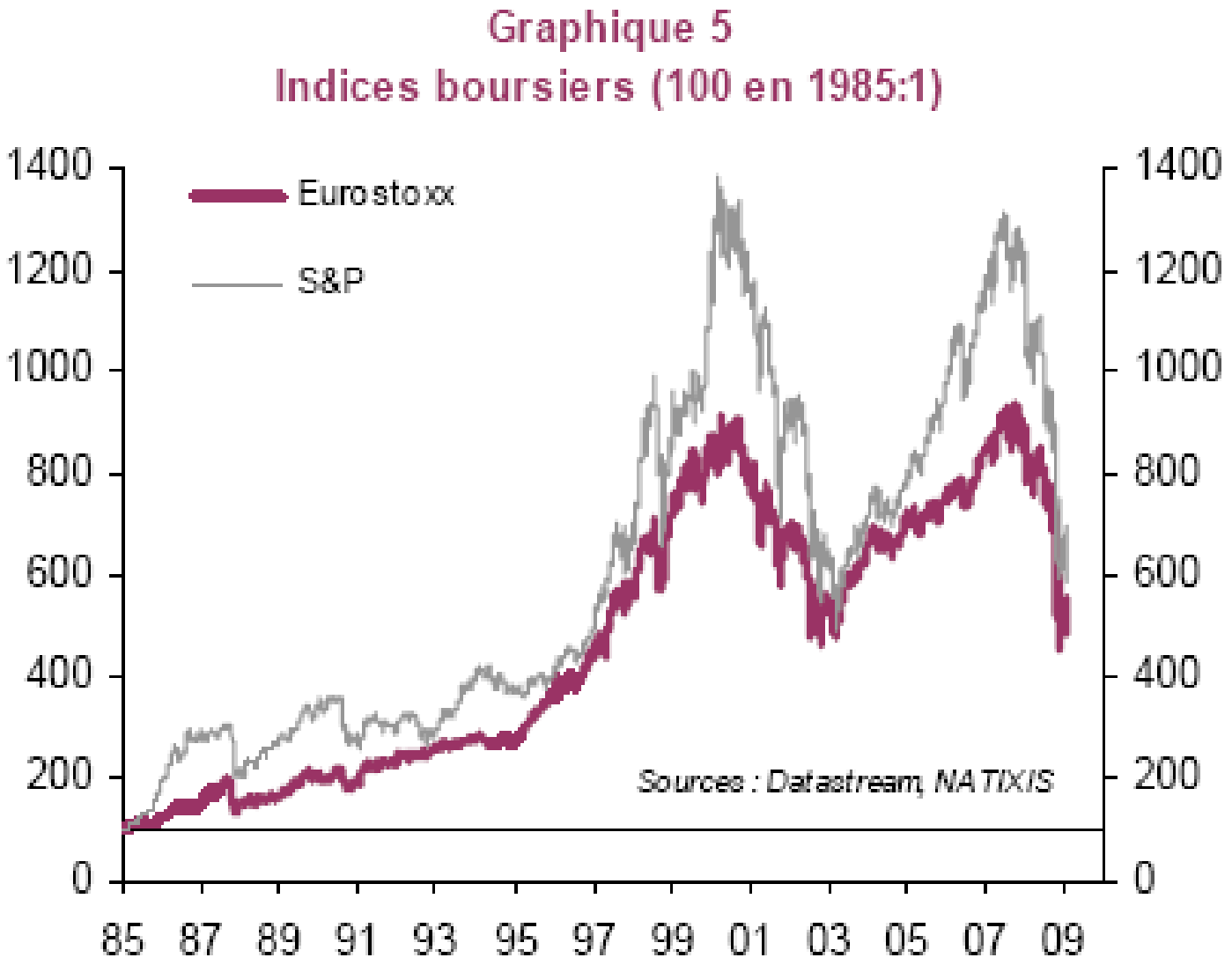
Mid-80s Acceleration in the growth of the US Financial Sector



Source: Philippon, 2008

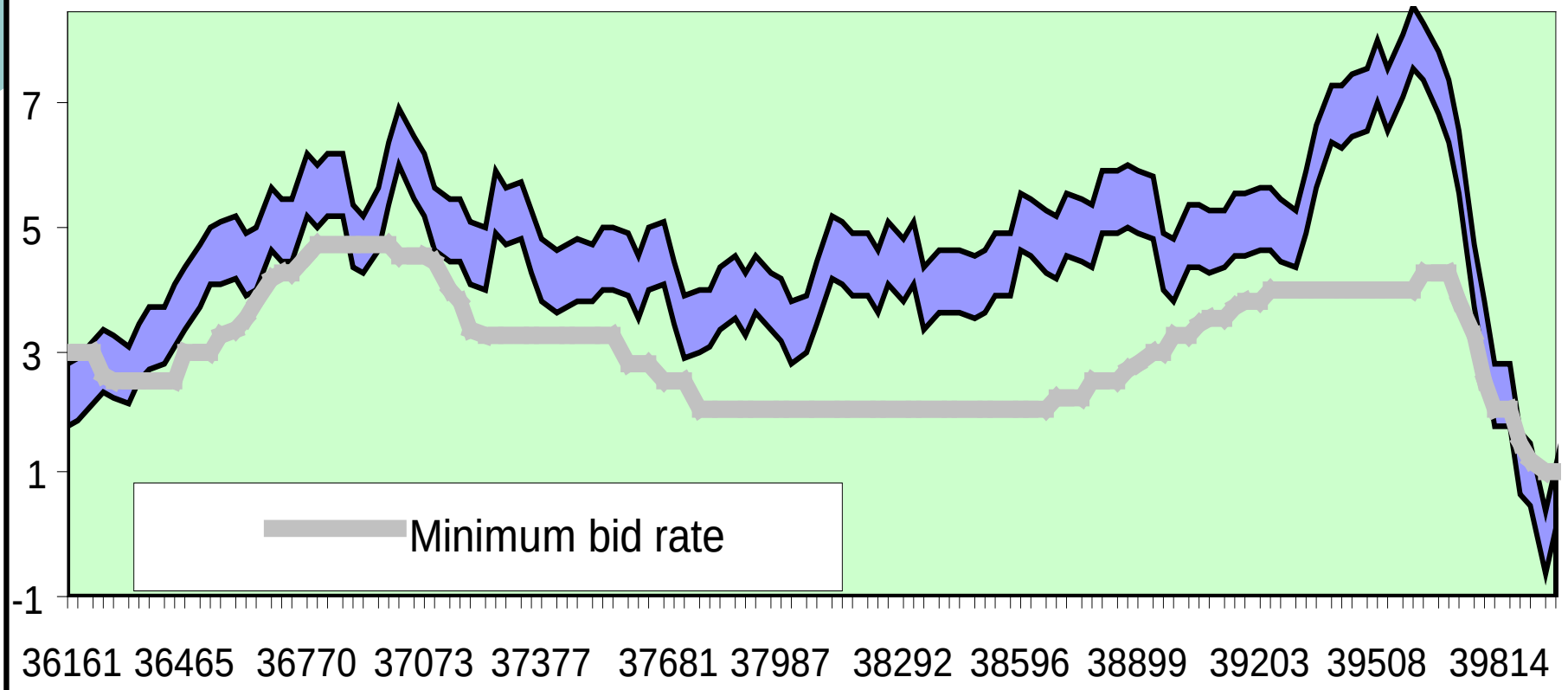
The Greenspan's bubbles affect the EU… in spite of the ECB two pillars strategy



...contrary to current belief, ECB was not « conservative » but rather expansionist...

Taylor rule (headline inflation)

(Jan1999 -Jun2009)



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...Taylor's test that ECB deviation from Taylor's rule is correlated to Fed policy rate

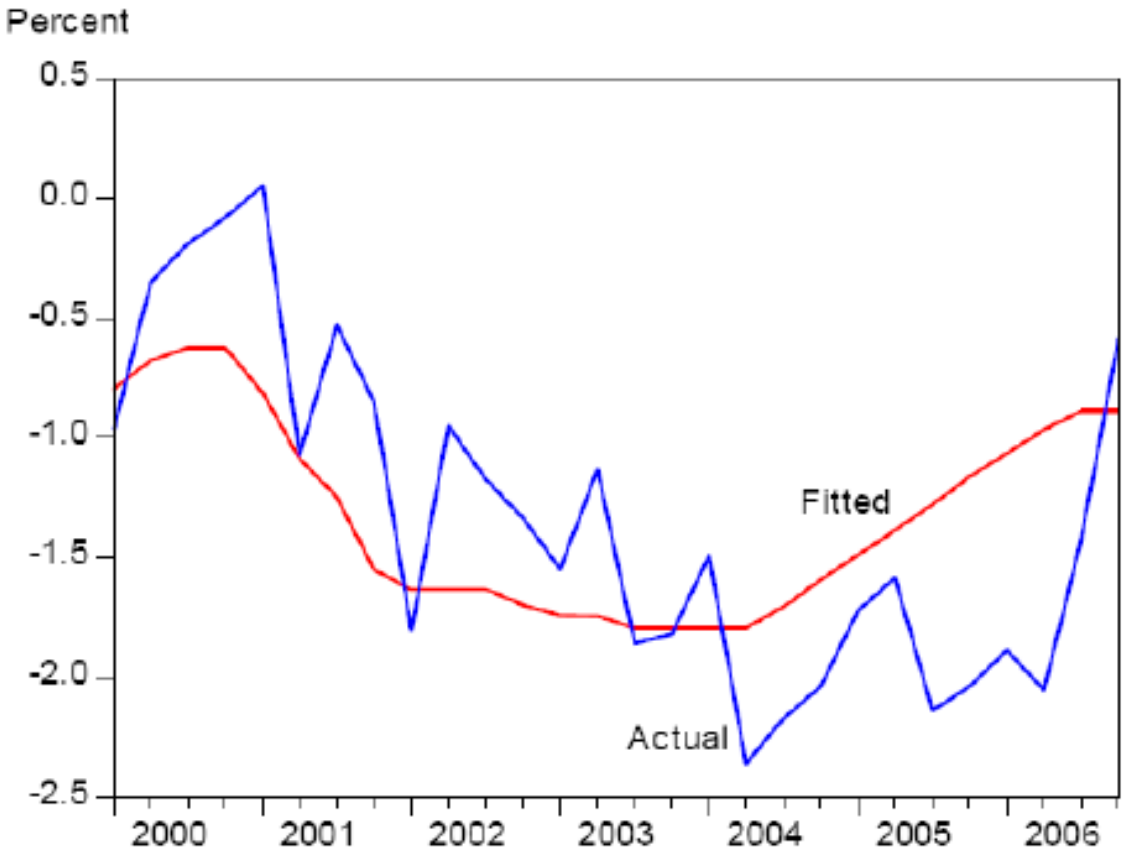

Figure 5. Actual Deviations from a Euro Policy Rule and the Predicted (fitted) Values Based on the Federal Funds Rate

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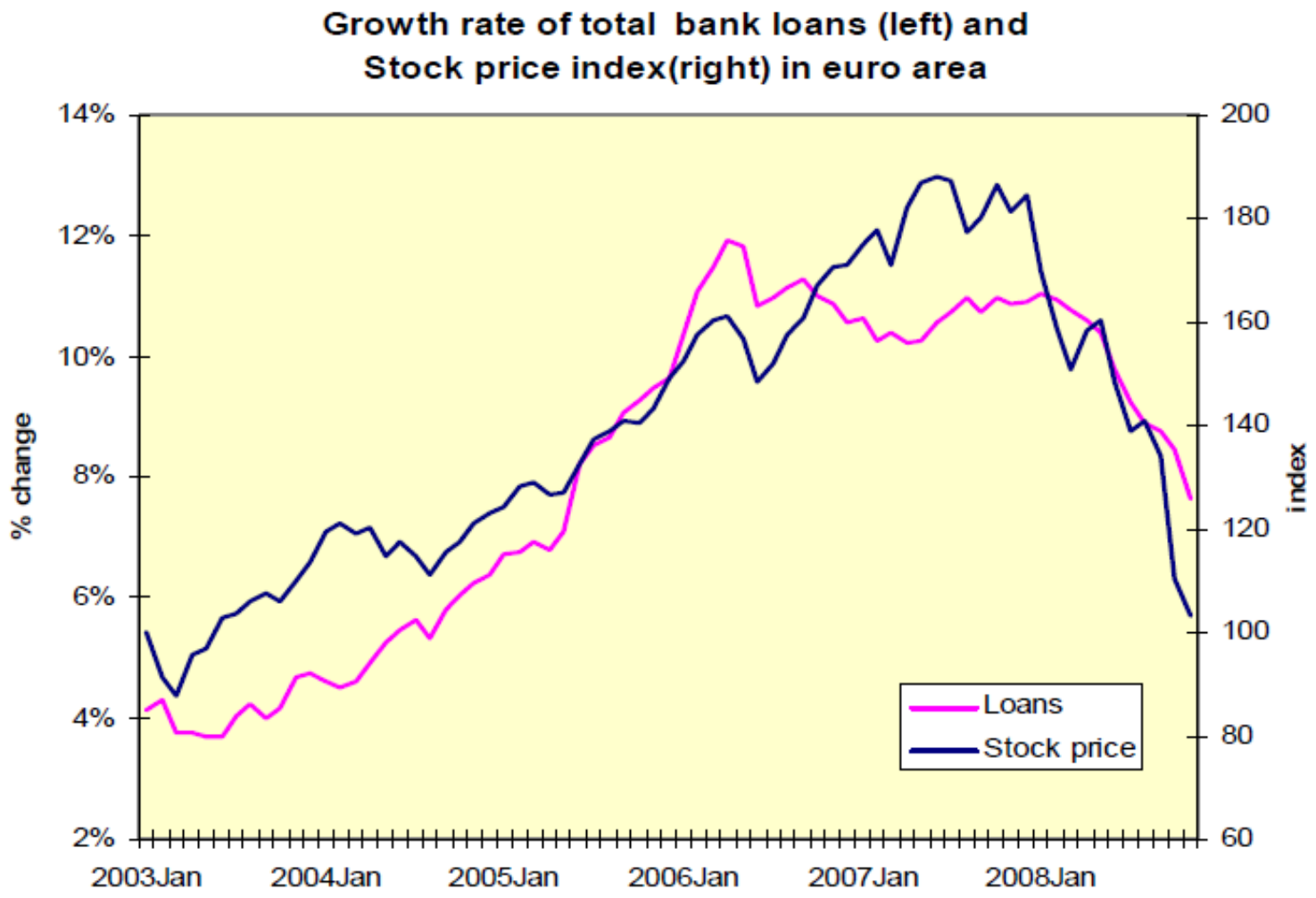
In spite of a visible credit-boom gaining speed (Source: Paul De Grauwe, Louvain)



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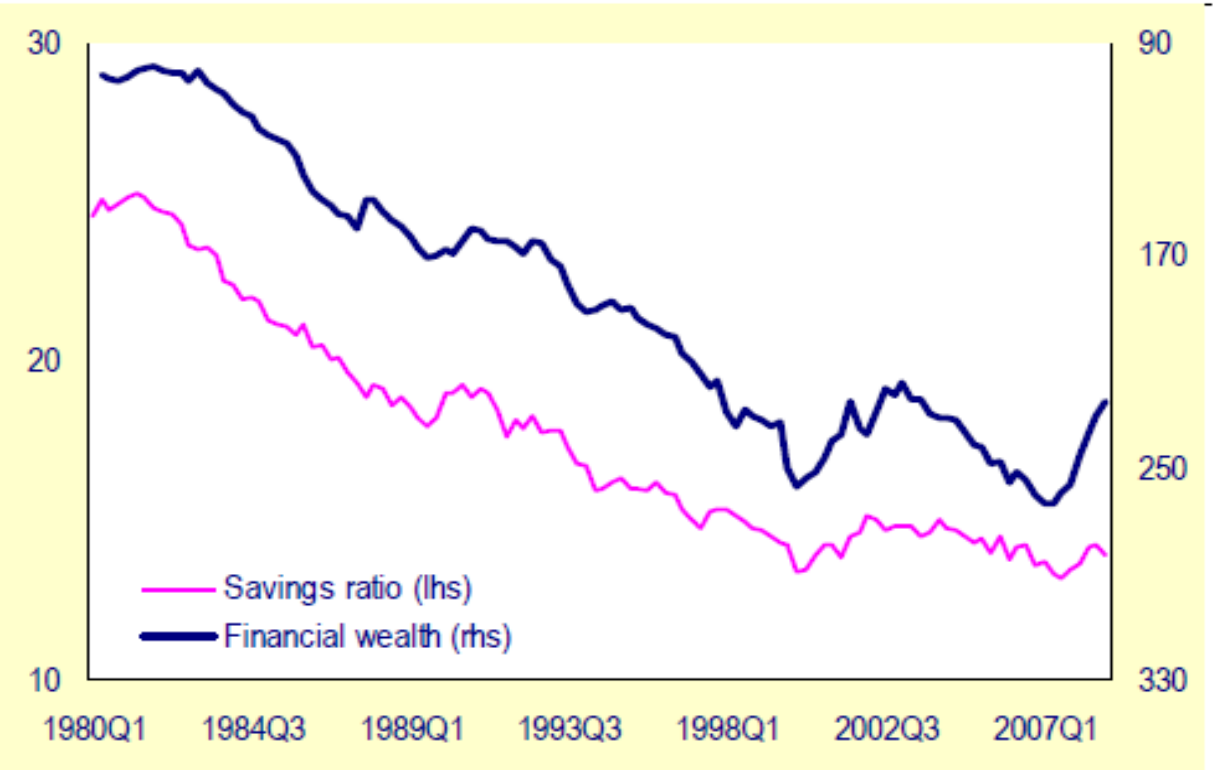
…private savings falls with increase in net financial wealth (Euro area)

Graph I.3.3: **Savings ratio and net financial wealth ratio, euro area** (1980Q1-2008Q3) (1)



(1) Inverted scale on the right hand side. Savings and net financial wealth are expressed as a share of gross disposable income.

Source: Commission services and ECB.

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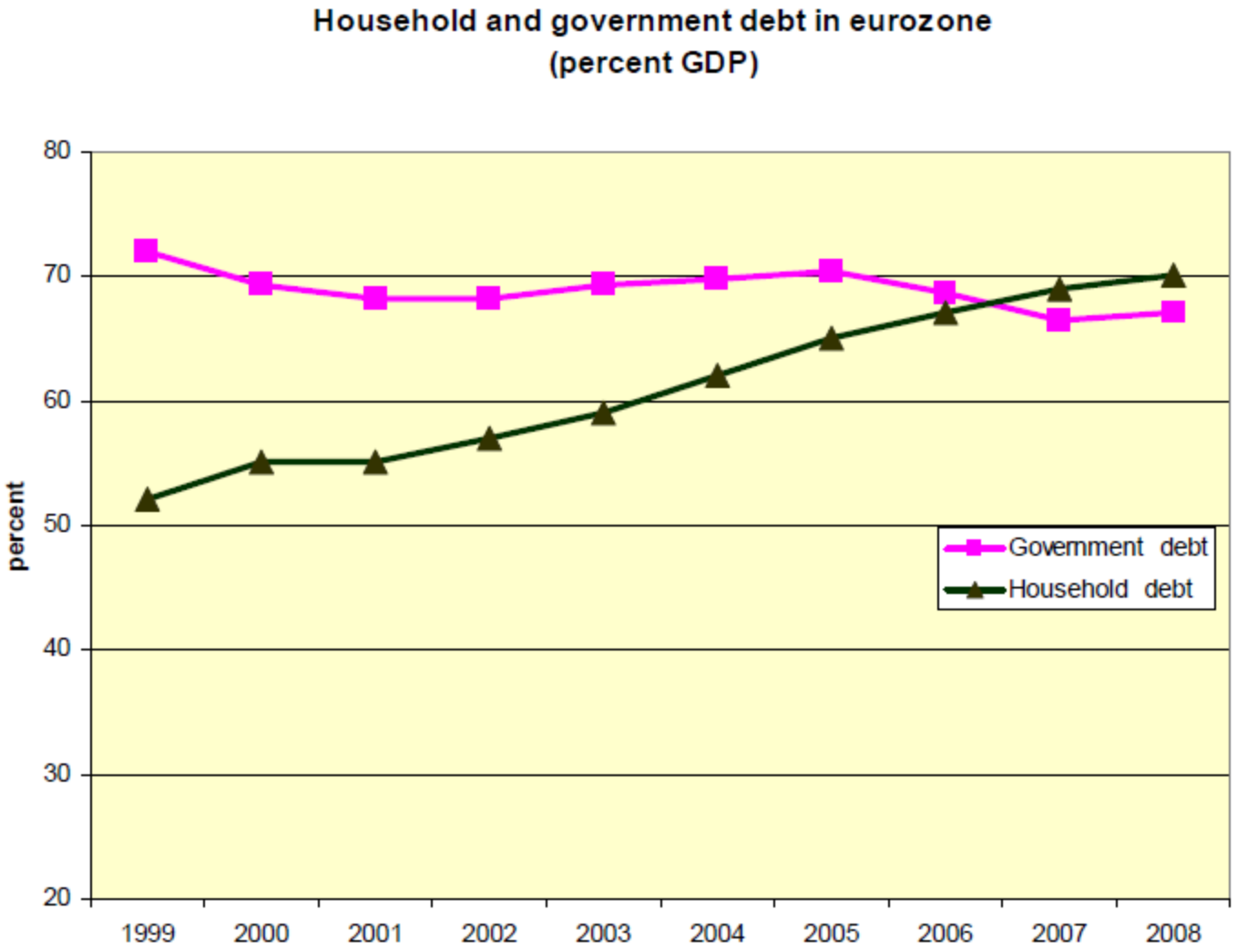
…and concentrated on private debt in the Euro-area



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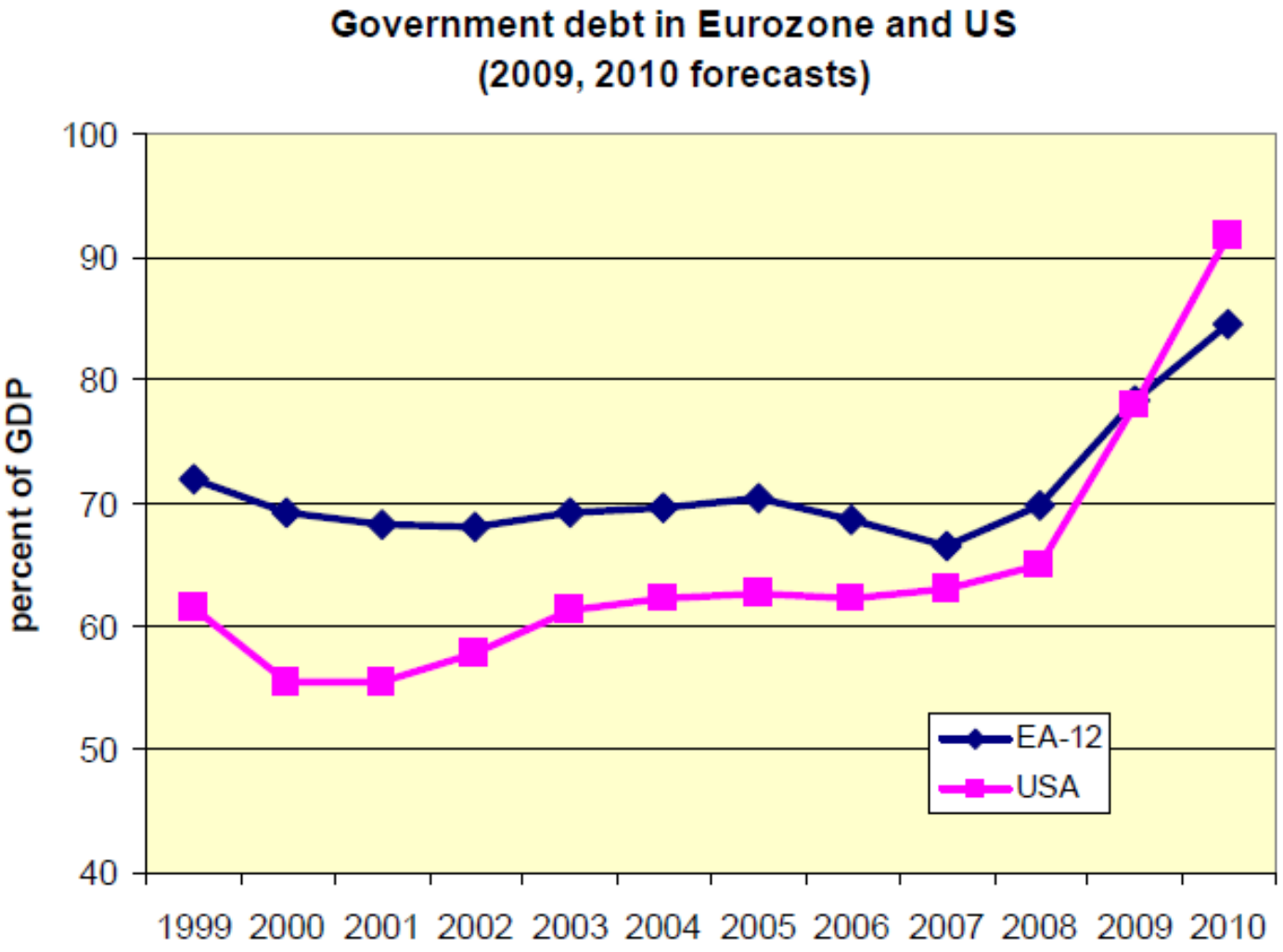
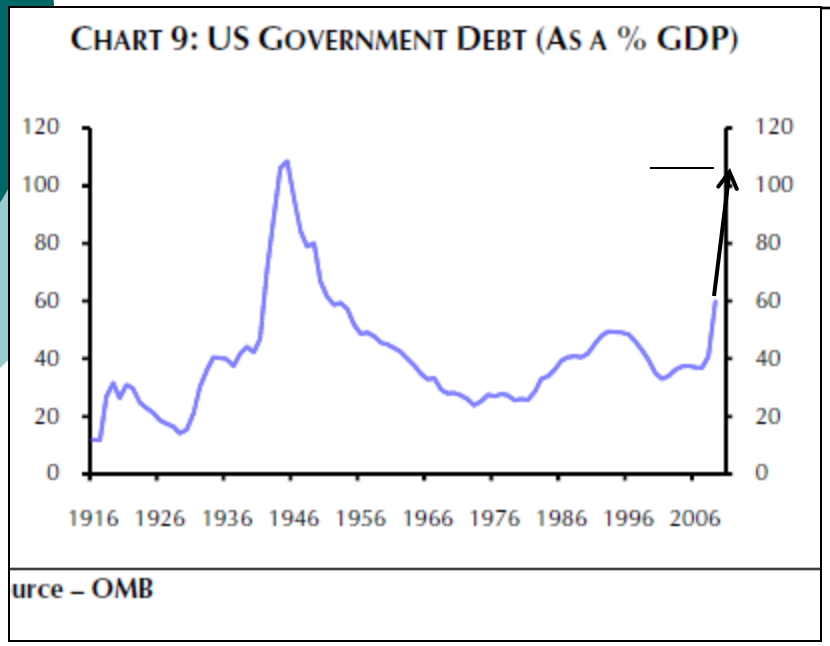
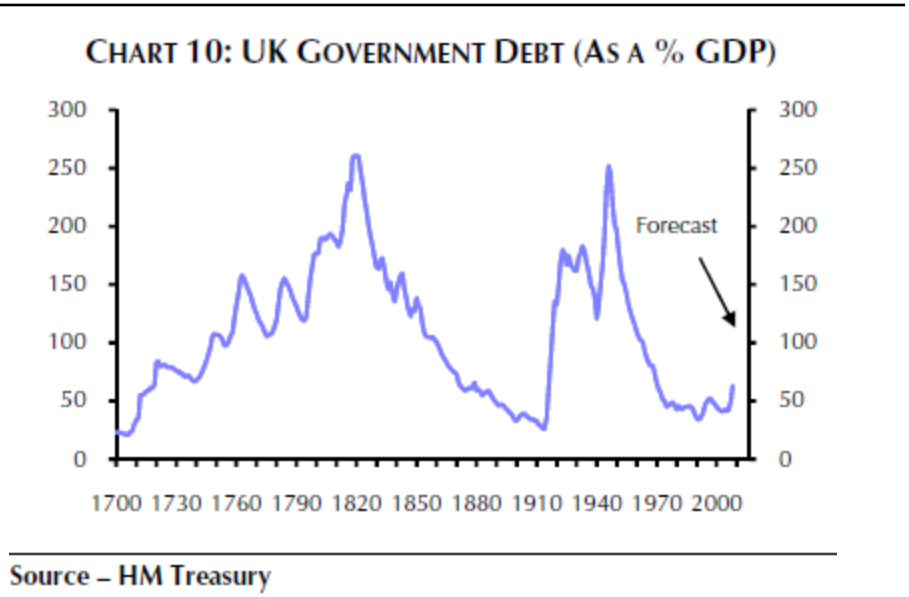
…but leading to a massive public bail-out due to the crisis….

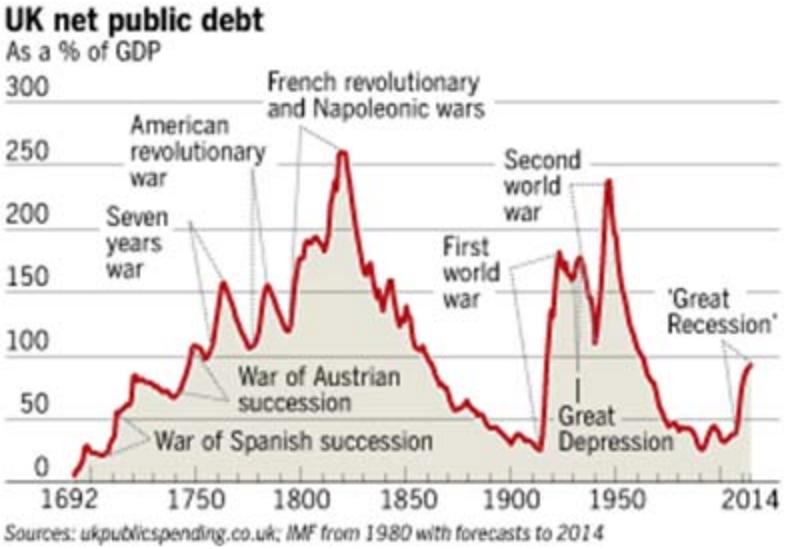


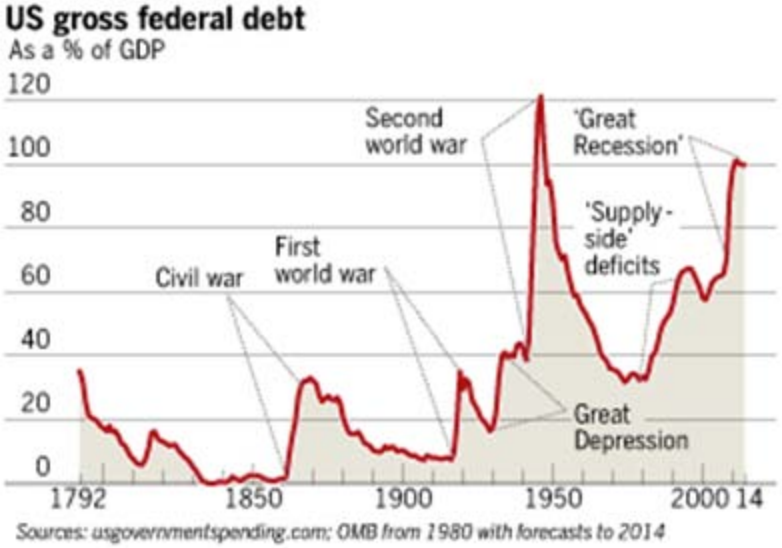
…pushing back debt ratio to worrying levels

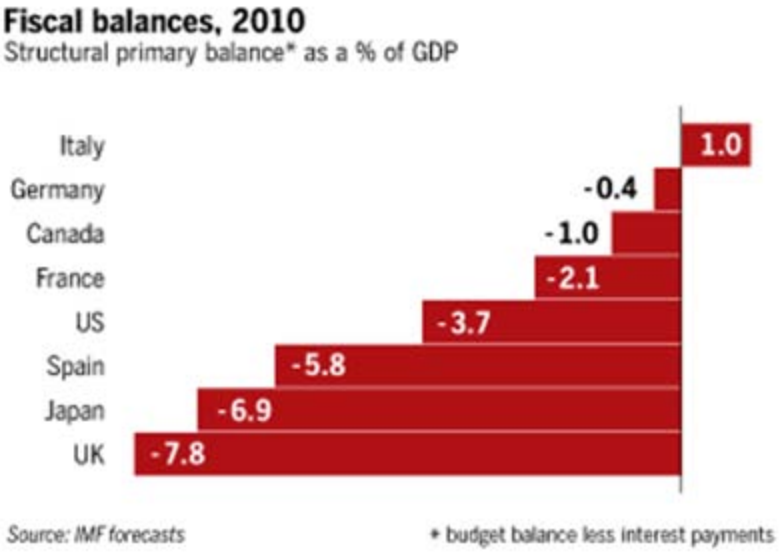




…pushing back debt ratio to worrying levels







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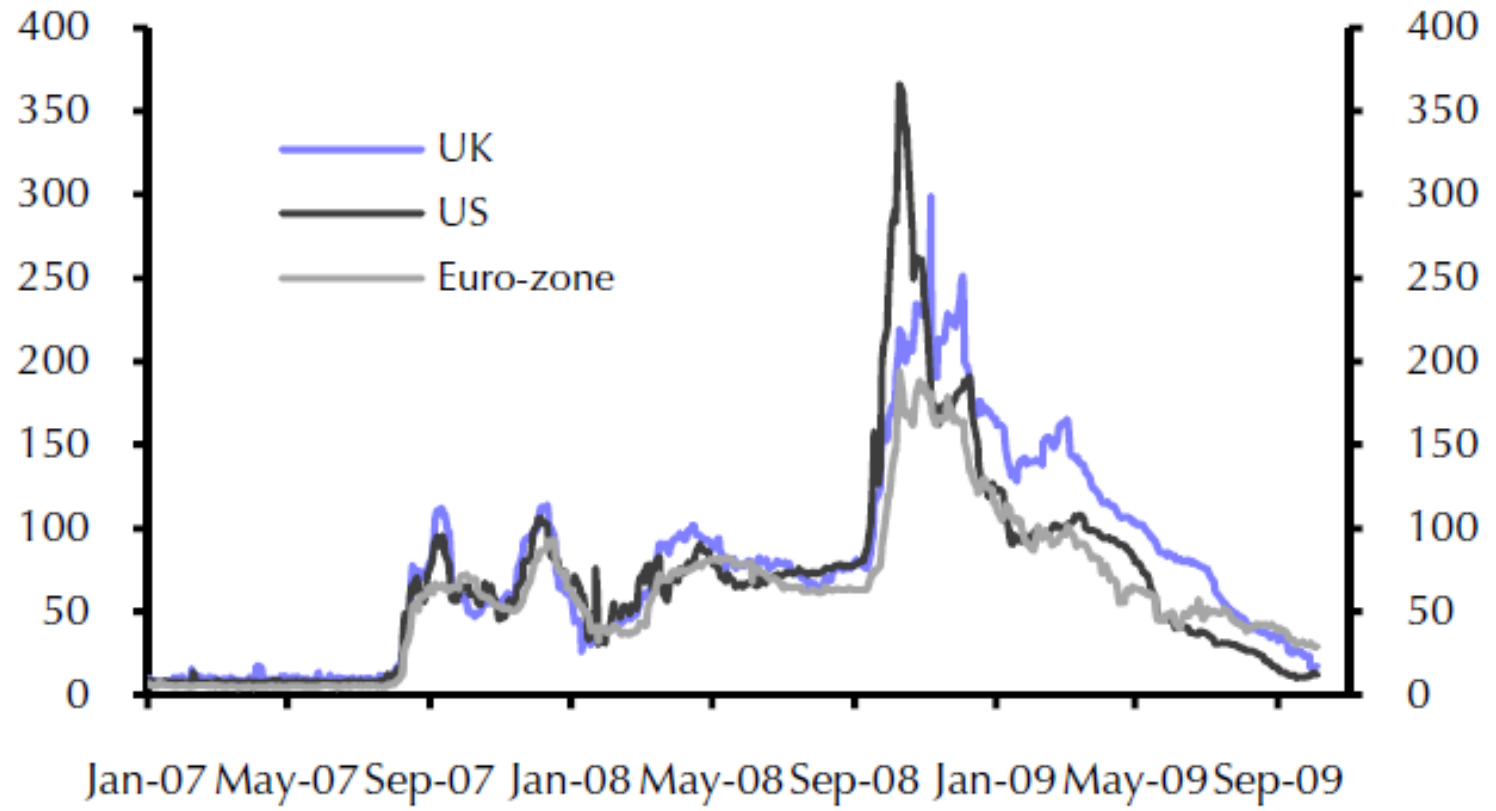
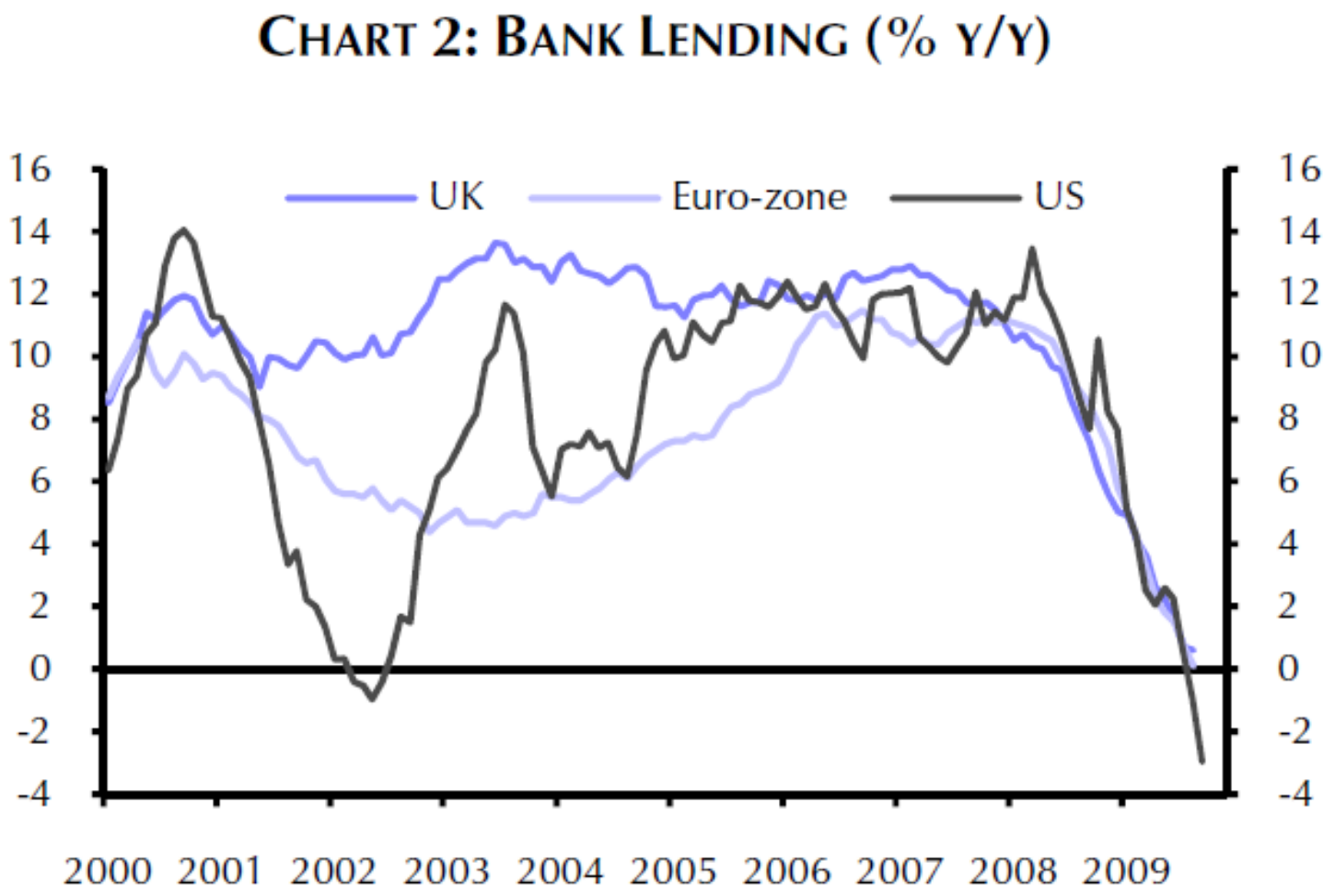
The credit-boom ended up killing the interbank markets => illiquidity….

CHART 1: 3M INTERBANK RATES MINUS 3M OIS RATES (BPS)



Source – Bloomberg

…impacting abruptly the credit on which our economies do rely upon



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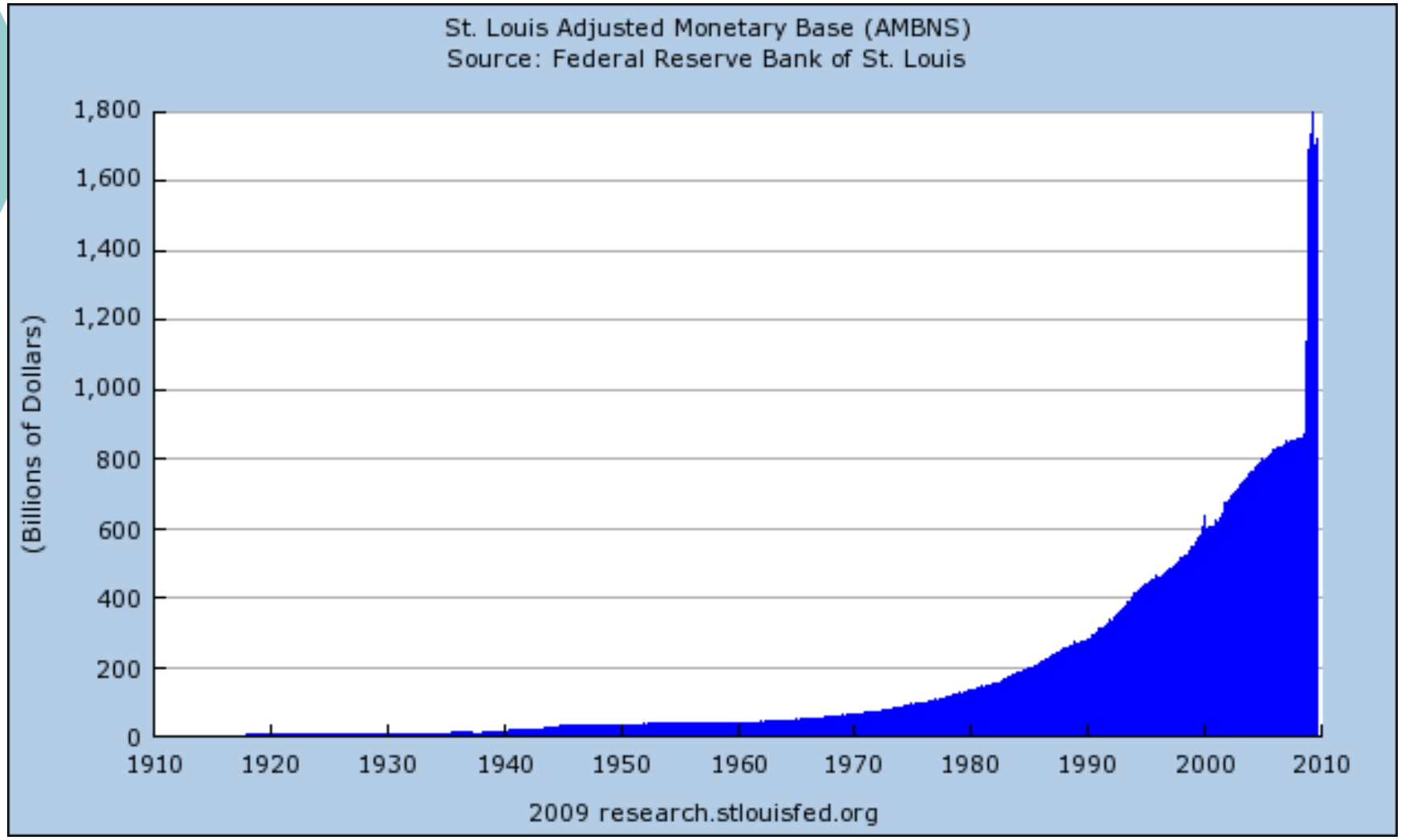
…forcing Central banks to act in an unprecedented expansion of monetary bases for cushioning…



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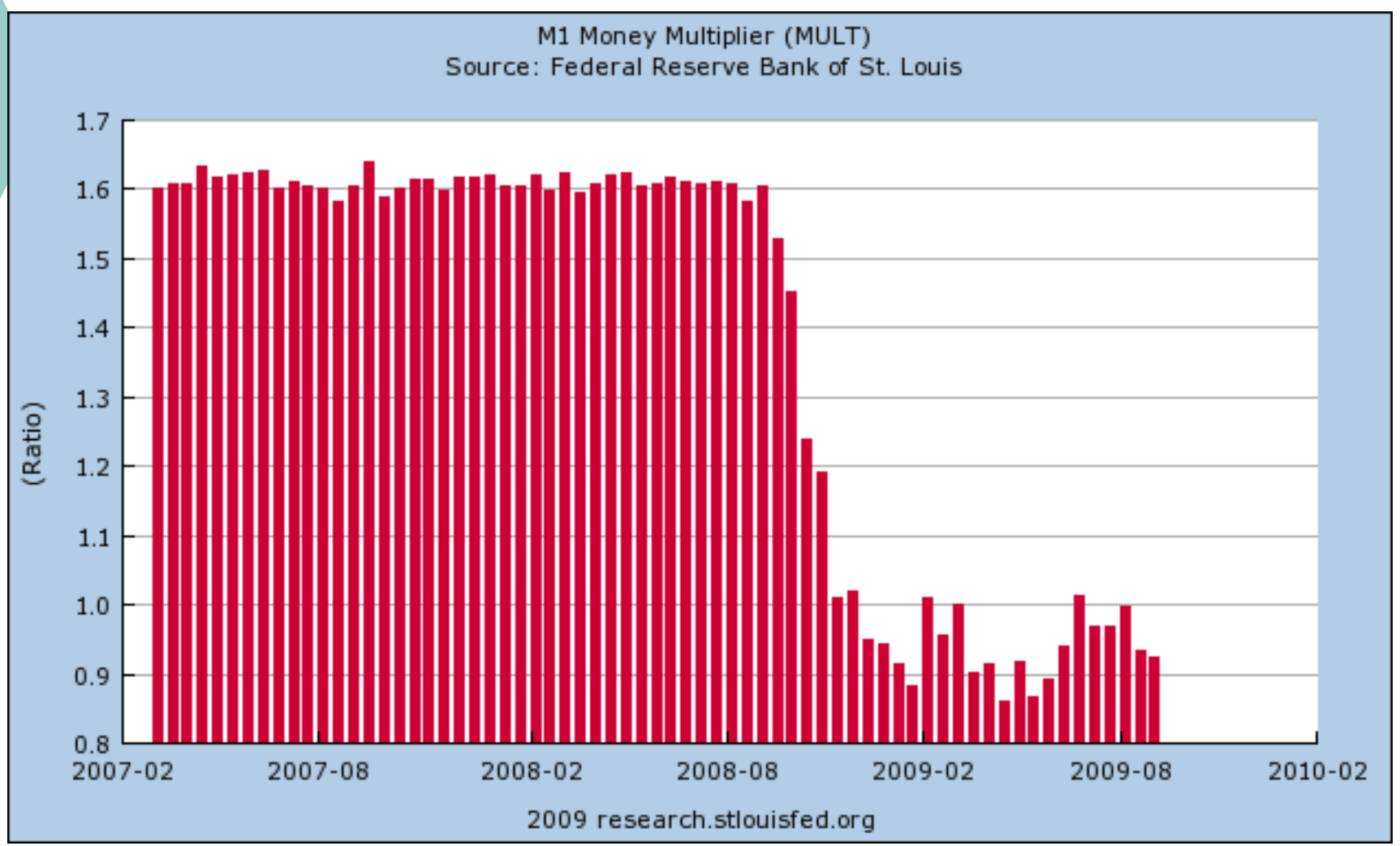
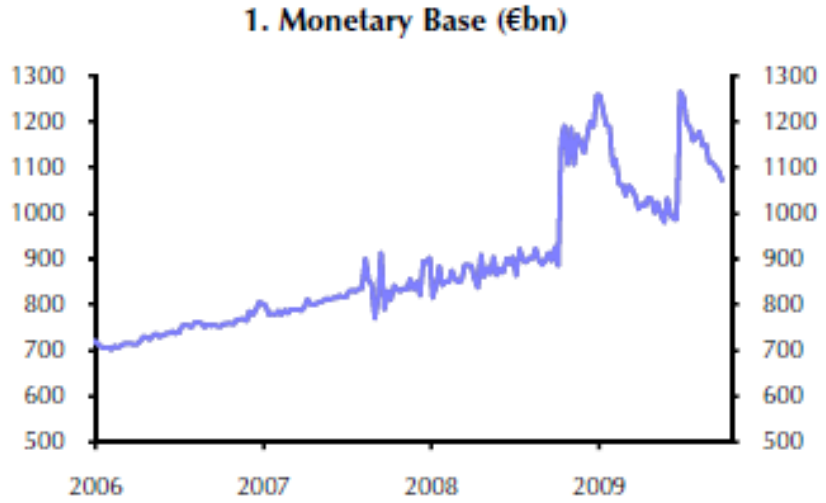
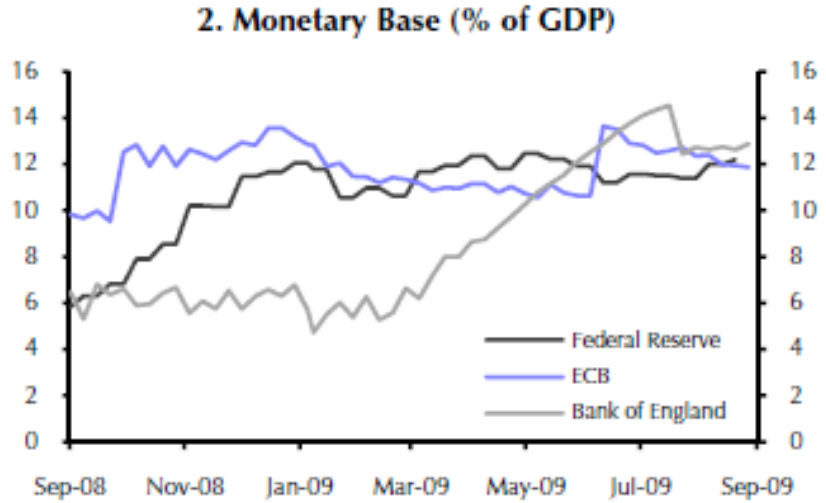
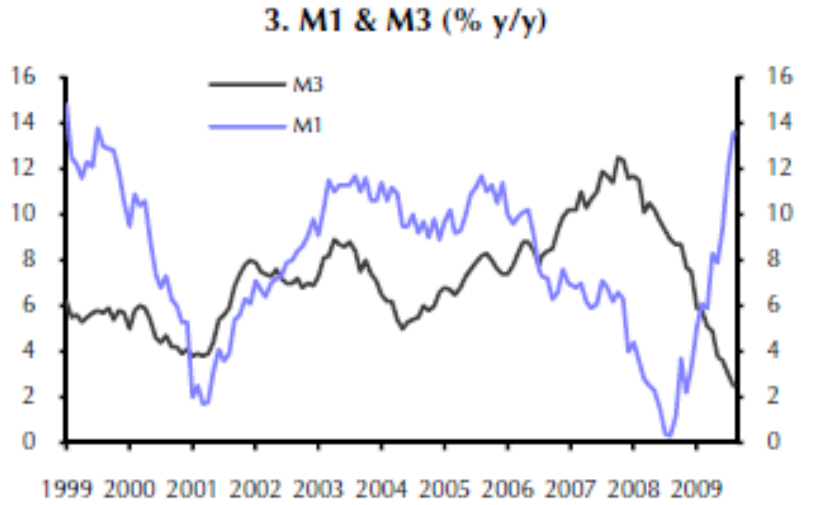
…forcing Central banks to act in an unprecedented expansion of monetary bases for cushioning the fall of multipliers

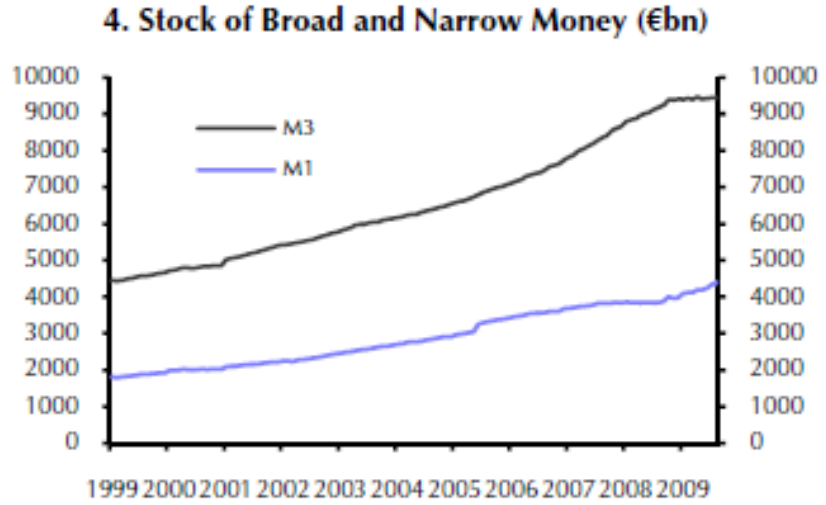


ECB policy: + 20 % in Monetary Base against +100% for UK and US









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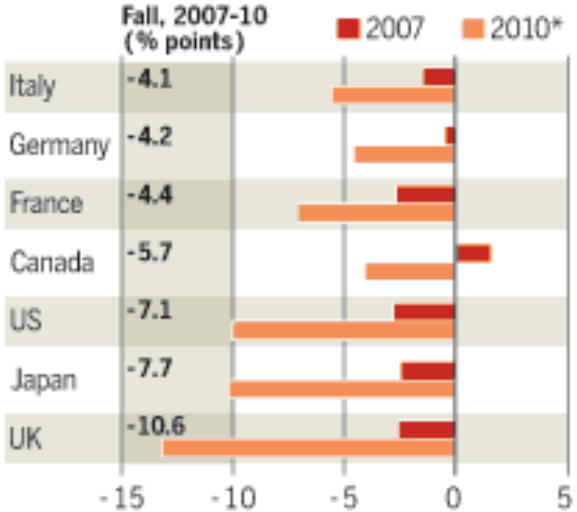
UK GDP growth scenarios

£bn at 2005 prices

Sources: ONS; HM Treasury

Deterioration in G7 public finances

General government balance (% of GDP)

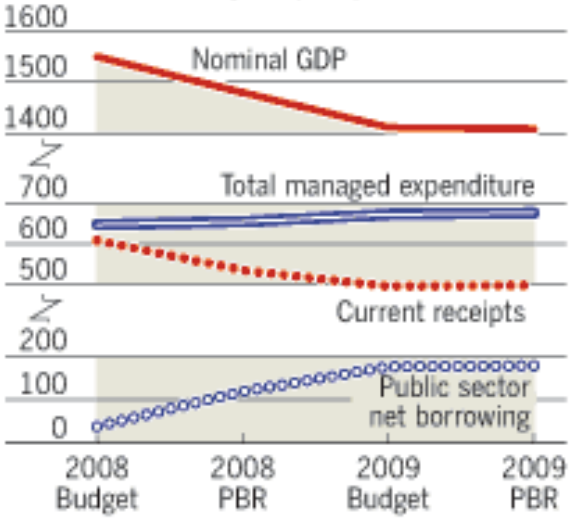


Source: IMF

* Forecast

UK Treasury forecasts

For 2009-10 fiscal year (£bn)



Source: HM Treasury

Fiscal tightening forecasts

% of national income

Source: IFS

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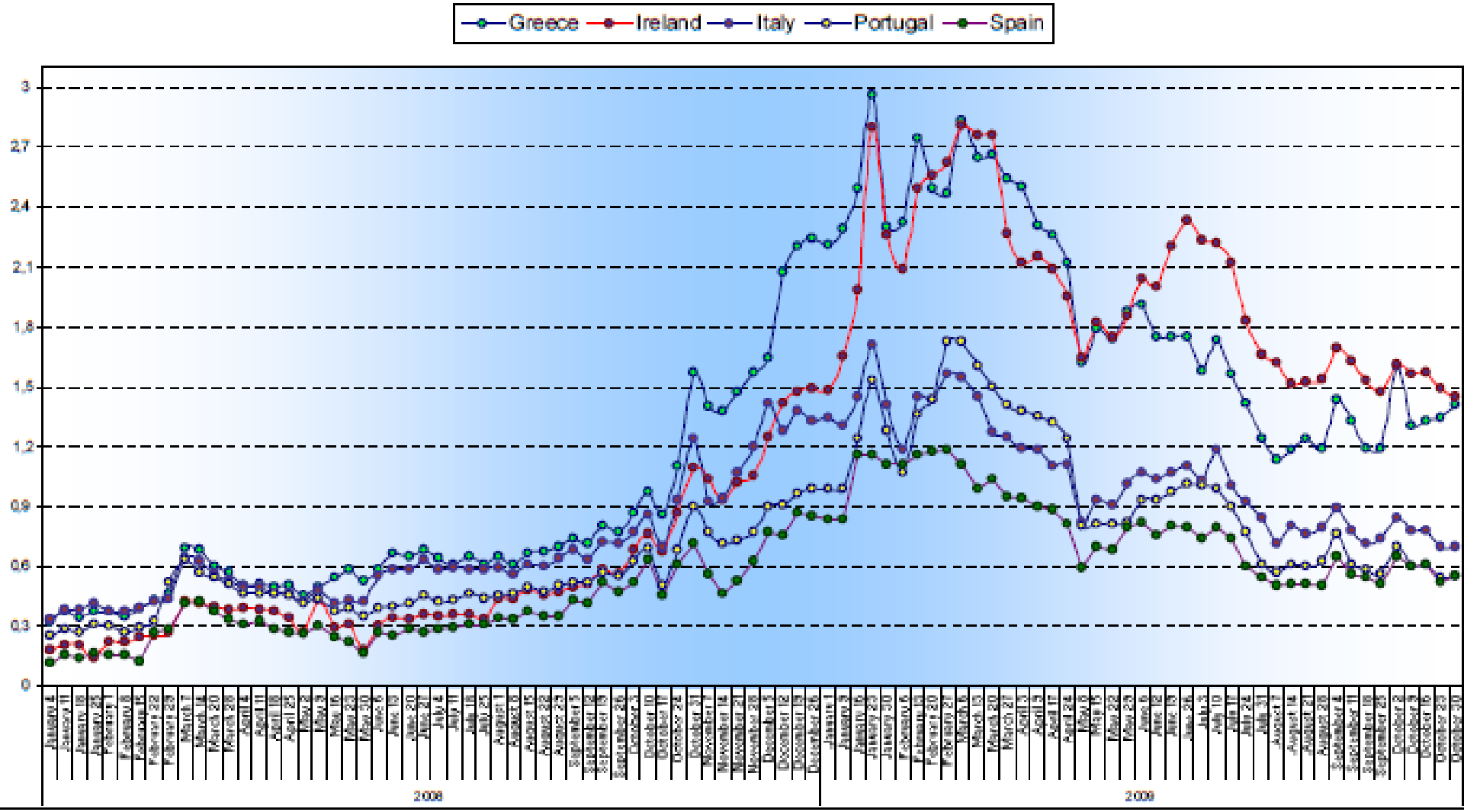
Graph 1: Spreads against 10-year bund

(in percentage points; weekly data on Friday; January 4, 2008 to October 30, 2009)



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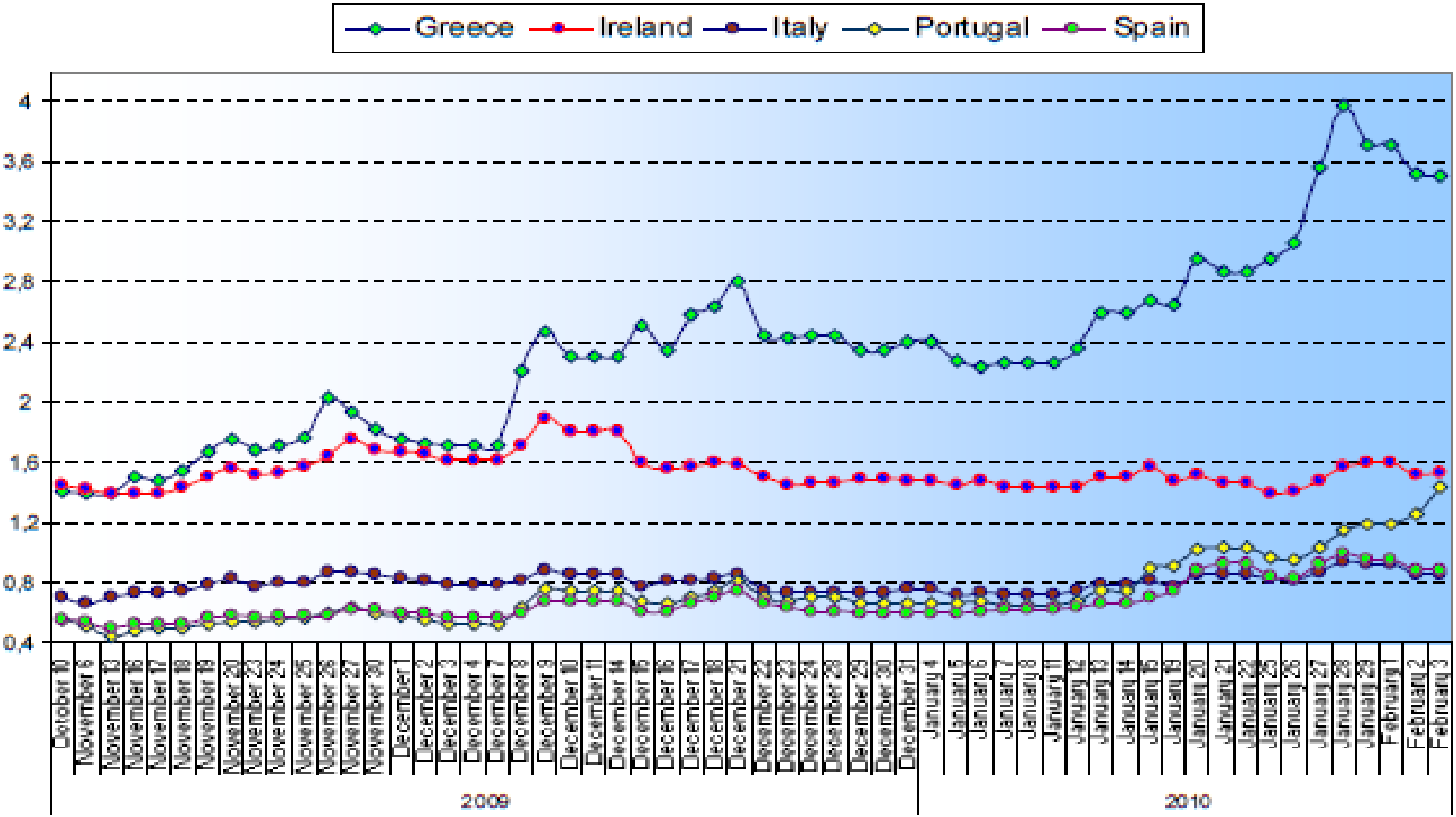
Graph 2: Spreads against 10-year bund

(in percentage points; weekly data on Friday; daily data from November 16 onwards)



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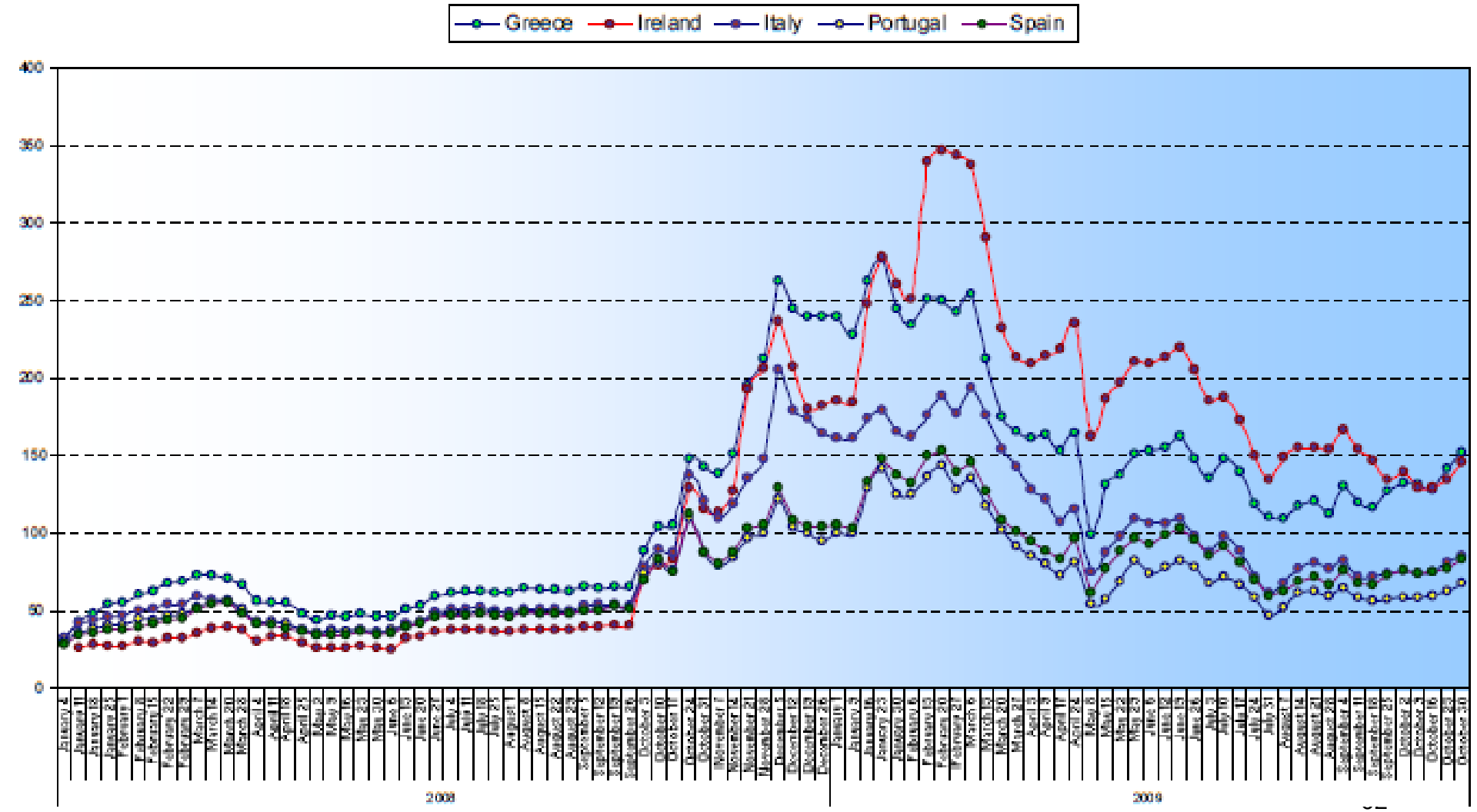
Graph 3: 10-year CDS speads

(in basis points; weekly data on Friday; January 4, 2008 to October 30, 2009)



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Graph 4: 10-year CDS spreads

(in basis points; weekly data on Friday; daily data from November 16 onwards)