Financial Crisis and the Future Path of the Global Economy

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Today's Great Recession: The Global Financial Crisis Continues for 23 months

1) A rapid global slowdown
2) How it all began in the financial sector

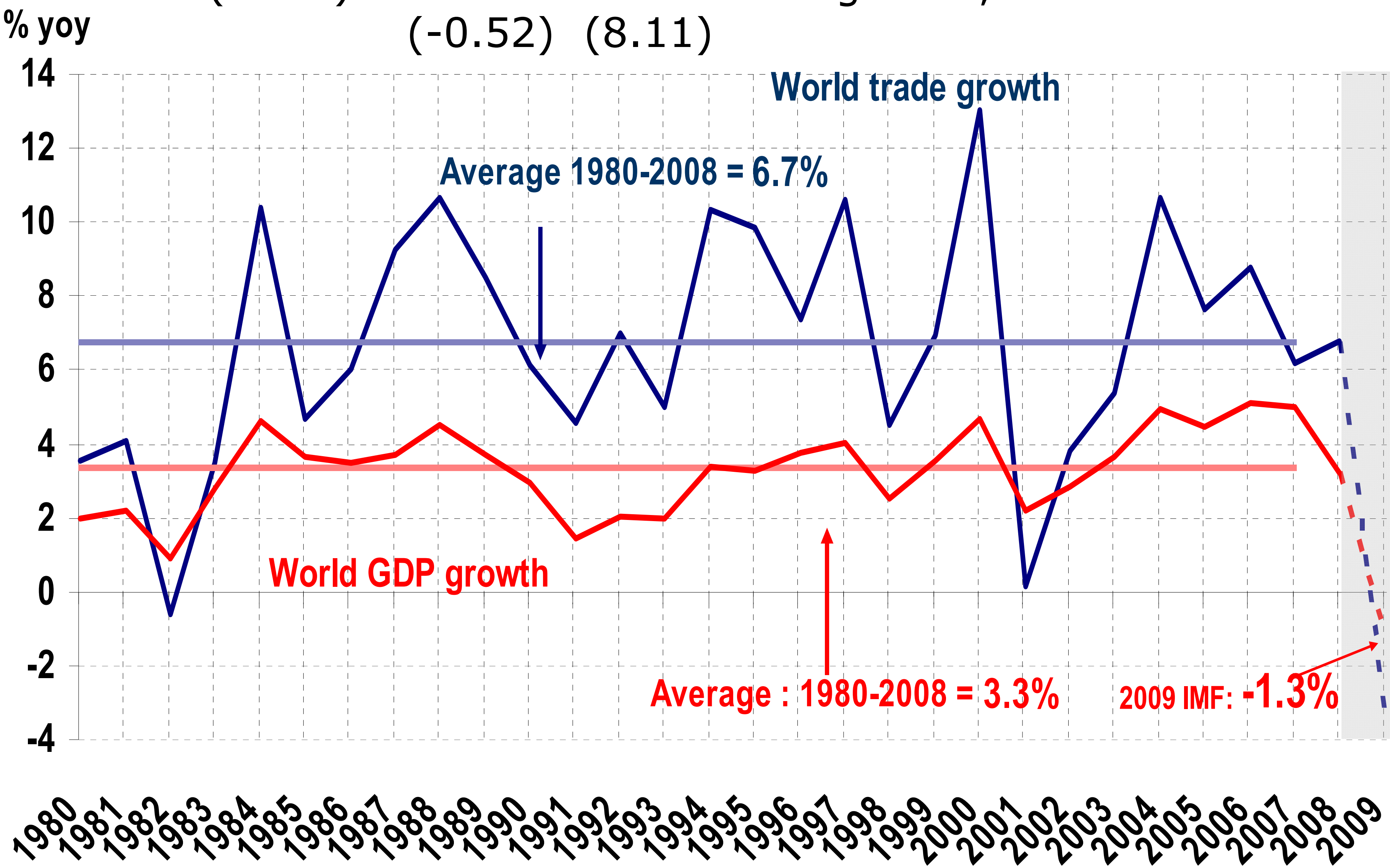
I.1 The global economy is facing the deepest – and probably longest – recession of the post-war period

- ✓ **We expect a significant deceleration in 2009 and a sluggish recovery in 2010**

Source: World Bank, IMF

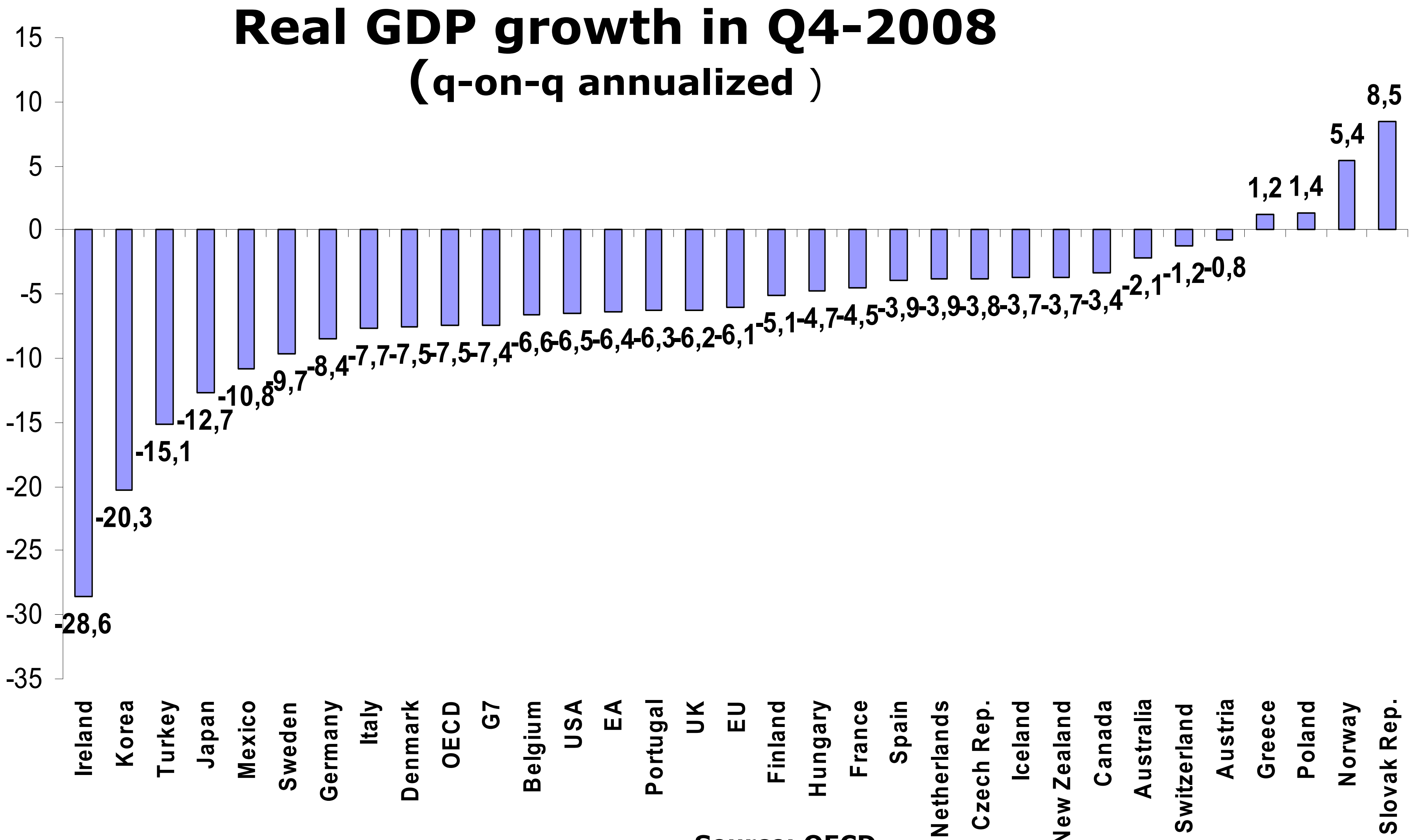
I.1 World Trade collapses in Q4-2008

$$\Delta(\text{trade}) = \underset{(-0.52)}{-0.50} + \underset{(8.11)}{2.28^*}\ \text{GDP growth}, \quad R^2 = 67\%$$



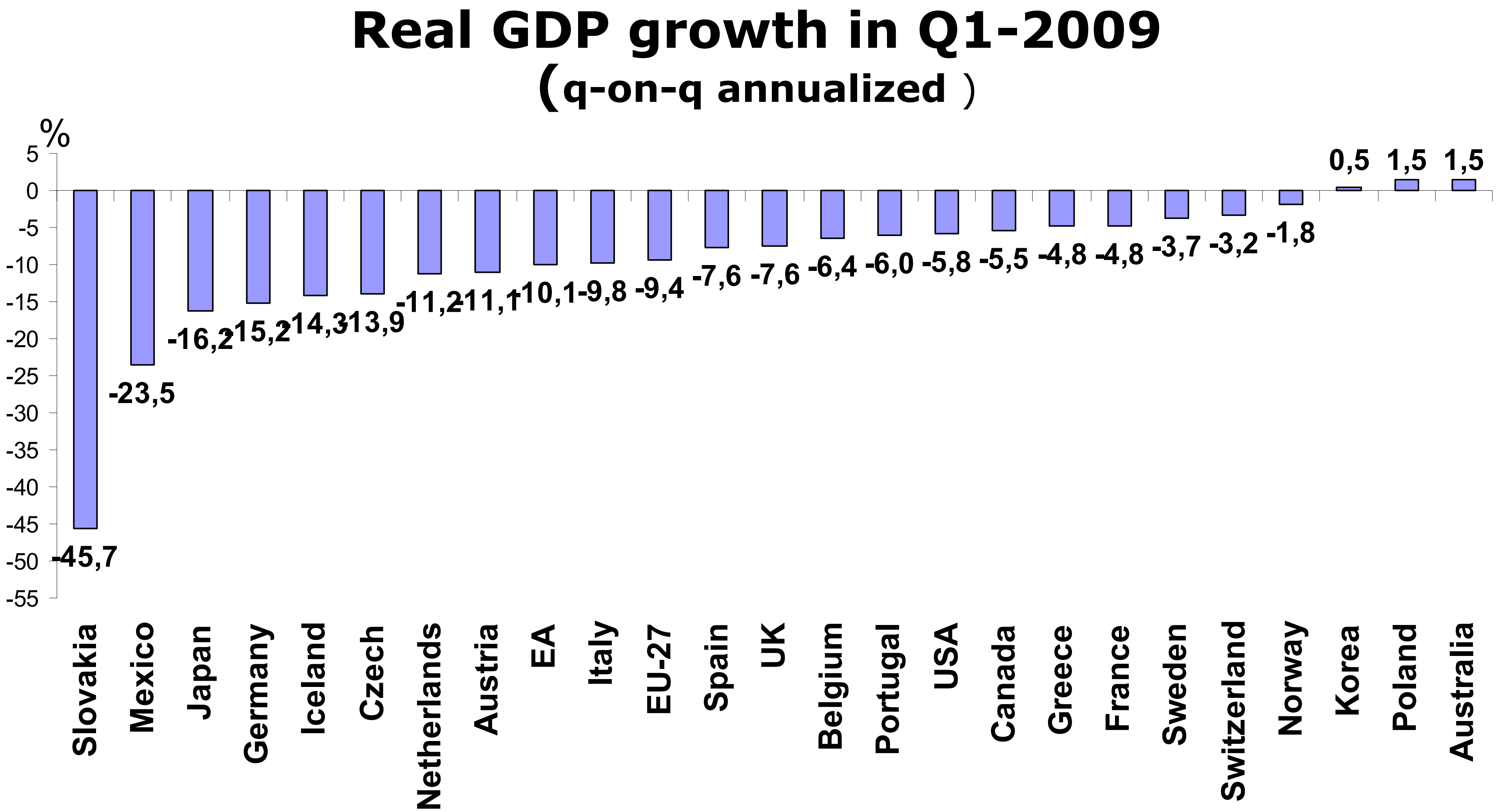
Source: IMF, OECD, Eurobank Research

I.1 Fast decline in Q4 2008



Source: OECD

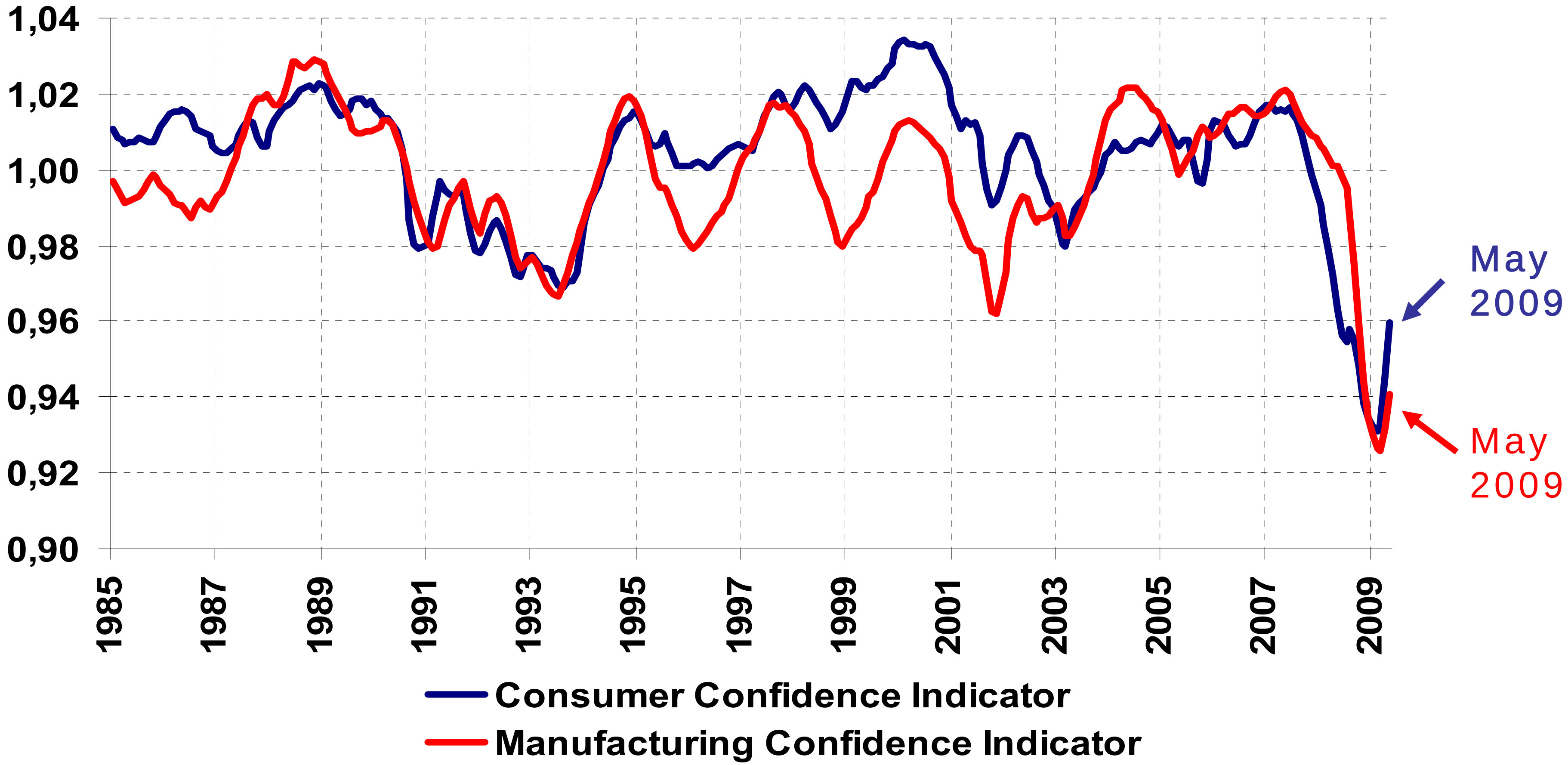
I.1 …that continues into Q1 2009



Source: OECD

I.1 Global Leading Indicators in an early free fall … now have bottomed out

OECD Confidence Indicators of households and manufacturing enterprises



Source: Ecowin, OECD

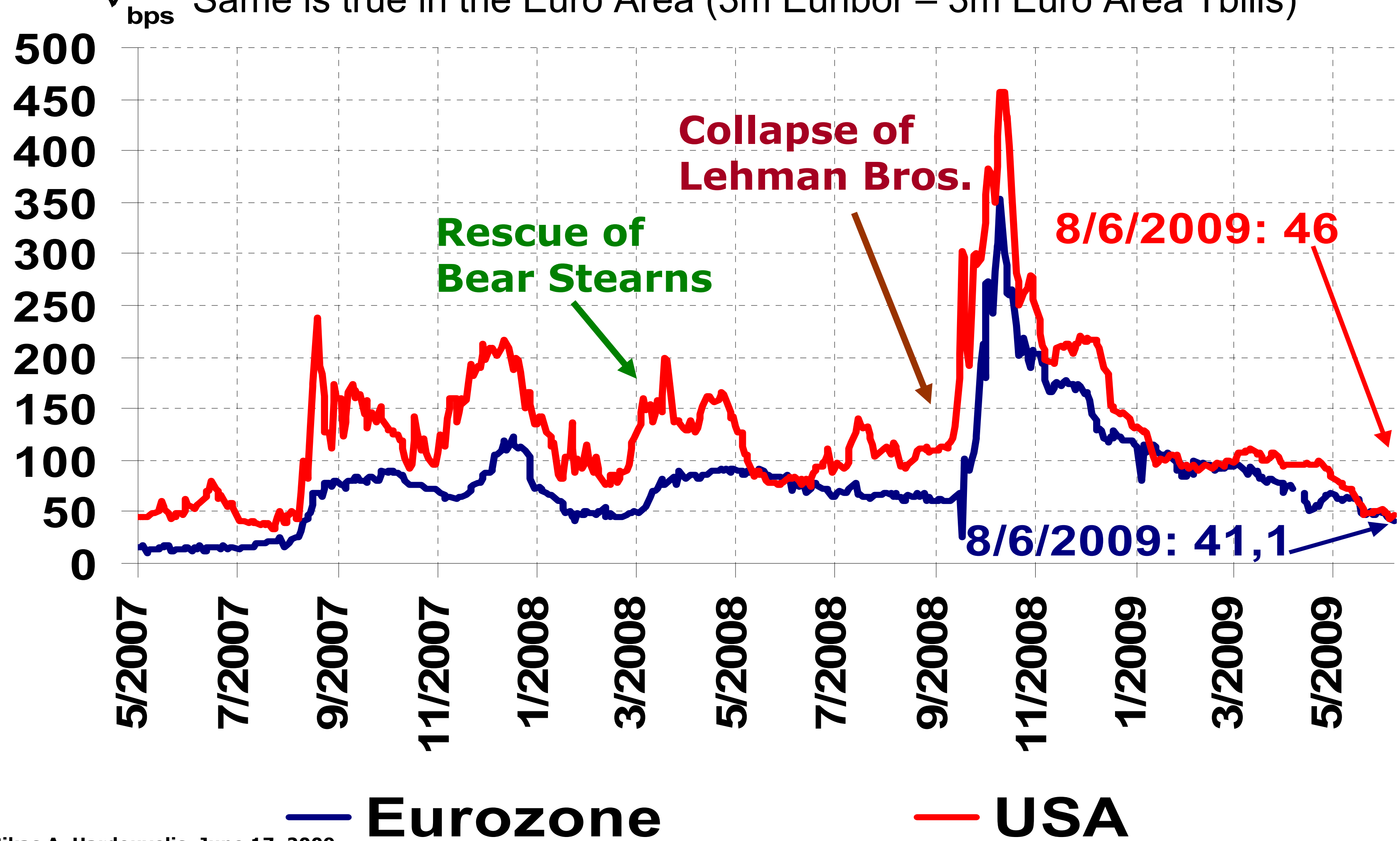
I.1 Consensus forecasts: Little has changed since February for the US, a lot for the other countries

		2009f			2010f		
Real GDP growth	**2008**	**as of Febr. 09**	**as of June 09**	**Delta**	**as of Febr. 09**	**as of June 09**	**Delta**
US	1.1	-2.1	-2.8	-0.7	1.0	1.8	0.8
Eurozone	0.8	-1.8	-4.2	-2.4	0.8	0.5	-0.3
Japan	-0.6	-2.9	-6.7	-3.8	0.7	1.0	0.3
China	9.0	6.5	7.1	0.6	8.0	8.3	0.3
Brazil	5.1	2.9	0.6	-2.3	3.9	3.3	-0.6
Russia	5.6	-0.7	-2.9	-2.2	3.2	2.3	-0.9
India	7.4	5.2	4.8	-0.4	6.0	6.3	0.3

		2009f			2010f		
Inflation	**2008**	**as of Febr. 09**	**as of June 09**	**Delta**	**as of Febr. 09**	**as of June 09**	**Delta**
US	3.8	-0.4	-0.4	0.0	1.9	2.0	0.1
Eurozone	3.3	1.0	0.0	-1.0	1.8	0.9	-0.9
Japan	1.4	-0.9	-1.5	-0.6	-0.3	-0.3	0.0
China	5.9	0.5	-0.5	-1.0	2.5	1.0	-1.5
Brazil	5.7	5.3	4.4	-0.9	4.5	4.3	-0.2
Russia	14.1	11.0	13.8	2.8	9.1	11.5	2.4
India	8.3	5.4	5.0	-0.4	4.4	4.3	-0.1

I.2 History of financial crisis is seen in the rise of short-run quality spreads

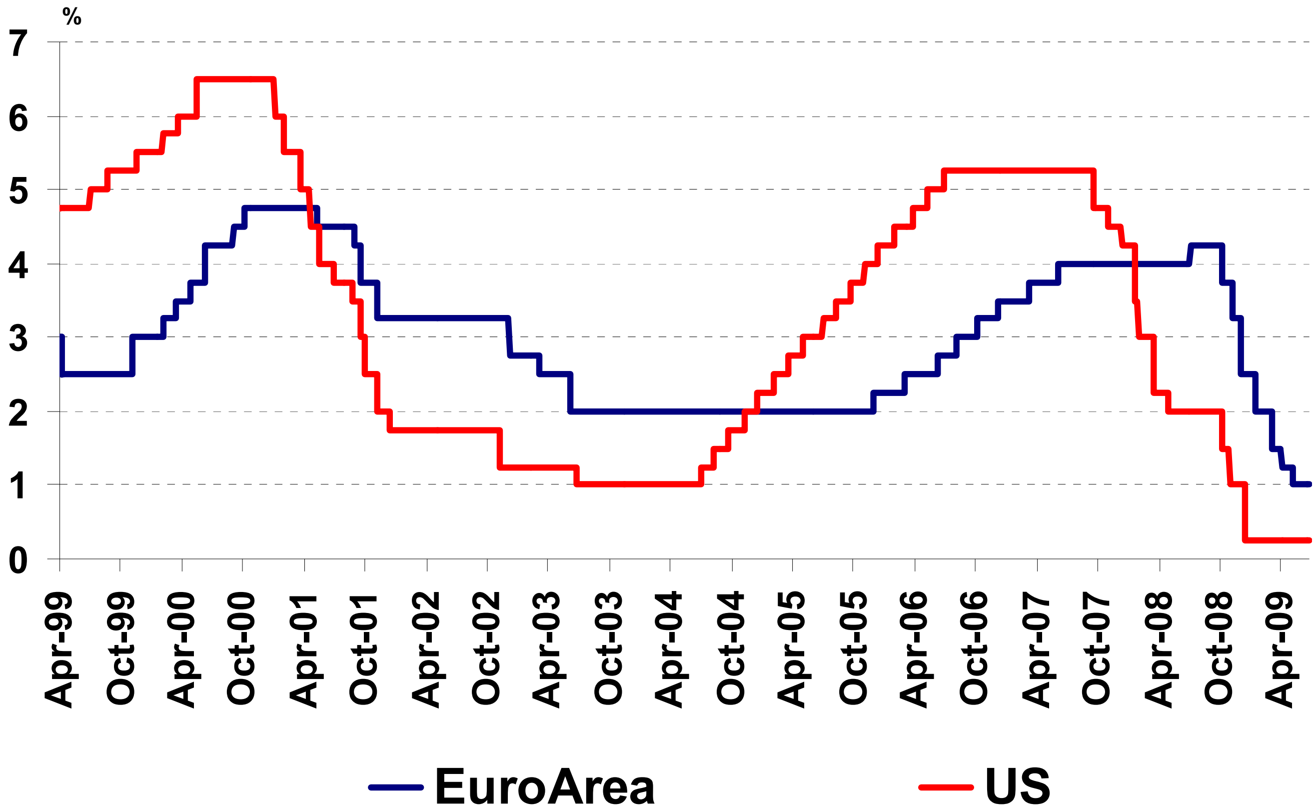
- ✓ US TED spread, 3m Eurodollar - 3m Tbill, points to an increase in **default premia** and a **flight to quality**
- ✓ Same is true in the Euro Area (3m Euribor – 3m Euro Area Tbills)



I.2 It all began in the financial sector

- ✓ The crisis is already 23 months old
- ✓ **Many underlying causes**:
  1) **Large global imbalances** ⇨ cheap money or liquidity from surplus countries channeled mainly to US
  2) **Housing bubbles & the subprime explosion** without adequate bank controls on credit risk, e.g. interest rate only loans, etc.
  3) **Securitization** and its new complicated and non-transparent layers in CDOs, CDOs squared, together with new private players outside the reach of Fannie Mae and Fredddie Mac
  4) "**Greed**," i.e. the quest for yield with a simultaneous underestimation of risk, that is, the opposite of the "*Peso Problem*". This is a recurrent feature of crises and endemic to capitalism
  5) **Lax regulation** – Abolition of Glass-Steagall Act in 1999, new lenient SEC leverage ratios on investment banks, regulatory arbitrage and SPVs
  6) **Perverted incentives** by Rating Agencies, corporate managers, etc.
  7) **New equity culture** in traditional banking based on up-front fee generation
  8) **Enormous Leverage** based on **short-term** borrowing by FI investing on their own account. This factor is very important in **spreading the crisis**.

I.2 Intervention Rates



- ✓ **coordinated rate cuts and liquidity injections** by major Central Banks.
- ✓ ECB constrained by its mandate.

- ✓ The transmission mechanism of monetary policy is paralyzed → **Quantitative & Qualitative Easing**
- ✓ **Fiscal Policy** the only effective tool
- ✓ As long as the crisis continues, the problem is **deflation**. Some analysts worry about the risk of inflation resurgence due to the current monetary and fiscal expansion

I.2 Bank Rescue Plans

	Package Amount*	% of 2009 GDP
Italy	€ 52 bn	**3.2 %**
Belgium	€ 19.6 bn	**5.5 %**
Greece	€ 28 bn	**10.8 %**
Norway	NOK 350 bn	**13.5 %**
Portugal	€ 24 bn	**13.9 %**
USA	$ 2,500 bn	**17.2 %**
France	€ 360 bn	**18.0 %**
Germany	€ 500 bn	**19.5 %**
Spain	€ 250 bn	**22.4 %**
Finland	€ 54 bn	**27.3 %**
Austria	€ 100 bn	**34.2 %**
Netherlands	€ 237 bn	**39.1 %**
Sweden	SEK 1,565 bn	**49.3 %**
UK	£ 1,163 bn	**78.7 %**
Ireland	€ 410 bn	**220.0 %**
Total EU-27	€ 3,460 bn	**26.8 %**

US Rescue Plans

- ✓ Initial Rescue Plan
  "**TARP**" → $700 bn, 5% of GDP

- ✓ New Rescue Plan
  "**Financial Stability Plan**"→
  $2 trillion, 14% of GDP

Nationalizations	
Countries	Financial Institutions
Ireland	Anglo Irish Bank, Bank of Ireland, Allied Irish Bank
UK	RBS, Bradford & Bingley, Northern Rock, Lloyds Banking Group
Germany	Commerzbank
Iceland	Landsbanki, Kaupthing Bank
US	Fannie Mae, Freddie Mac, AIG

* Includes capital injections, asset purchasing and guarantees on debt issuance

I.2 Eurosystem monetary policy: unconventional measures

- ✓ ***9/8/2007***: *The ECB was the first Central Bank to provide €95 bn to the market (through a fixed rate operation with full allotment) within a few hours.*
- ✓ ***17/12/2007***: *Extension of the duration of main refinancing operations from 1 week to <u>up to 2 weeks</u>, by providing **unlimited funds**.*
- ✓ ***4/3/2008***: *Extension of the duration of longer-term refinancing operations from 3 months to <u>up to 6 months</u>.*
- ✓ ***15/10/2008***: *Expansion of the list of assets eligible as collateral in Eurosystem credit operations*

  (eg. marketable debt instruments denominated in other currencies than the euro, namely USD, GBP and JPY, euro-denominated syndicated credit claims governed by UK law)
- ✓ ***15/10/2008 up-to-date***: *Provision of <u>unlimited funds</u> to all main refinancing operations.*
- ✓ ***30/10/2008 up-to-date***: *Provision of <u>unlimited funds</u> to all longer-term refinancing operations.*
- ✓ ***7/5/2009***: *Extension of the duration of longer-term refinancing operations from 6 months to <u>up to 1 year</u>.*

I.2 Fiscal Packages

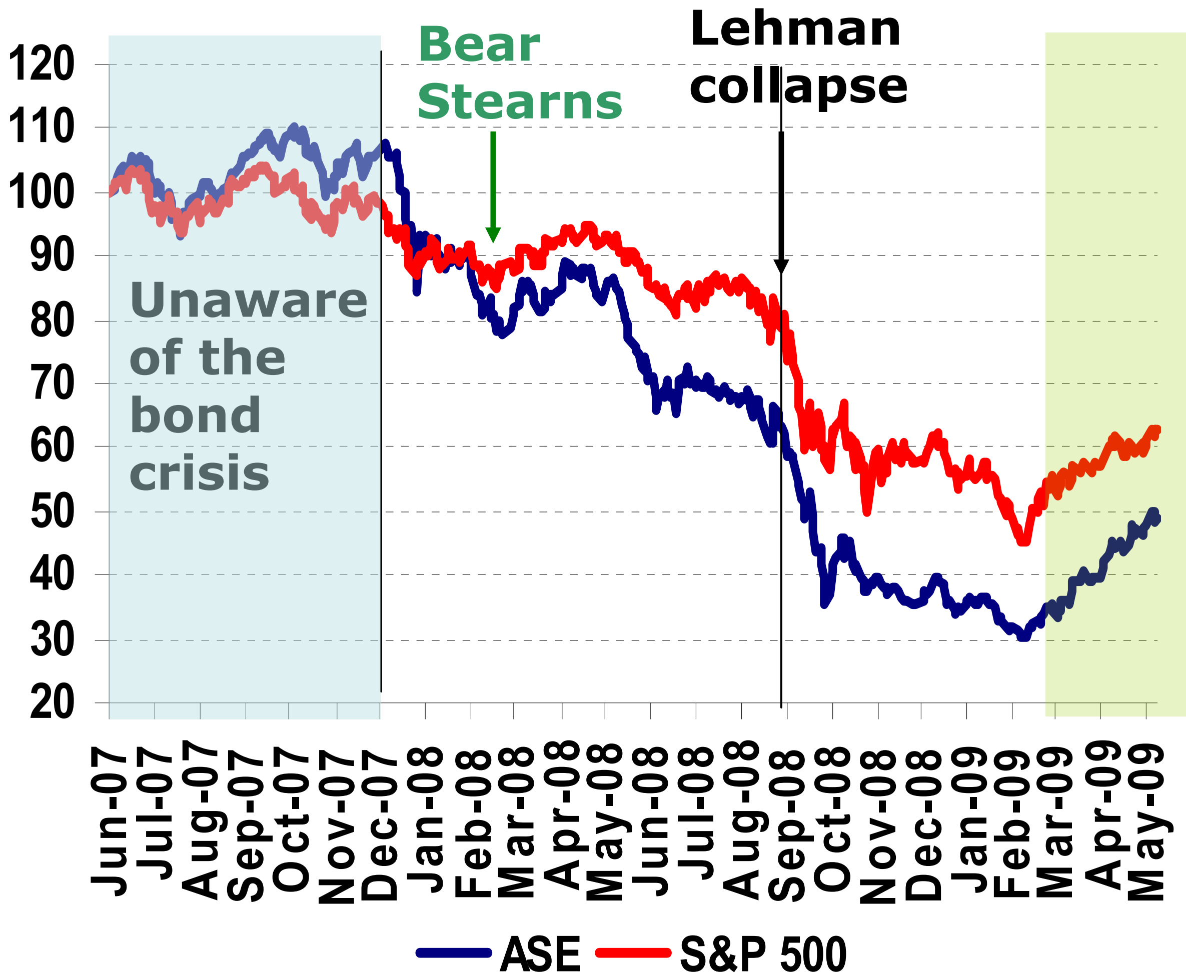
	Amount	% of 2009 GDP
US 2008 2009-19	\$ 168 bn \$ 789 bn	**1.2%** **5.5%**
EA-16 2009-10	€ 245 bn	**2.6%**
China 2009-10	CHY 4 tr	**13.0%**

	Fiscal deficit (% GDP)	
	2008	**2009**
US	-3.2%	-11.9%
EA-16	-1.7%	-4.0%
China	-0.4%	-2.8%

Source: European Commission, Congressional Budget Office, Economist

- ✓ **Not enough fiscal stimulus in Europe,** according to the US Administration
- ✓ **Will Western Europe eventually commit funds for Eastern Europe**? It is particularly exposed to Eastern Europe (% GDP: **82% Austria, 53% Switzerland, 49% Netherlands, 42% Belgium**), so there is motivation for help
- ✓ Eastern European External bank liabilities to Western Europe **\$1.51 tr** from a total of \$1.66 tr as of Sept 2008 through BIS reporting banks (Greek banks not included).

I.2 Stock markets appear to vote for an end of the crisis – Are they right?



- ✓ Stock markets became aware of the crisis in Jan. 2008
- ✓ Post-Lehman fear & panic (Sept. 2008)
- ✓ Since Mid-March 2009 a bullish rally: (i) mainly **Decline of fear** (risk premia), (ii) plus acceleration of decline in GDP stopped

- ✓ **Can we trust a market that was oblivious of the crisis for 6 months?**

II.
Open Questions for the Future

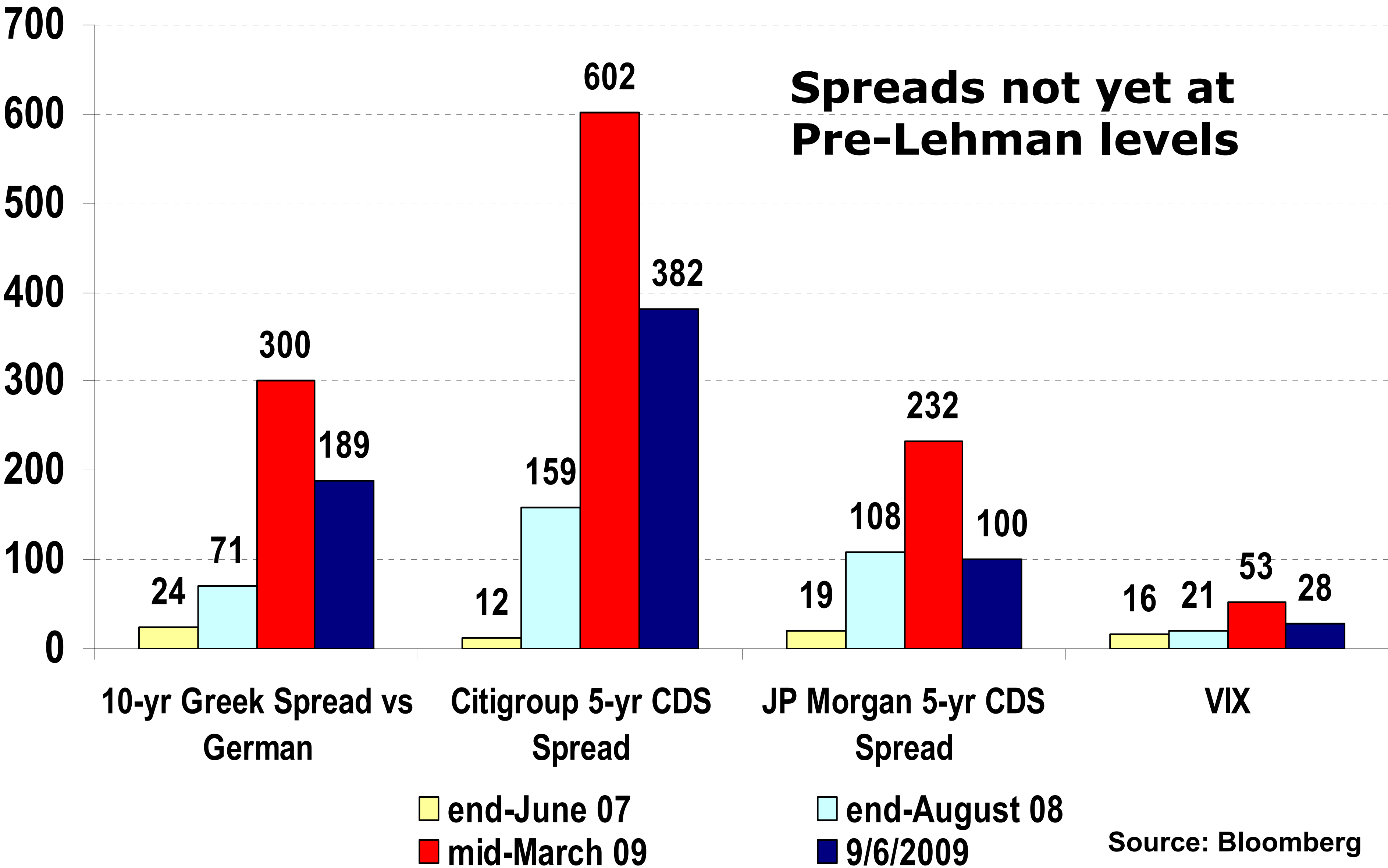
1) Is the financial crisis over?
2) How will the post-crisis global economy look like?

II.1 Is the financial crisis over?

- ✓ **The G-20 decisions – especially on financing the IMF - made a positive difference** ***(especially for New Europe)***
- ✓ **US stress tests also made a difference, as they have taken out a large part of the uncertainty from the market,** ***(but have not eliminated it)***
- ✓ **Financial spreads have shrunk (*****but still remain large by historical standards, hence risk aversion is still present)***
- ✓ **Liquidity normalizes** ***(but not fully yet)***

- ⇩ **NPLs will rise with a delay as the recession progresses, extending the financial stress forward**
- ⇩ **No European stress tests yet**
- ⇩ **Bank losses are amortized over time ⇨ vulnerabilities remain**
  (⇨ US short rates will be kept low for some time to allow bank profitability to help clean up their balance sheets)
- ⇩ **Will there be another negative surprise as in September 2008?**
  Some worry about the effects of (i) A sudden collapse of the dollar together with a policy mistake (ii) The commercial real estate market losses

II.1 Risk aversion: Down but not out



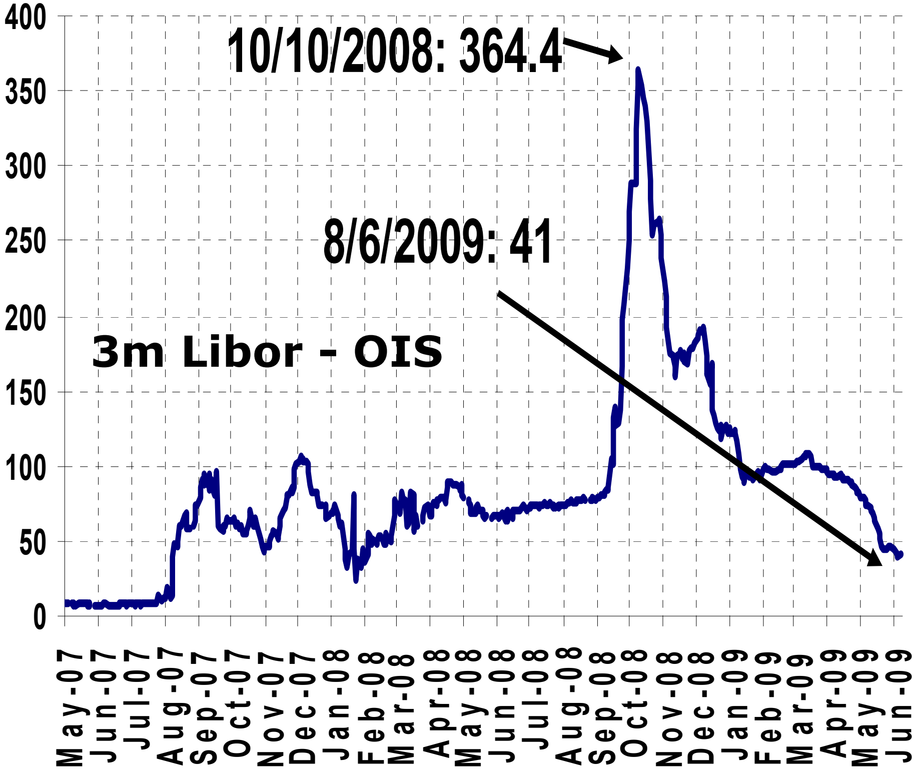
Source: Bloomberg

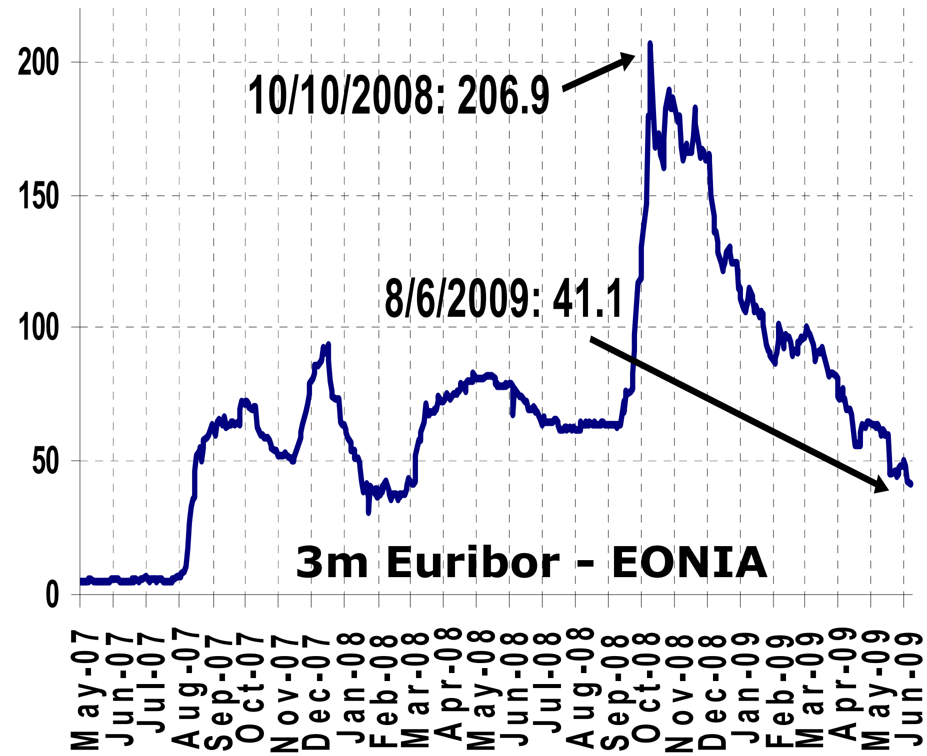
II.1 Liquidity normalizes, but not fully yet

US

Euro Area

Uncovered minus covered 3-month inter-bank rates



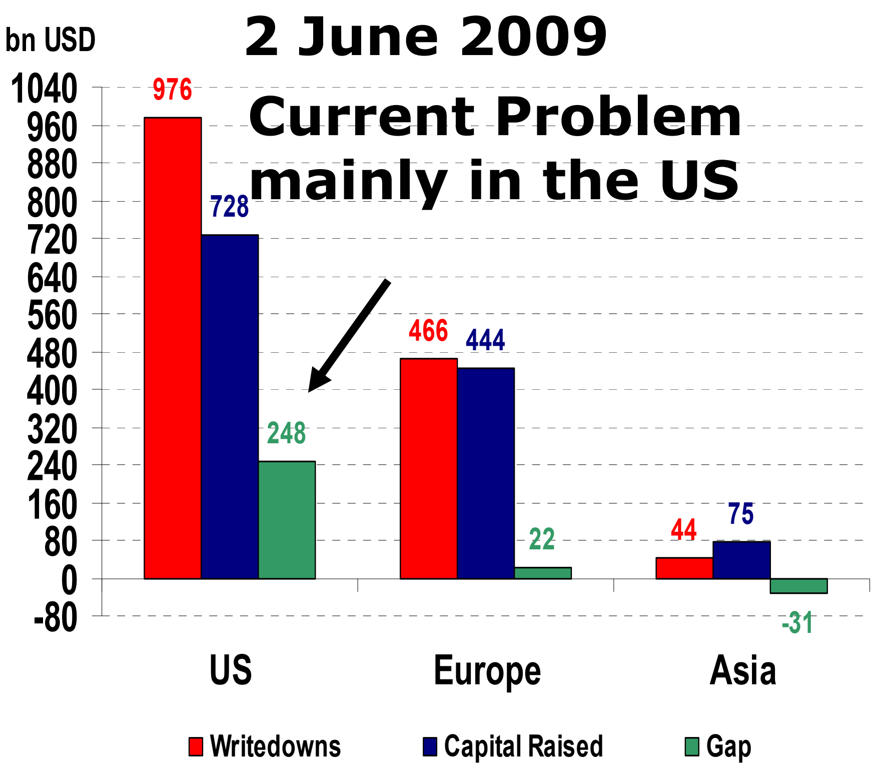


II.1 FI Insolvency: The biggest global risk

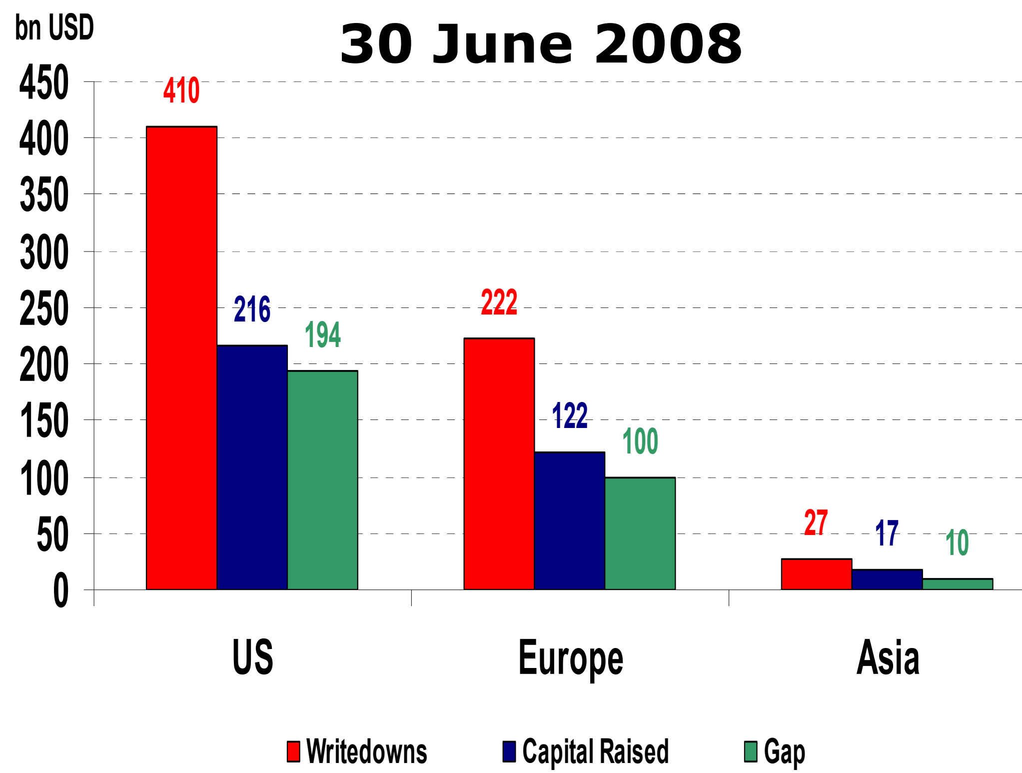
✓ **IMF** estimates that total global write-downs will reach **$4.1 trillion** at end-2010, $2.7 in USA, $1.2 in Europe, $0.2 in Japan

All Financials*

Total Write-downs: $ 1486.1
Total Capital Raised: $ 1247.9
Total Gap: $ 238.2



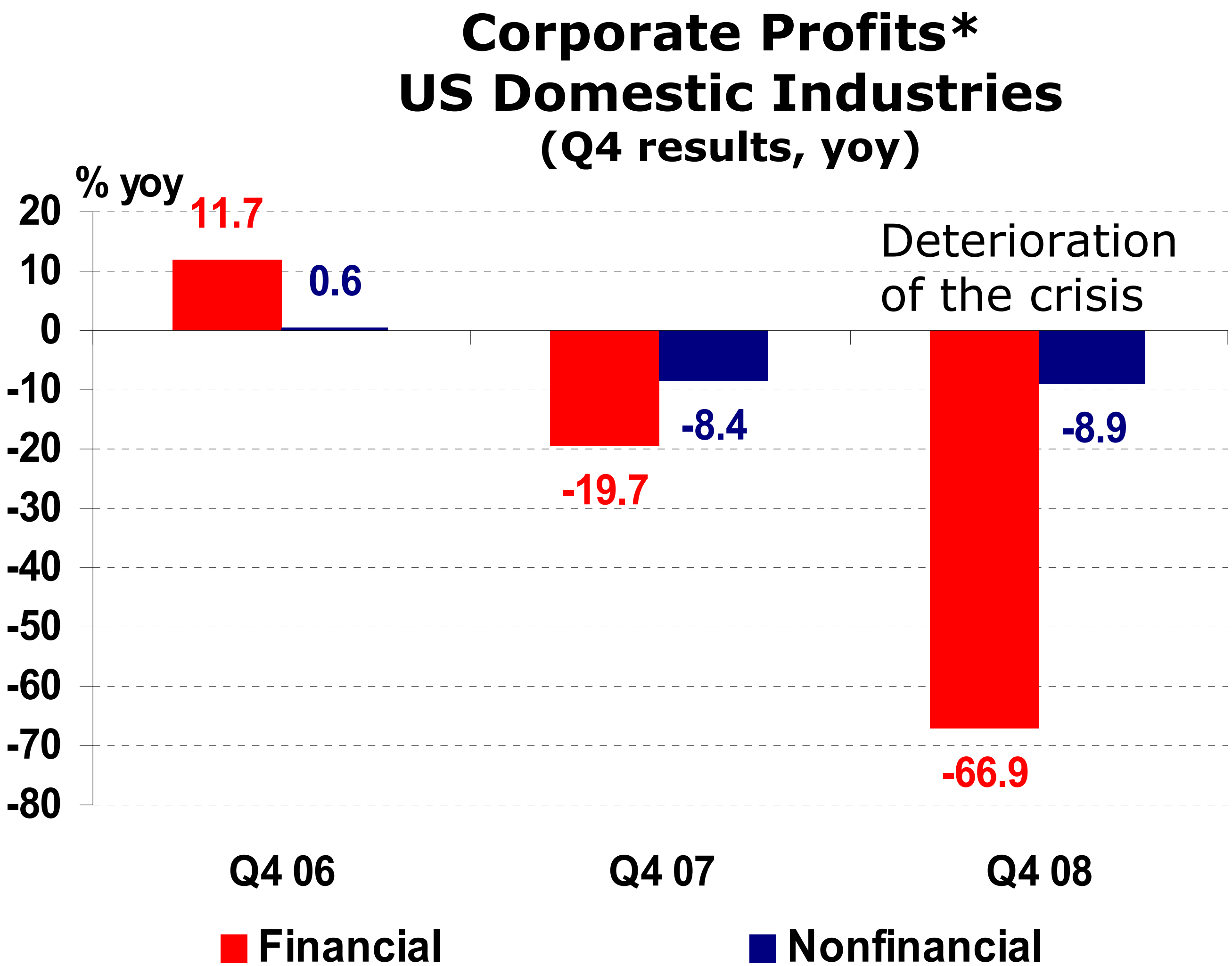
Total Writedowns: $ 658.5
Total Capital Raised: $ 355.3
Total Gap: $ 303.2



* Banks/Brokers, Insurers, GSEsx

Source: Bloomberg

II.1 FI profits deteriorate



- ✓ Asset losses affect the Income Statement
- ✓ Effort to hide losses by dressing up the Balance Sheet is no longer feasible as the crisis prolongs for 23 months

Source: US Department of Commerce, Bureau of Economic Analysis, National Economic Accounts

II.1 The removal of toxic assets

Public-Private Partnership Investment Program → $500 bn - $1 tril

✓ Using **$75** to **$100 bn** in **TARP** capital (of its $700 bn), is designed to attract private capital to generate $500 bn to $1,000 bn of purchasing power in order to buy eligible legacy assets from participating financial institutions in partnership with the FDIC, the Federal Reserve and the Treasury.

<u>Sample Investment Under the Legacy Loans Program</u>

Step 1: A bank seeks to divest a pool of residential mortgages of **$100** face value

Step 2: FDIC determines whether or not to leverage the pool at a **6 - to - 1** debt-to-equity ratio.

Step 3: FDIC auctions the pool to several private sector bidders. The highest bid – in this example, **$84** – would be the winner and forms a Public-Private Investment Fund to purchase the pool of mortgages.

Step 4: Of this $84 purchase price, the FDIC provides guarantees for **$72** of financing, leaving **$12** of equity.

Step 5: The Treasury then provides 50% of the equity funding required on a side-by-side basis with the investor. In this example, Treasury invests approximately **$6**, with the private investor contributing **$6**.

Step 6: The private investor manages the servicing of the asset pool and the timing of its disposition on an ongoing basis – using asset managers approved and subject to oversight by the FDIC.

Source: US Department of the Treasury

II.1 US stress test results

- ✓ 19 US banks participated, with year-end 2008 assets above $100 bn, with total assets of about $10 trillion, representing 70% of total bank asset size in USA
- ✓ Banks projected credit losses and revenues for 2009-10 under two scenarios

Scenario	2009	2010
Real GDP		
Baseline	-2.0	2.1
Adverse	-3.3	0.5
EFG Forecasts	-2.9	1.3
Unemployment Rate		
Baseline	8.4	8.8
Adverse	8.9	10.3
EFG Forecasts	9.5	10.0
House Prices		
Baseline	-14	-4
Adverse	-22	-7
EFG Forecasts	-23	-7

Criticism: The tests were anything but stressful

Stress Test Results

(Adverse Scenario)

Estimated losses 2009-2010:	**$599 bn**
Less: losses of Q1-2009 already in capital figures	**$ 64 bn**
Less: Est. revenues 2009-2010:	**$350 bn**

Est. need for additional capital buffer:	**$185 bn**
Less: Planned capital actions and excess Q1 2009 earnings:	**$110 bn**

Total capital requirement	**$75 bn**

II.1 Stress test results: A comparison

	Fed	**IMF**	**Roubini**
Expected write-downs by the 19 banks* in 2009-10	$599bn	$385bn	$875bn
Less: Portion already in capital figures (purchase accounting adjustments)	$64.3bn (Fed's stress test results)	$64.3bn (Fed's stress test results)	$64.3bn (Fed's stress test results)
Net write-downs absorbed by the 19 banks 2009-10	$535bn	$321bn	$811bn
Less: Expected net retained earnings 2009-10 for the 19 banks*	$350bn	$210bn	$210bn
Capital that firms need to add to capital buffers to reach the target SCAP capital buffer at the end of 2010	$185bn	$111bn	$601bn
Total capital requirement	**$75bn**	**$0.6bn**	**$491bn**

* Assuming that the 19 banks represent the **70%** of system-wide assets.

✓ Expected write-downs 2009-10: IMF $550bn, Roubini $1250bn

✓ Expected net retained earnings 2009-10 (after taxes & dividends): IMF $300bn

✓ According to Fed's stress test results, planned capital actions and excess Q1 09 earnings are $110.4bn. The **IMF** projections imply that the **banks have bottomed out**, while real pessimists (**Roubini**) suggest that we are **far from finished** with the solvency crisis at the banks.

Sources: IMF, Federal Reserve, The Brookings Institution, EFG Eurobank

II.2 Looking ahead: Slower future growth?

This is not the Great Depression or Capitalism's 1989, yet a severe recession that is likely to leave <u>permanent</u> marks

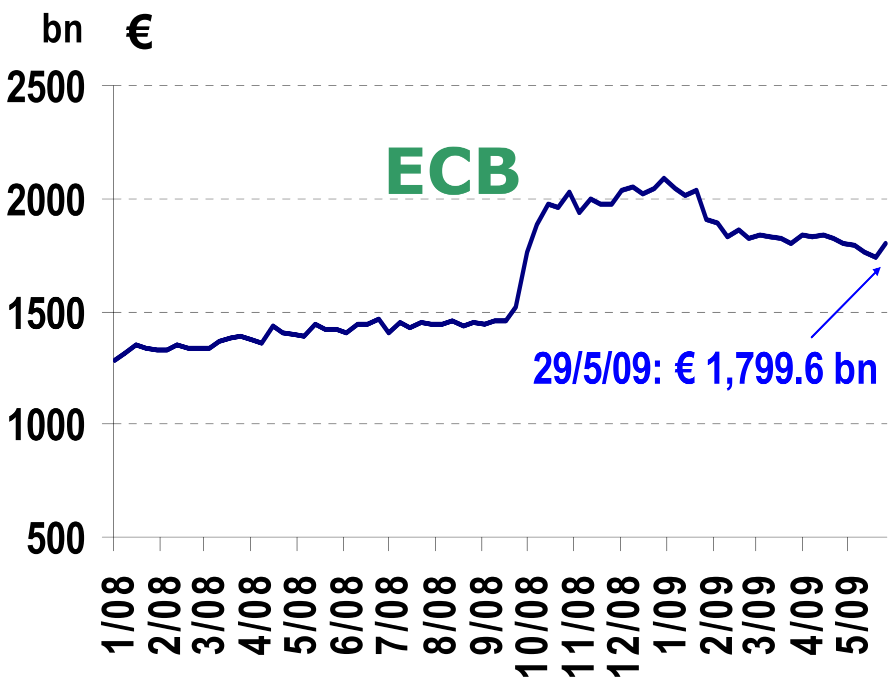
- ✓ Assuming the financial sector stabilizes gradually, still where would future growth originate from? if
  - The US consumer is forced to reduce leverage and increase savings – same is true in other countries with high household indebtness
  - The Chinese consumer is not ready yet
  - India is still a closed economy
  - Europe was never a leader, always following the US, even its economic cycle with a lag
- ✓ Hence, is there a positive probability on the scenario of a decade-long sluggish global growth?
- ✓ More so, if risk premia stay high as fiscal deficits remain high for a long time and central bank interest rates go back up?

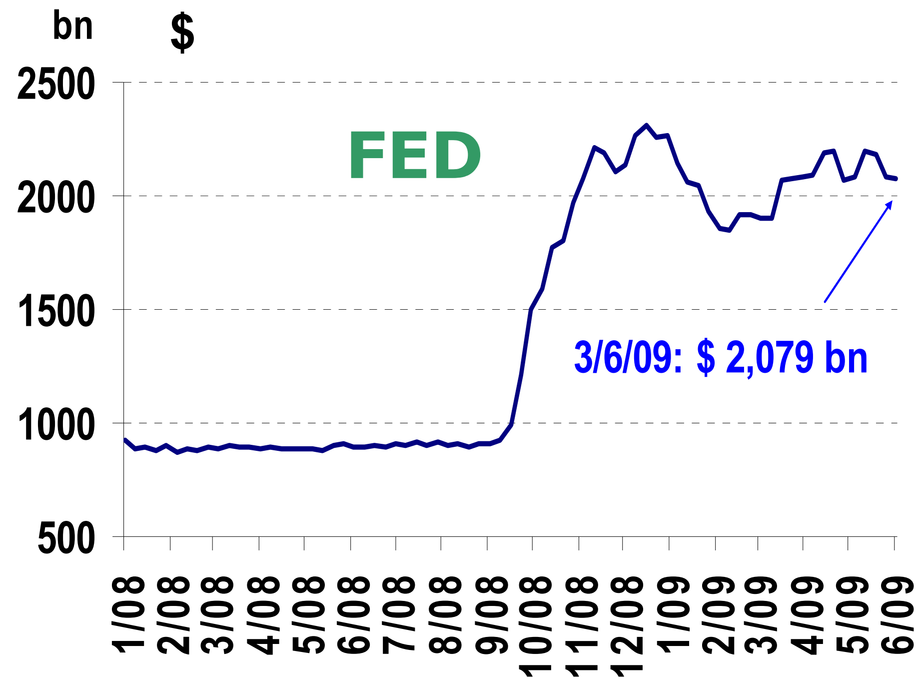
The political question: Is there an exit strategy for the state, or will it stay on as a permanent busybody

At the other end: Is there an **inflation risk** originating from the current expansionary monetary policy?

II.2 Looking ahead: Risk of future inflation?

Central bank balance sheets





Source: ECB, Federal Reserve

- ✓ Can the FED manage to **absorb the liquidity** it has released, once recovery arrives?
- ✓ Will **interest rates stay low** for a long period to support the profitability of banks?
- ✓ Is there a incentive to **inflate away the huge debt** of the non-financial private *(175% of GDP)* and public *(61% of GDP)* sectors in the US?

II.2 Looking ahead: Possible policy changes?

Monetary Policy

- ✓ Will ECB change its focus away from targeting exclusively inflation and begin targeting growth as well?
- ✓ Would the elimination of bubbles become a target variable by the authorities?
- ✓ Will monetary and regulatory policy become more coordinated?

Other policies

- ✓ Counter-cyclical capital ratios are likely – Basel 2 is becoming Basel 2.5
- ✓ Stricter rules on manager compensation, on rating agencies, on securitization, etc.
- ✓ G-20 gain political power – Would they shape policy?
- ✓ A stronger IMF, better able to fight crises
- ✓ Increased awareness that protectionism hurts global growth

II.2 Looking ahead: Deeper & broader regulation?

Deeper and broader regulation required. Will the current G-20 talk for tighter future regulation on the international financial system hold its momentum and lead to:

- ✓ An international agreement on common principles across countries regarding regulation that goes beyond the current Basel Accord?
- ✓ Increased capital charges for bank size, i.e. for Bank Holding Companies that become too big?
- ✓ An extra and more transparent restriction on leverage, i.e. on the ratio of equity capital to tangible assets? (besides the Basel Capital Adequacy restrictions, which are risk-based)
- ✓ A renewed separation of commercial banking from investment banking, along the lines of the earlier Glass-Steagall Act, as many argue for? Can it happen?
- ✓ In Europe, more likely to see tougher regulation. Recent ECOFIN decision to create
  1. European Systemic Risk Board
  2. 3 European Supervisory Authorities for Baking, Insurance and Securities

- ❖ Yet Wall Street appears to continue to hold considerable **political power <u>against future regulatory restrictions</u>**, even in obvious items like over-the-counter markets. Watch the noise over allowing banks that were helped by TARP, once profitable, to leave!! the government umbrella. What a free ride!!

III. Conclusions

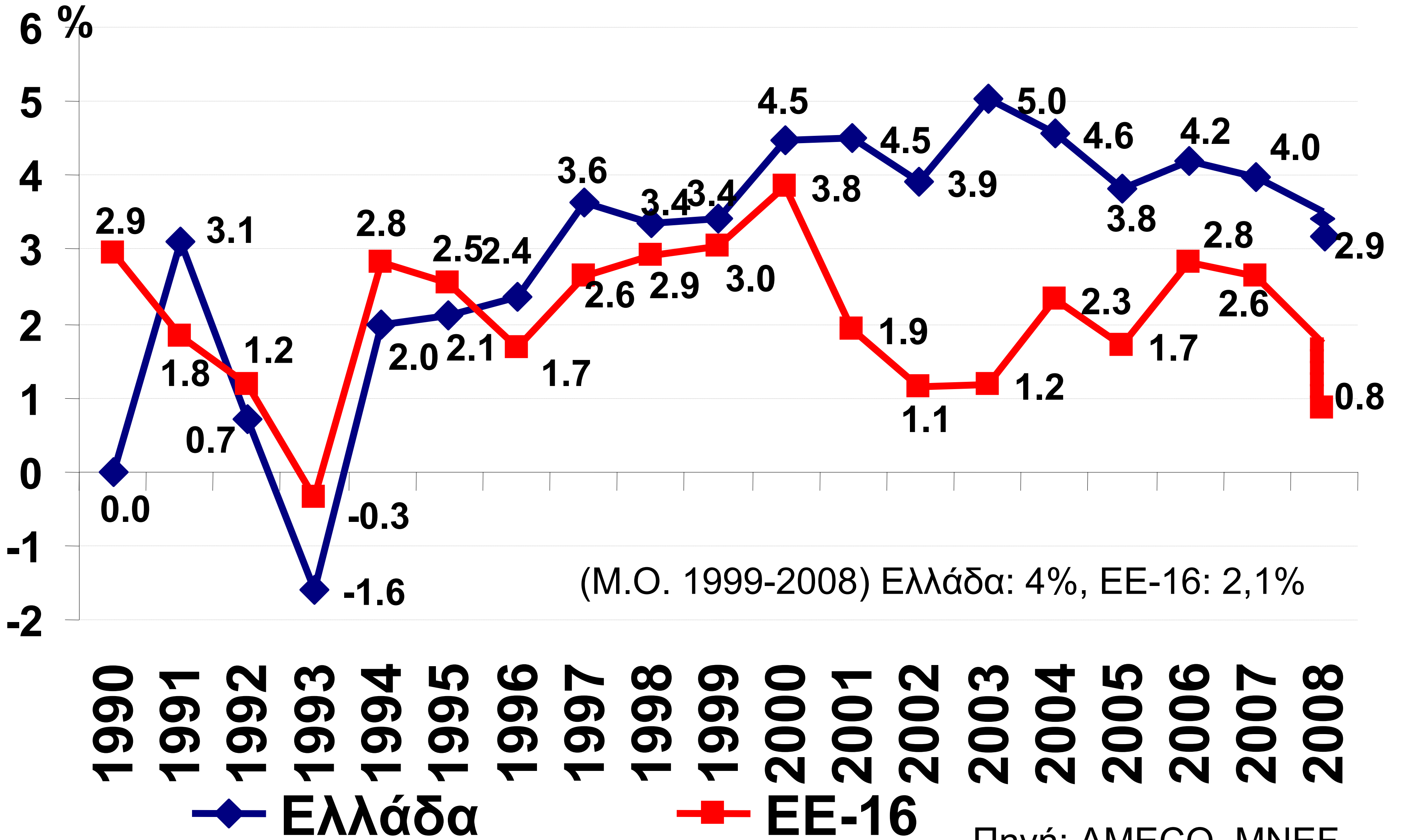
- ✓ The international crisis began in the US shadow banking system, but quickly spread due to high leverage
- ✓ A large part of the uncertainty is out – yet look for stabilization in asset prices before you think the crisis is over
- ✓ Prepare for a decade of lower growth and higher inflation
- ✓ Deeper and broader regulation in the future, particularly in Europe, but no single global regulation or regulator
- ✓ The jury is out on whether Wall Street has lost political power
- ✓ The State is likely to play a bigger role as a supervisor, not as a spender
- ✓ The G-20 have gained political power, representing a relative shift in global GDP towards the developing world and Asia
- ✓ We need a global banking system that will return to its traditional intermediary role and a global economy that will turn to innovation and growth
- ✓ We should ensure society does not ostracize the motive for healthy profits, and the best way to do it is to pay prime attention to **distributional issues**
- ✓ We should emphasize policy coordination in a global village and avoid new protectionism in disguise

APPENDIX

Greece: Opportunity or stagnation and divergence ahead?

1) High living standards & high growth so far
2) Plus a delayed recession
3) Yet, significant internal economic imbalances raise the possibility of a long stagnation period ahead

III.1 Greek rates of growth consistently higher than in the EU-16 average

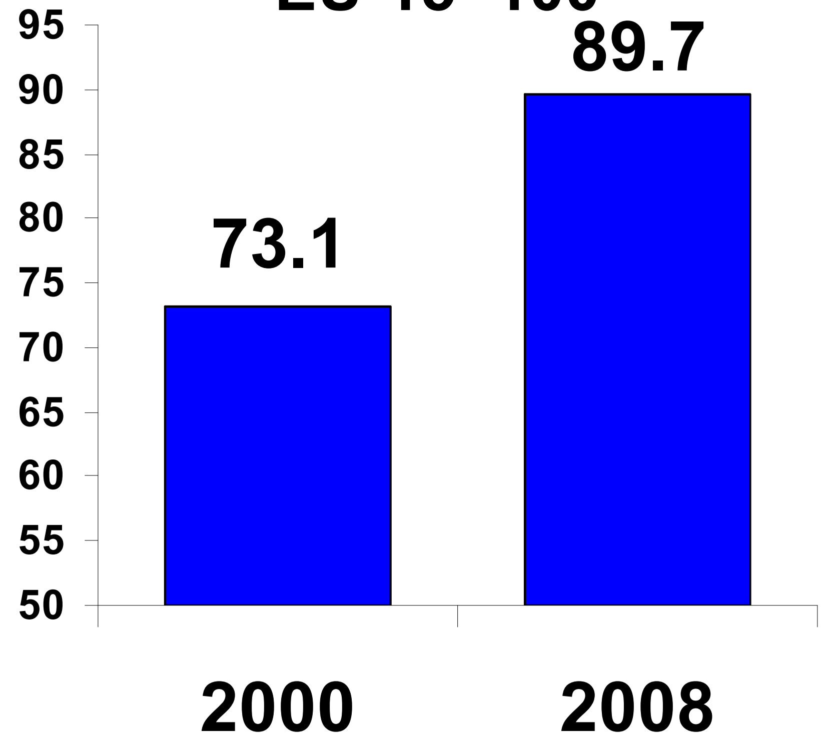


Πηγή: AMECO. MNEF

III.1 Greeks enjoy a high standard of living thanks to real convergence

- ✓ According to the UN's **Human Development Index**, Greece ranks 24th among 175 countries
- ✓ HDI is a composite index and captures: (a) life expectancy, (b) $GDP per capita in PPP, (c) knowledge = (2/3) adult literacy + (1/3) gross enrollment
- ✓ Greece still ranks second to last among the EU-15, with Portugal being last.

GDP per head in PPS
EU-15=100



Yet, Greece's growth model is based on domestic demand and credit expansion

III.1 Contributors to growth

Την τελευταία δεκαετία, η ιδιωτική κατανάλωση και οι επενδύσεις συνεισέφεραν το μεγαλύτερο μέρος της ανάπτυξης ενώ ο εξωτερικός τομέας είχε αρνητική καθαρή συνεισφορά

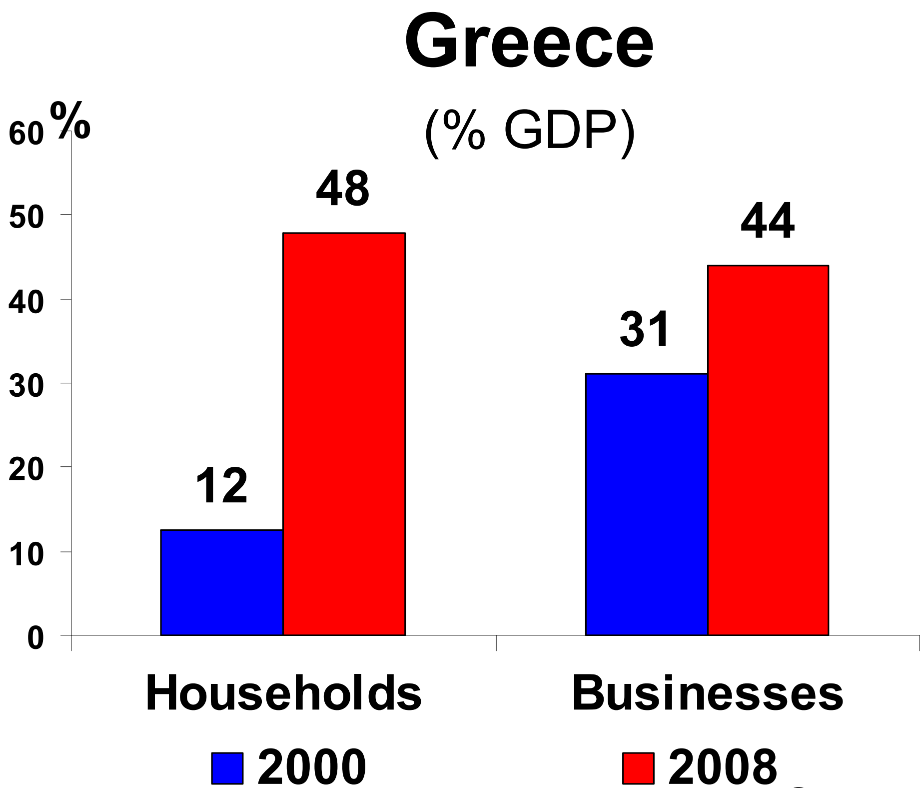
Συνεισφορά στην πραγματική ανάπτυξη του ΑΕΠ

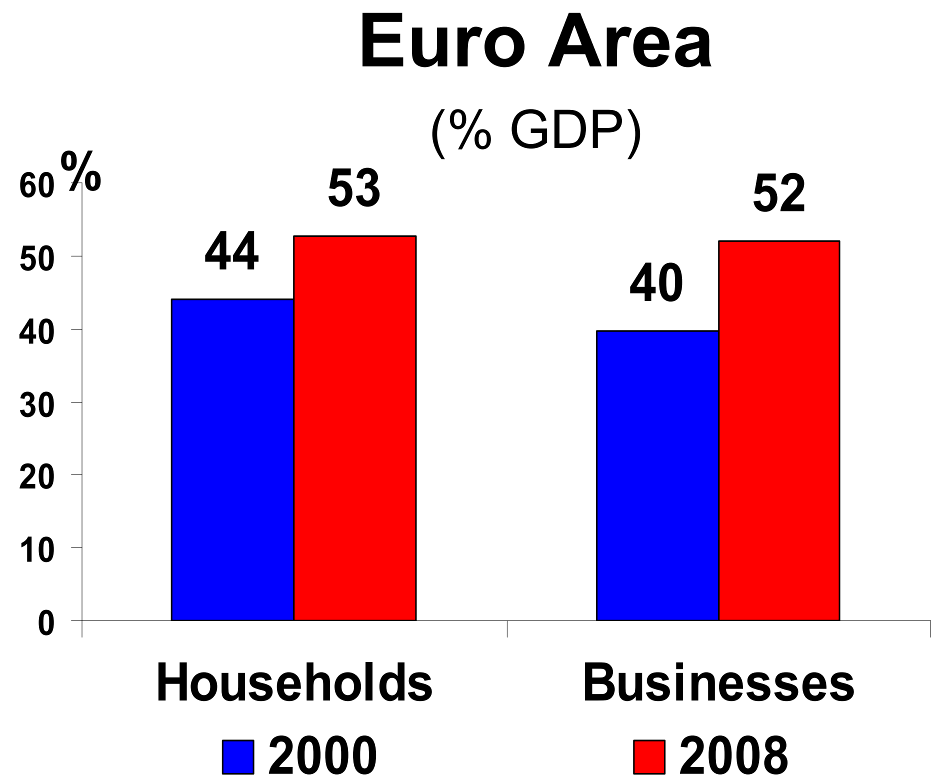
(ποσοστό ανάπτυξης που οφείλεται στον αντίστοιχο τομέα)

Μ.Ο. Δεκαετίας 1999-2008	**Ελλάδα**	**ΕΕ-16**
Ιδιωτική Κατανάλωση	**65,5%**	**52,7%**
Δημόσια Κατανάλωση	**16,6%**	**22,6%**
Συνολικές επενδύσεις	**22,4%**	**21,2%**
Καθαρή συνεισφορά του εξωτερικού τομέα	**-4,5%**	**3,5%**
Εξαγωγές Αγαθών-υπηρεσιών	**30,8%**	**87,5%**
Εισαγωγές Αγαθών-υπηρεσιών	**-35,3%**	**-84%**
Σύνολο	**100%**	**100%**

✓ Σωρευτική αύξηση πραγματικού ΑΕΠ στη δεκαετία 1999-2008: **Ελλάδα 48,5%, ΕΕ-16 22,7%**

III.1 Large credit expansion in the past





Source: BoG, ECB

- ✓ **Private sector credit / GDP* has almost converged to Euro Area levels**
- ✓ **Greek growth model seems to have reached its limits**

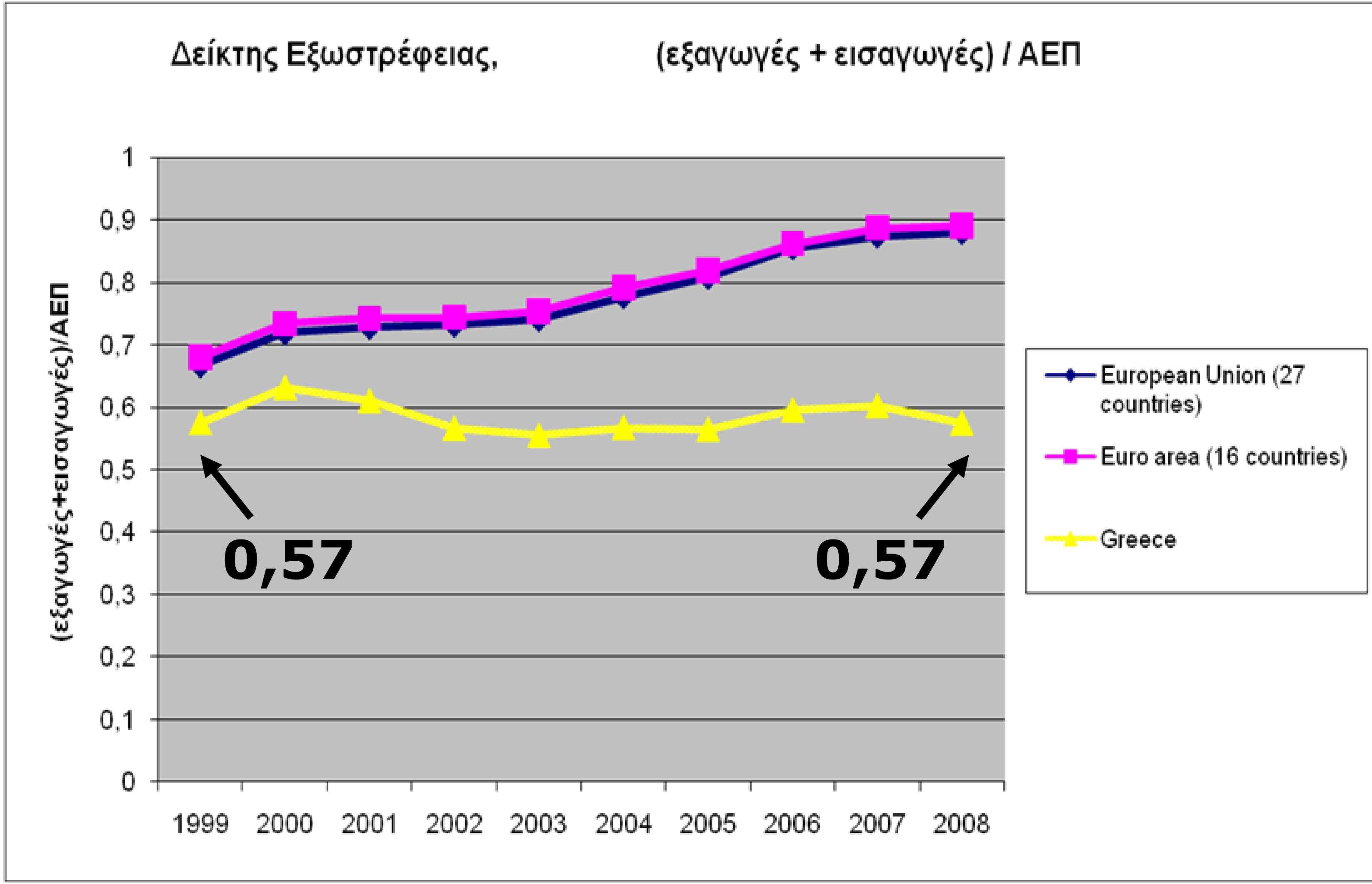
* Domestic MFI loans to domestic enterprises and households

III.1 Share of consumption is large in Greece

Private Consumption (% GDP, 2008)

Greece	**71.4**		
Bulgaria	69.0	Slovakia	56.0
Cyprus	66.9	Estonia	55.8
Portugal	66.0	Germany	55.7
Lithuania	65.3	Hungary	53.9
Romania	65.0	Belgium	53.2
Un. Kingdom	64.5	Austria	53.0
Latvia	61.5	Slovenia	52.5
Malta	61.4	Finland	51.2
Poland	60.7	Denmark	49.6
Italy	58.9	Czech	48.8
Spain	57.6	Ireland	48.7
EU-27	**57.3**	Sweden	47.8
France	56.9	Netherlands	47.2
EA-16	**56.3**	Luxemburg	33.4

III.1 Unlike the rest of Europe, Greece did not improve its rate of openness



III.2 Greece can withstand the recession better …

In the **short-run**, Greece **can withstand** the crisis **better** than its European counterparts, thanks to

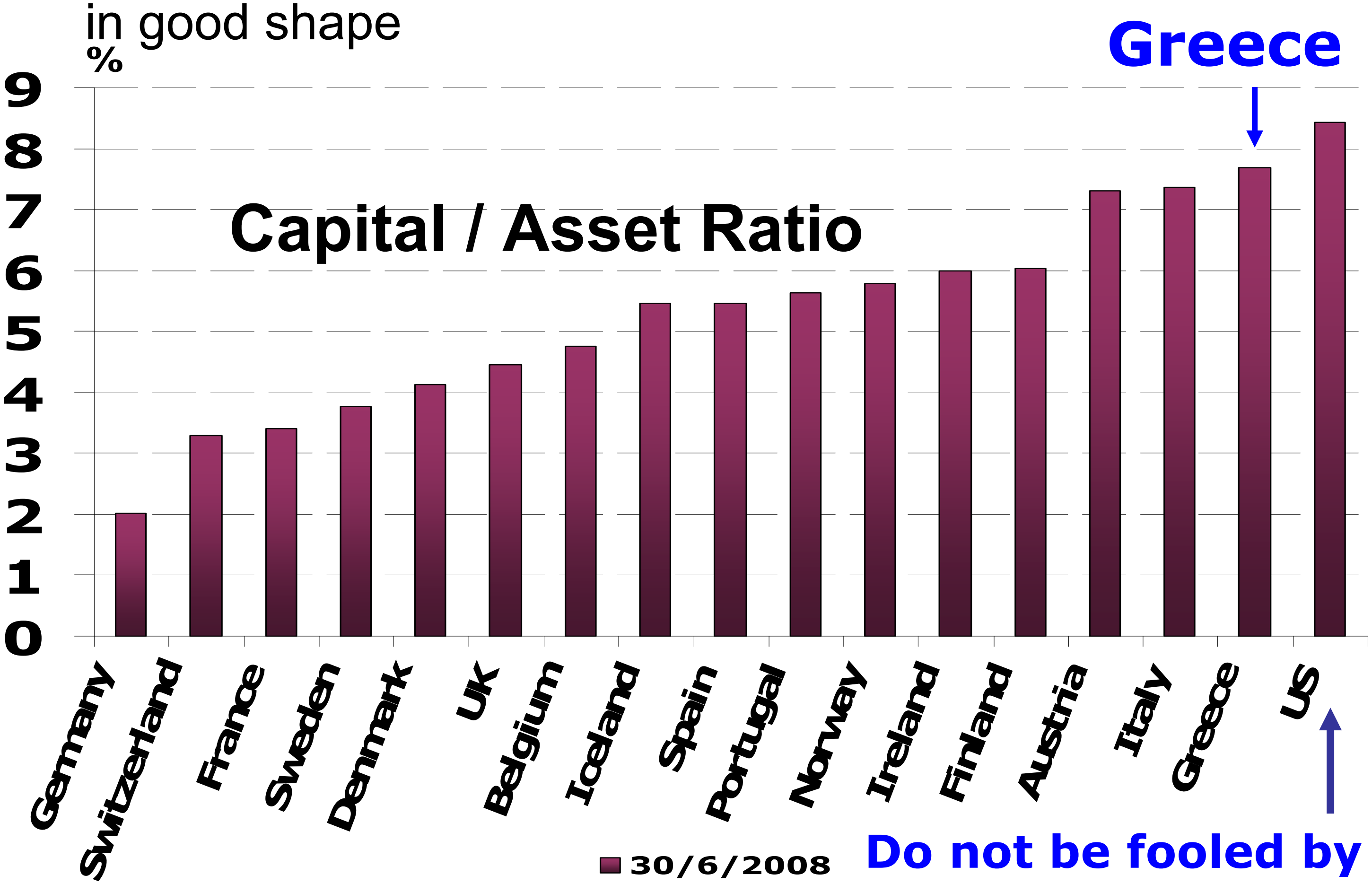
1) A strong banking system that weathers the external financial storm
2) A relatively more closed economy
3) Horizontal diversification of business activity, i.e. absence of vertical integration
4) Strong real wage growth that may keep consumption from dropping

Moreover, **the decline in interest rates** from their peak in Q4-2008 plays a significant role

The above strengths **simply delay** the upcoming recession

III.2 Greece: The strongest FI capital base in Western Europe

✓ this shock has come from abroad and has found the Greek banks in good shape



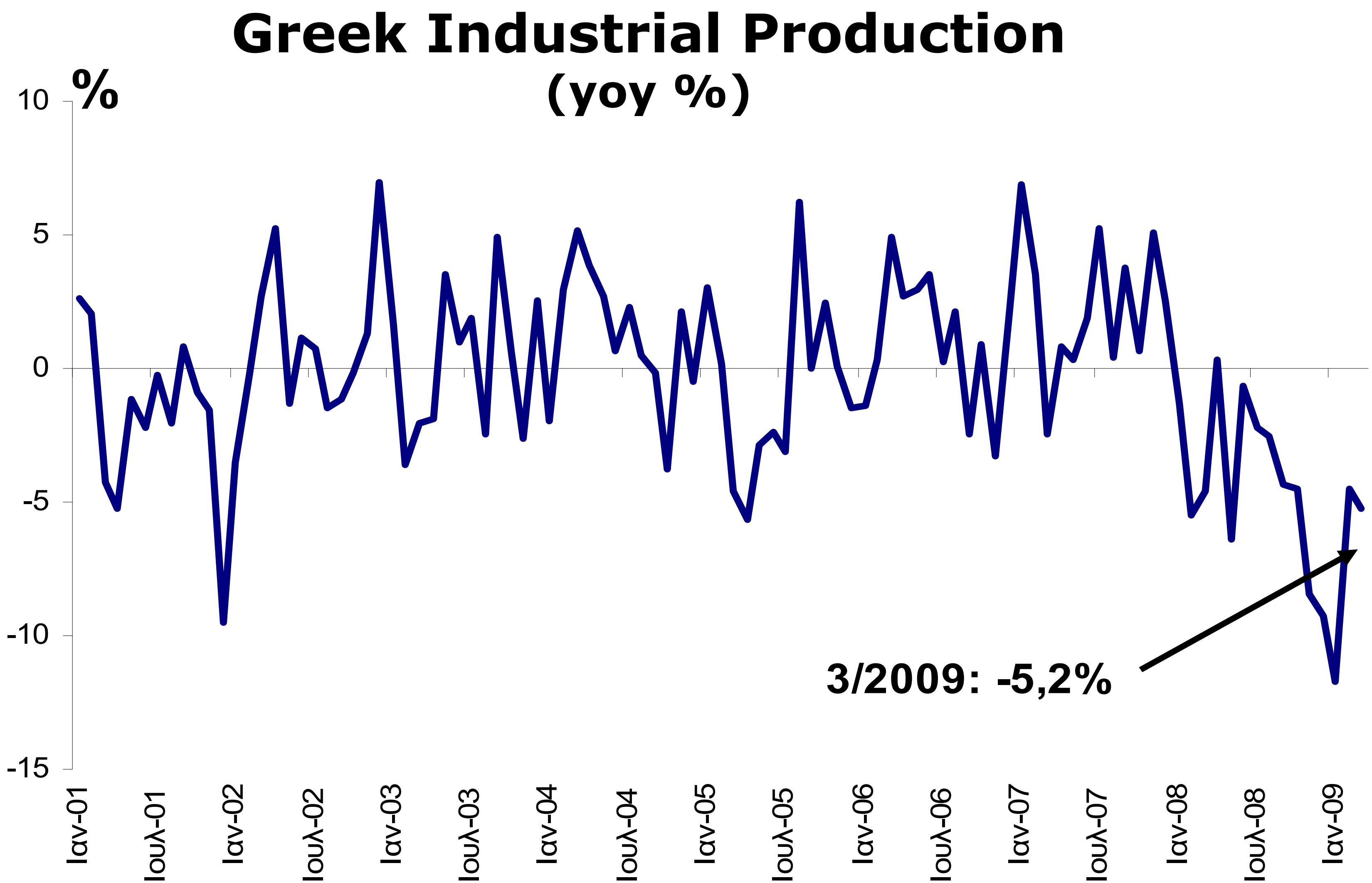
✓ **Best FI**: EFG Intern/al **13.52%**

✓ **Worst** FI: DEXIA **1.67%**

Do not be fooled by high US capital cushion: SPVs excluded from asset size in the US, which makes balance sheets appear small

Source: Bloomberg

III.2 but … the recession is knocking on our door as industrial production is sliding

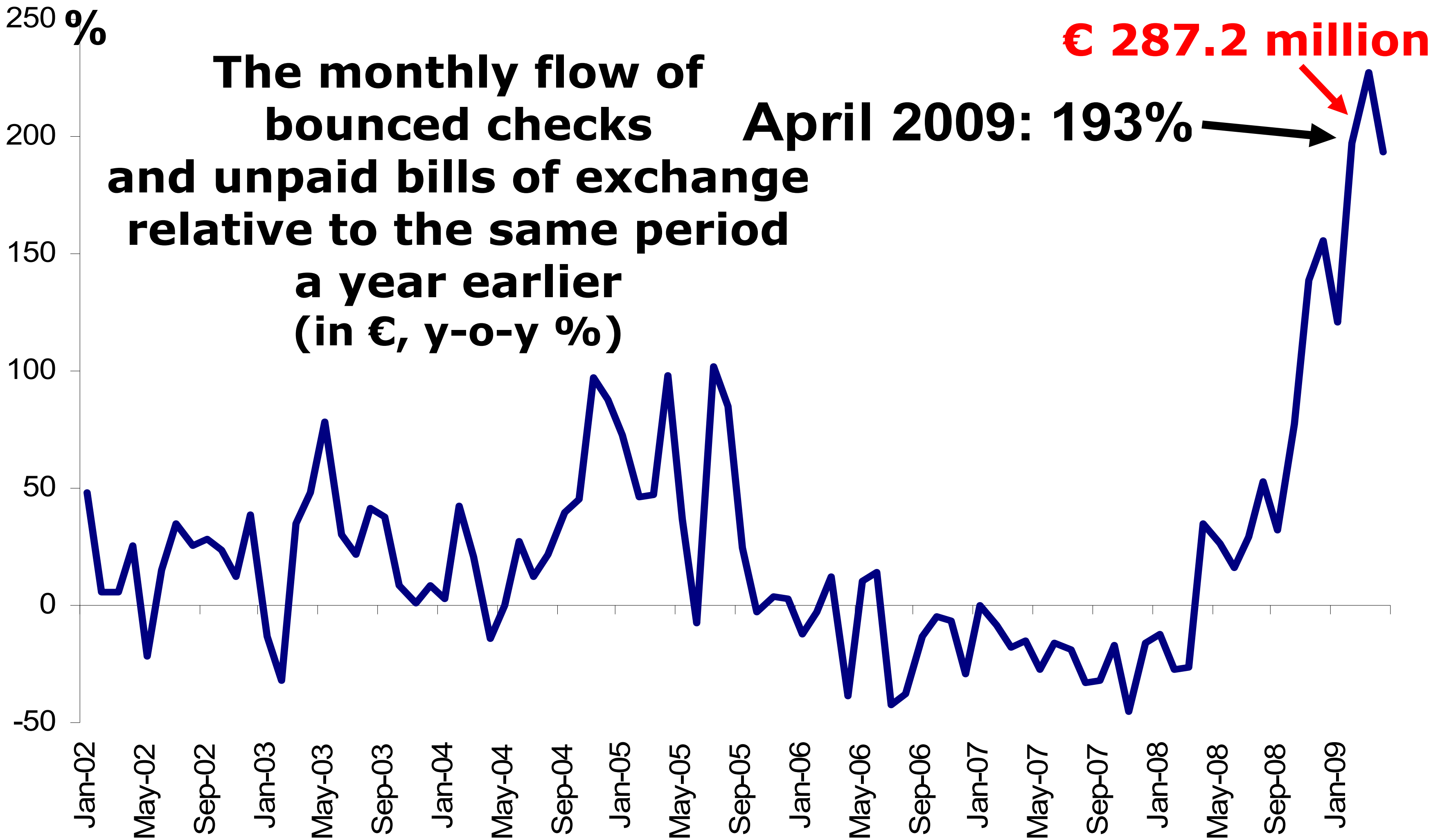


Source: NSSG

III.2 … and demand is weakening

Source: National Statistical Service of Greece

III.2 … with Increased Signs of Financial Strain

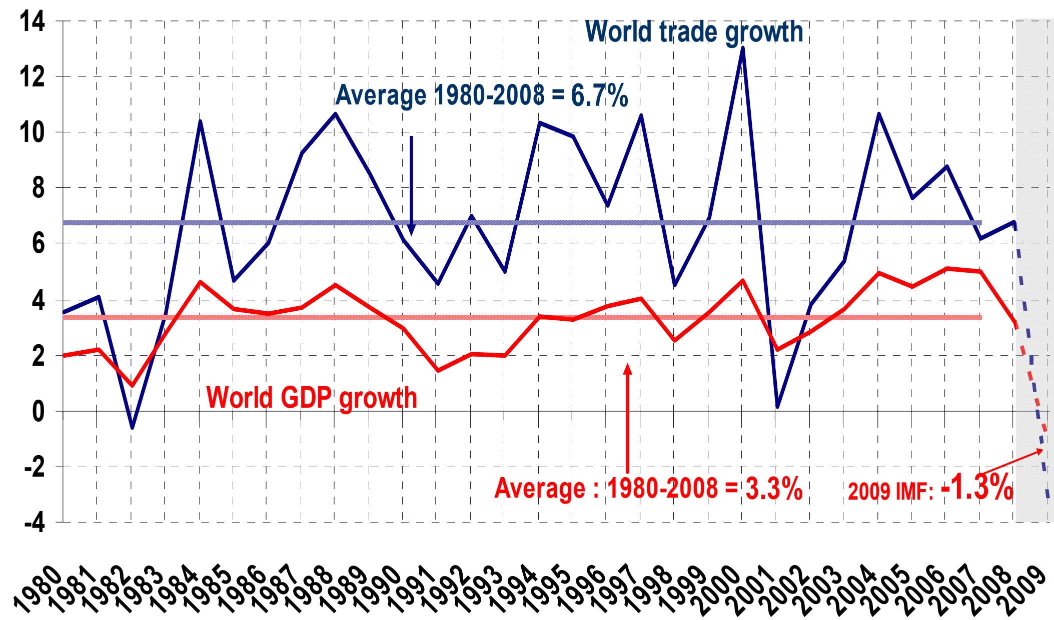


Source: TIRESIAS

III.2 World Trade, Shipping and Tourism … decelerate fast

Increase in trade = -0.50 + 2.28* GDP growth, R^2 = 67%
(-0.52) (8.11)

Trade growth will contract sharply in 2009



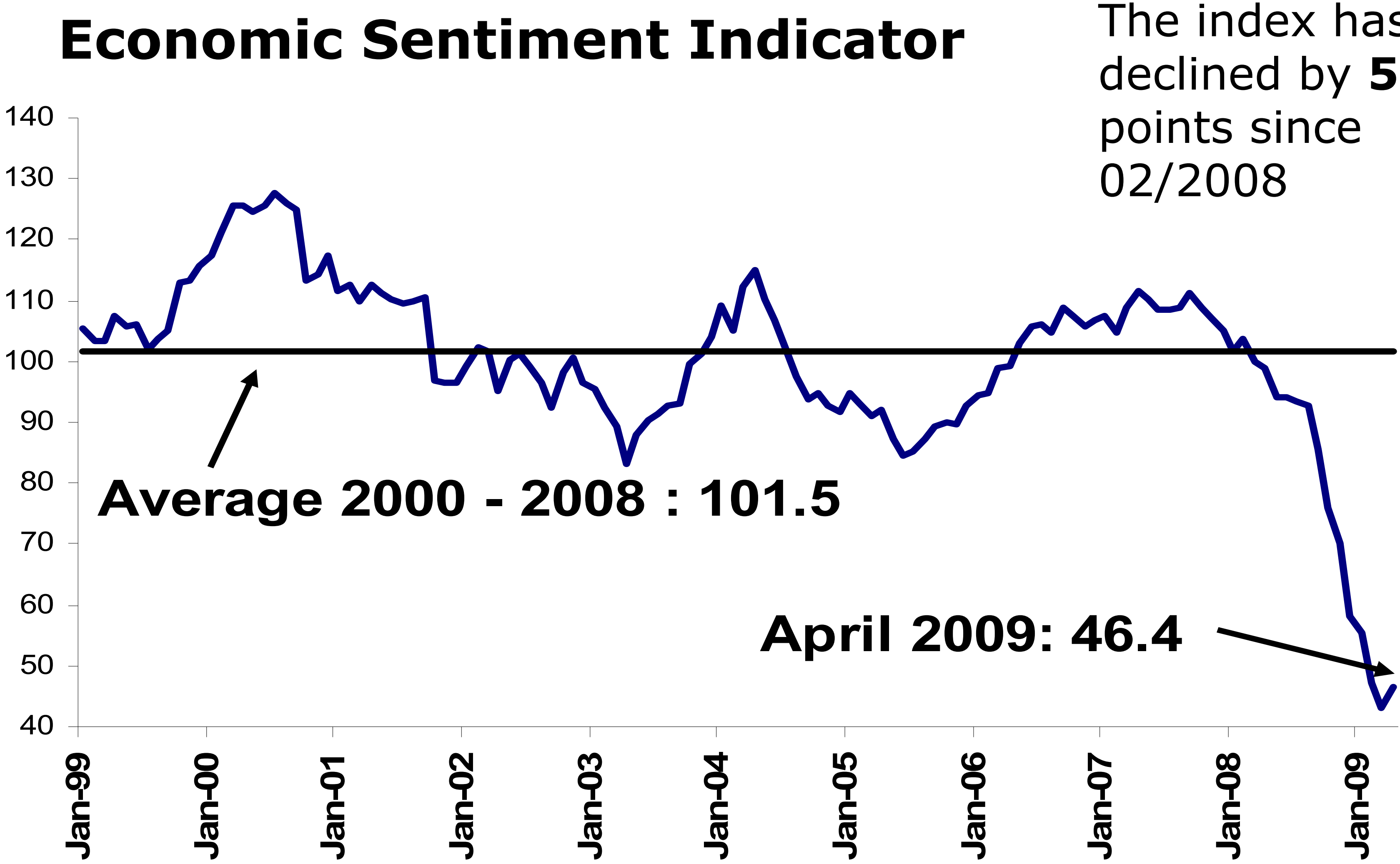
Baltic Dry Index

- ✓ Lower shipping rates and lower ship values affect Greek economic activity, but a lot less than the underlying assets
- ✓ Early hotel reservations point to a more than 15% summer decline in tourism revenues from abroad

Source: IMF, OECD, Eurobank Research

III.2 Business and Consumer confidence have collapsed

The index has declined by **57.2** points since 02/2008



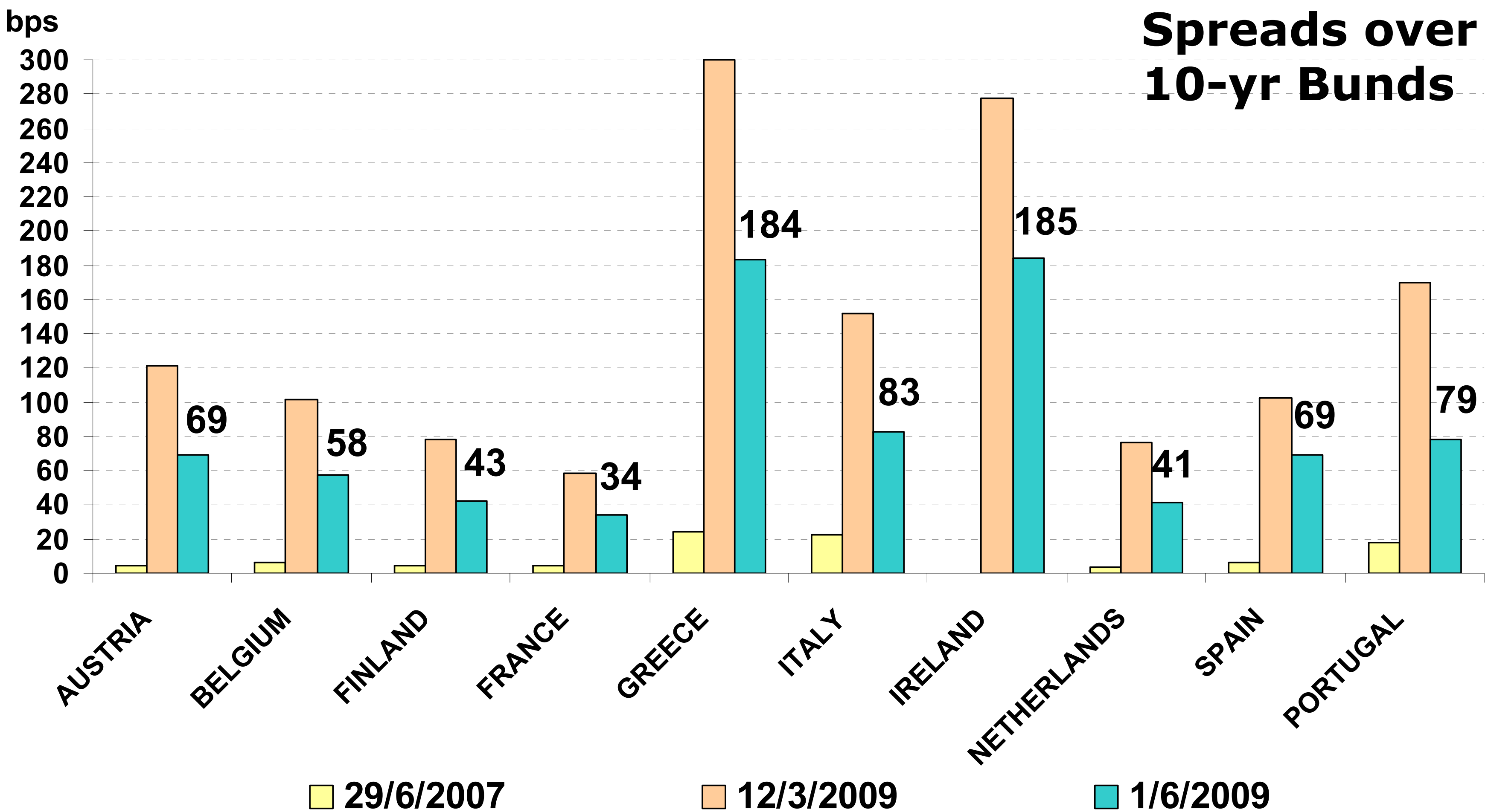
Source: European Commission

III.2 Hence, … a mild recession is likely

y/y grwoth	**2008e**	**EFG- 2009 Baseline**	EC 2009F
GDP (constant prices)	2.9	**-1.0**	-0.9
Private Consumption	2.2	**0.5**	0.4
Public consumption	3.2	**2.5**	1.9
Total Investment	-5.3	**-7.5**	-7.8
Exports g&s	2.2	**-8.5**	-7.3
Imports g&s	-4.4	**-5.6**	-6.0
National CPI (average)	4.2	**1.6**	1.8
Budget balance (% GDP)	-5.0	**-5.5**	-5.1
Public debt (% GDP)	97.6	**97.5**	103.4
C/A balance (% GDP)	-14.4	**-12.6**	-12.5

- ✓ **Yet real convergence continues in 2009 as EU-16 expected to grow by -4%**

III.3 Yet, financial markets are worried about Greece's ability to pay its debts



✓ **In March 2009, the probability of complete default of the Greek State over the next 10 years was higher than 20%**

III.3 Sovereign Credit Ratings deteriorate

	S&P	MOODY'S	FITCH
3/2009	A-	A1	A
12/2008	A	A1	A
2007	A	A1	A
2006	A	A1	A
2005	A	A1	A
2004	A	A1	A
2003	A+	A1	A+
2002	A	A1	A
2001	A	A2	A
2000	A-	A2	A-
1999	A-	A2	BBB+
1998	BBB	Baa1	BBB
1997	BBB-	Baa1	BBB
1996	BBB-	Baa1	BBB-
1995	BBB-	Baa3	BBB-
1994	BBB-	Baa3	
1993	BBB-		

Source: Bloomberg

Rating agencies are worried:

- ✓ Continuous upgrading from 1996 to 2003:

  BBB- → A+

  was interrupted in 2004:
- ✓ **First** downgrade by S&P, Fitch in 2004
- ✓ **Second** downgrade, in Jan 2009 by S&P due to the worsening international crisis
- ✓ **Another** downgrade by Fitch likely. Fitch already downgraded Greece's outlook to negative from stable on further fiscal deterioration (12/5/2009).

III.3 Is the market concern of long-term low growth or stagnation founded?

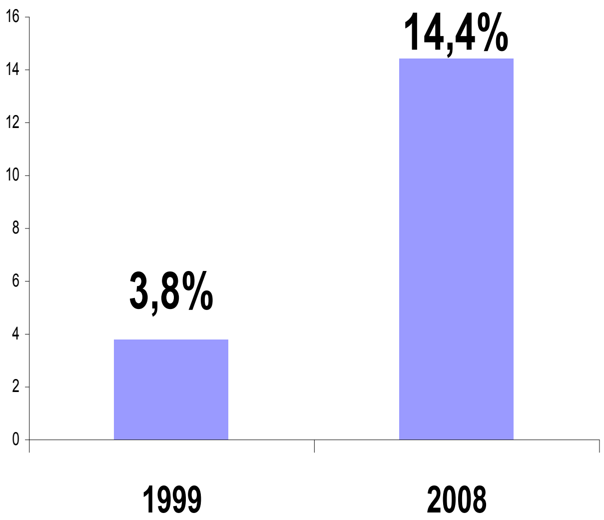
A prolonged economic stagnation could be the result of deep economic vulnerabilities:

- ✓ Inefficient public sector and its large deficits and debt
- ✓ Aging population and additional future fiscal pressures
- ✓ Low Competitiveness (due to: Bureaucracy, market oligopolies, etc.) and its impact on quality, prices and the current account

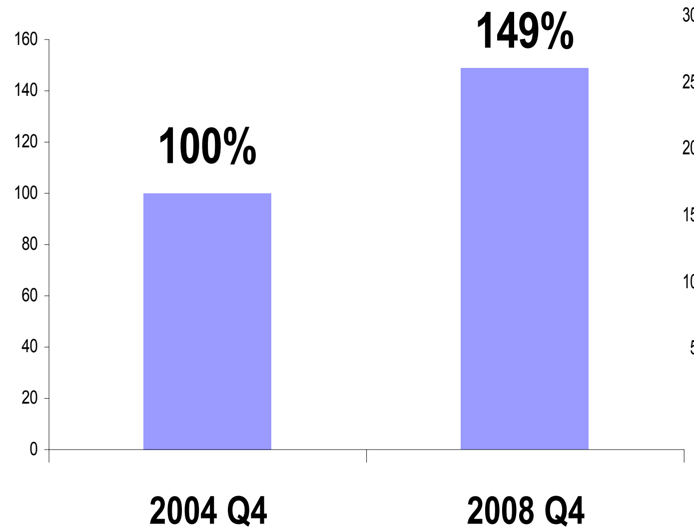
- ❖ A low growth path could result in real divergence instead of continued convergence to the old EU-15
- ❖ The IMF believes that stagnation is a certainty

III.3 Imbalances of the Greek economy

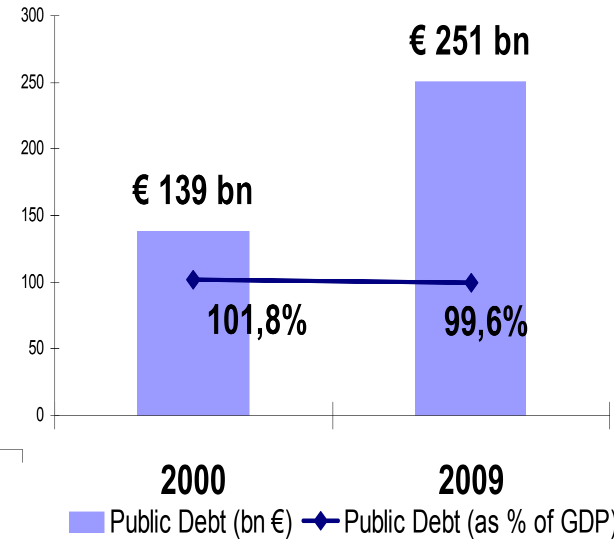
Current Account Deficit



External Debt



Public Debt



i. Competitiveness

Deteriorating, e.g. Current Account Deficit more than tripled since 1999, while prices and costs ↑ relative to trading partners ($REER_{CPI}$: 14%, $REER_{ULC}$: 28.2%) → Gross External Debt ↑ from 100% of GDP in 2004 to 149% in 2008.

ii. An ineffective public sector

- ✓ Public debt has soared from €139 bn in 2000 to €251 bn in 2009 (*Official projections*) i.e. from 101.8% of GDP to 99.6% of GDP
- ✓ General Government deficit fell under the 3% of GDP limit only once (2006 2.8%).

III.3 Size of the Public Sector

General Government Expenditure (% GDP) 2007

Sweden	52.7	Cyprus	43
France	52.4	Czech Rep.	42.6
Denmark	50.7	Slovenia	42.4
Hungary	49.8	Malta	42.2
Belgium	48.4	Poland	42
Austria	48.4	Bulgaria	41.5
Italy	48.2	Norway	40.9
Finland	47.3	Spain	38.8
Portugal	45.8	Luxemburg	37.8
EU-15 av.	**45.6**	Romania	37.3
Netherlands	45.3	Estonia	35.5
Un. Kingdom	44.4	Latvia	35.5
Germany	44.2	Ireland	35.4
Greece	43.7	Lithuania	35.2
Iceland	43.1	Slovakia	34.6

Public Sector:

- ✓ **Smaller than the EU-15 average**
- ✓ **but inefficient**

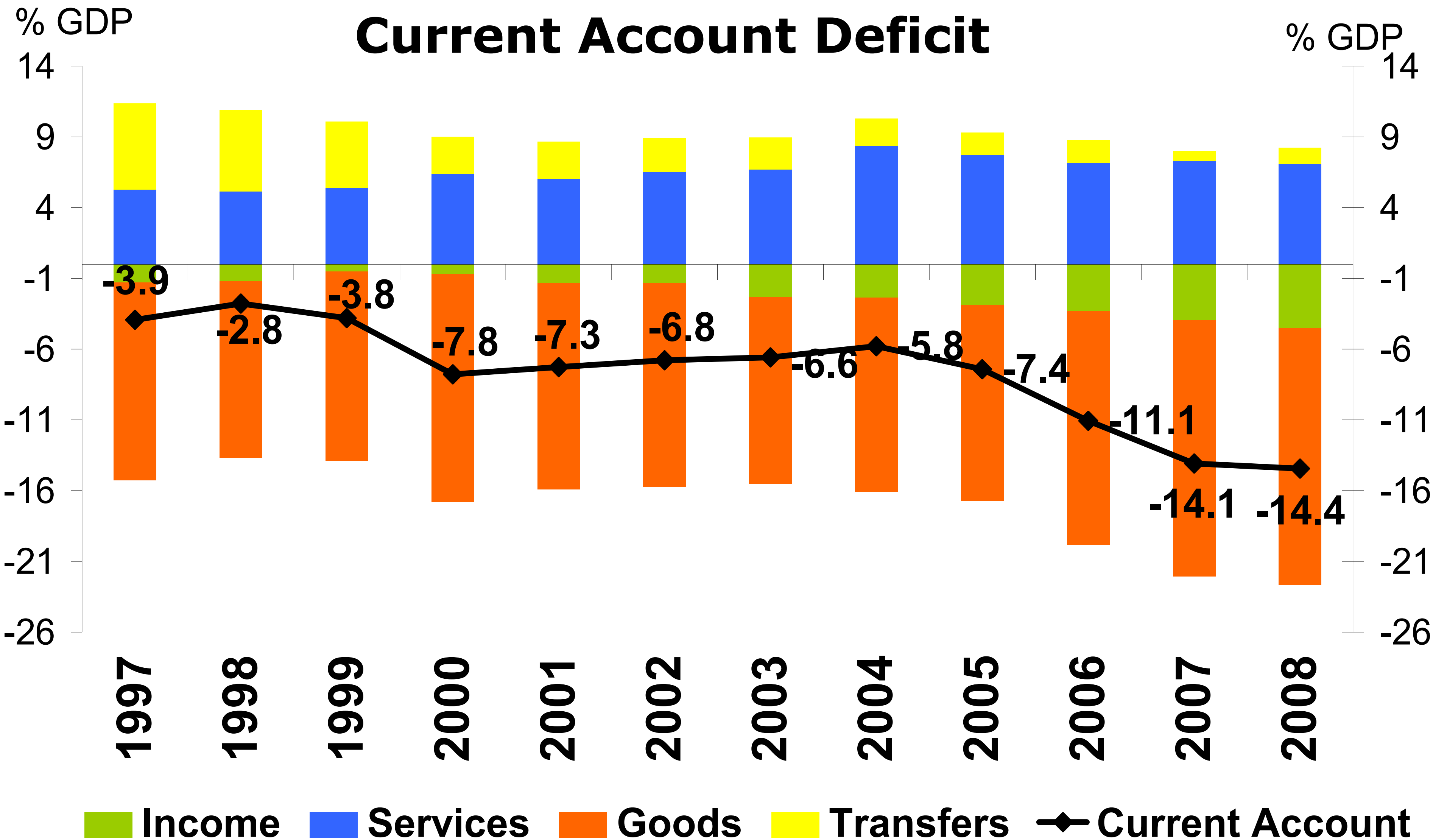
Source: European Commission

III.3 Aging population & pressures on pensions and debt

	GREECE				
	2005	2010	2015	2025	2050
Health Expenditure (% GDP)	5.1	5.4	5.5	5.7	6.8
Education Expenditure (% GDP)	3.4	3.1	2.9	3.0	3.1
% of older employees (55 – 64)	10.9	12.0	13.6	17.3	17.4
Old-age Dependency Ratio	26.8	28.0	30.3	35.8	60.4
	2007	2020	2030	2040	2060
Pension Expenditure (% GDP)	11.7	13.2	17.1	21.4	24.1

Source: European Commission 2006, SGP 2008-2011

III.3 Competitiveness: A Macroeconomic Perspective



Source: Bank of Greece

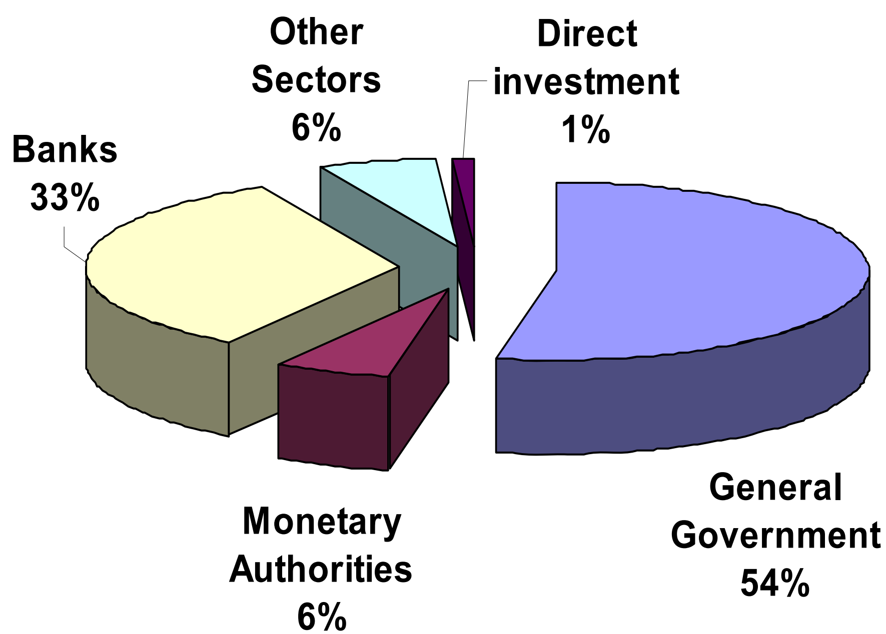
III.3 Greek External Debt deteriorates

Greek Gross External Debt increased by **52.4 p.p.** of GDP, or 220% in 5 years

2Q 2008 : $ 531.7 bn : 138.2% of GDP
2Q 2003 : $ 166.2 bn : 85.8% of GDP

Accumulated Current Account Deficits 2Q 2003 – 2Q 2008 : **49 p.p. of GDP**

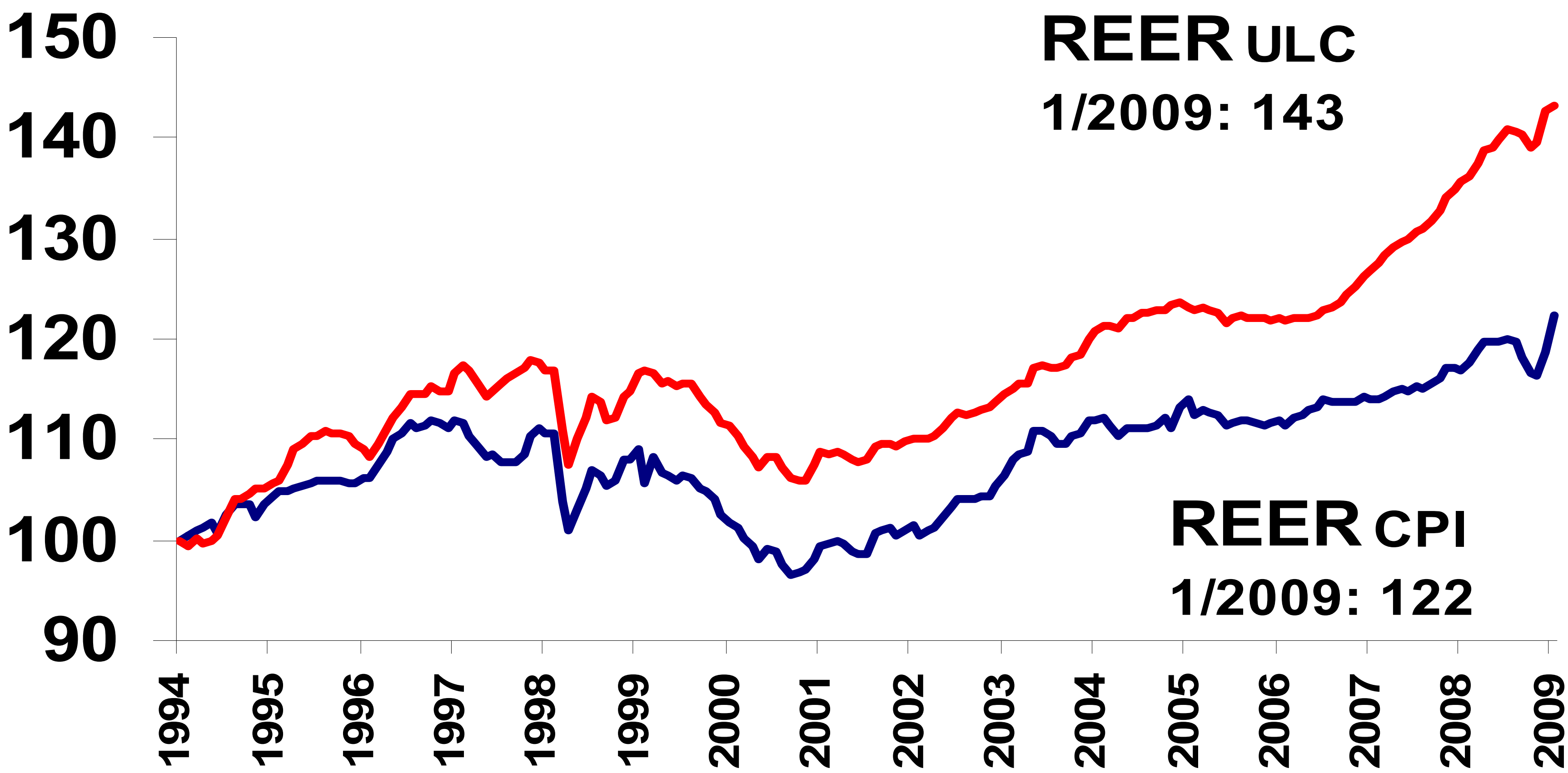
Greek Gross External Debt Composition
(2Q 2008, Total: $531.7 bn)



✓ Banks' ownership of 1/3 of external debt may prolong the current liquidity problem if crisis continues

Source: IMF, OECD, BIS, WORLD BANK Joint External Debt Database

III.3 Price Competitiveness



Source: IMF, IFS

- ✓ Real Effective Exchange Rate shows large **overvaluation**
- ✓ Harmonized Index of Consumer Prices (HICP): In every single month, inflation in Greece was higher than the Euro Area average

III.3 A new growth model for Greece

A new growth model is needed in Greece:

- ✓ Cannot be based on consumption, should be export-driven

Active policies enhancing **competitiveness and productivity**,

- ✓ Adopt a multi-year strategy to enhance our comparative advantages and those sectors with potentially strong international demand
- ✓ Improve the quality of factors production, e.g. education, health
- ✓ Implement reforms first on those sectors that are easiest to do, i.e. in the goods and services markets, and not on the labor market
- ✓ Restructure the public sector in order to reverse the fiscal deficits and improve the business environment
- ✓ Reform the pension system to relieve future fiscal pressures
- ✓ Implement reforms in the labor market last, only after the public sector is run efficiently, so that state supervision works

Long-run imbalances would thus be eradicated

III. Conclusions … for Greece

- ✓ Recession arrives with a lag, yet markets already focus on the imbalances of the Greek economy and fear the outcome of long-term stagnation
- ✓ Lack of competitiveness and an inefficient public sector generate huge current account and fiscal deficits, while the unwillingness to tackle the pension problem would further worsen income inequalities in the future
- ✓ The probability of a long period of stagnation and divergence is high
- ✓ We need a new model of growth, based on an export oriented economy, less dependent on domestic demand and credit
- ✓ Reforms must begin in those sectors where the cost is small: Adopt a long term plan of enhancing our comparative advantages, increase competition in product and services markets with more efficient supervision, a better educational system with a different mentality, a more efficient health system, reduced bureaucracy, a revamped state revenue collection system, restructured state expenditures, an overhaul of the pension system
- ✓ There is an awakening of the public and politicians to the imbalances, hence substantive reforms have a chance

THANK YOU FOR YOUR ATTENTION!!

My thanks to the Research department of Eurobank EFG for able research assistance and support

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