Financial Crisis and the Future Path of the Global Economy

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Athens, June 10, 2009

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I.

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

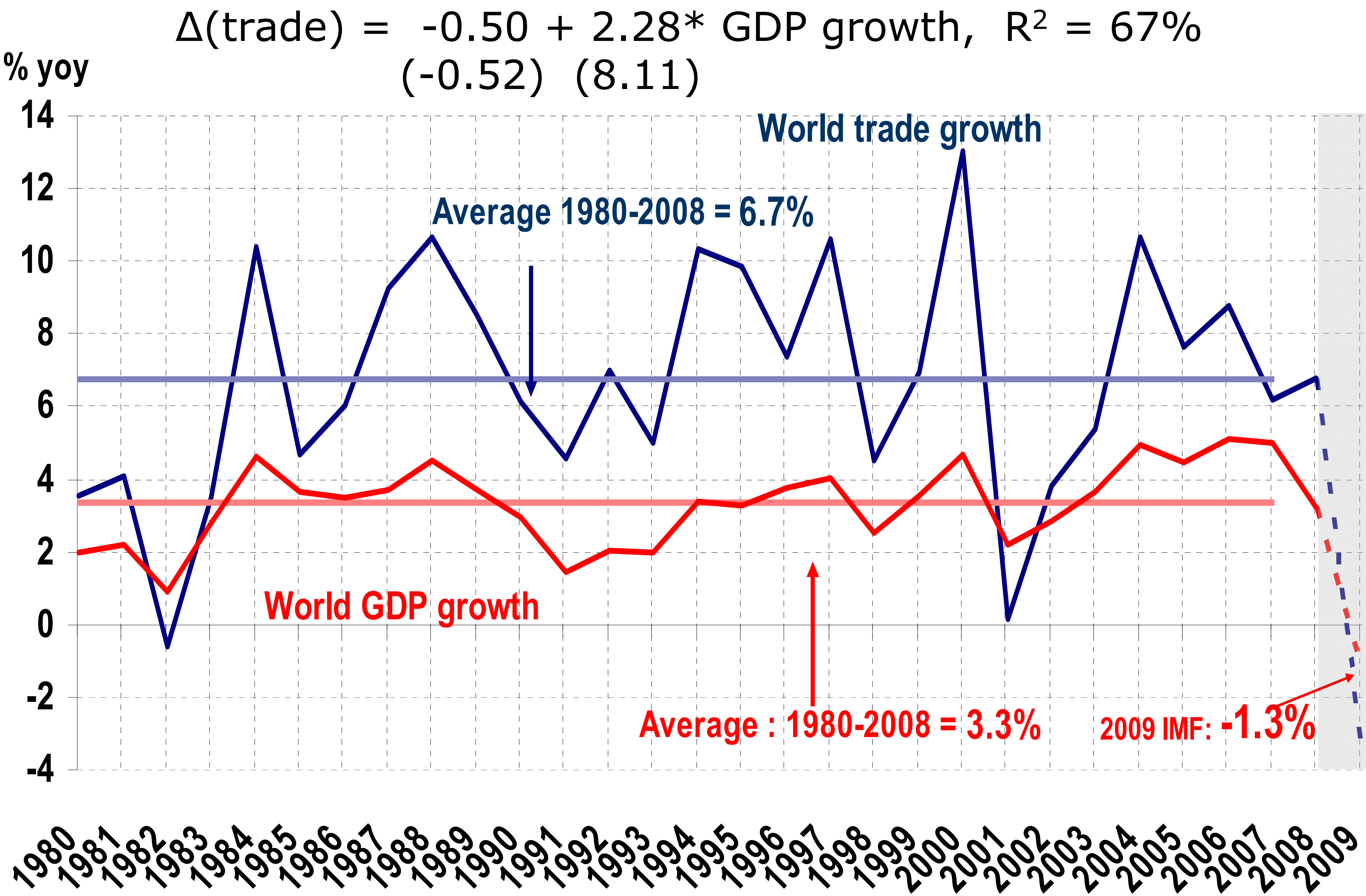
1) A rapid global slowdown
2) How it all began in the financial sector

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**

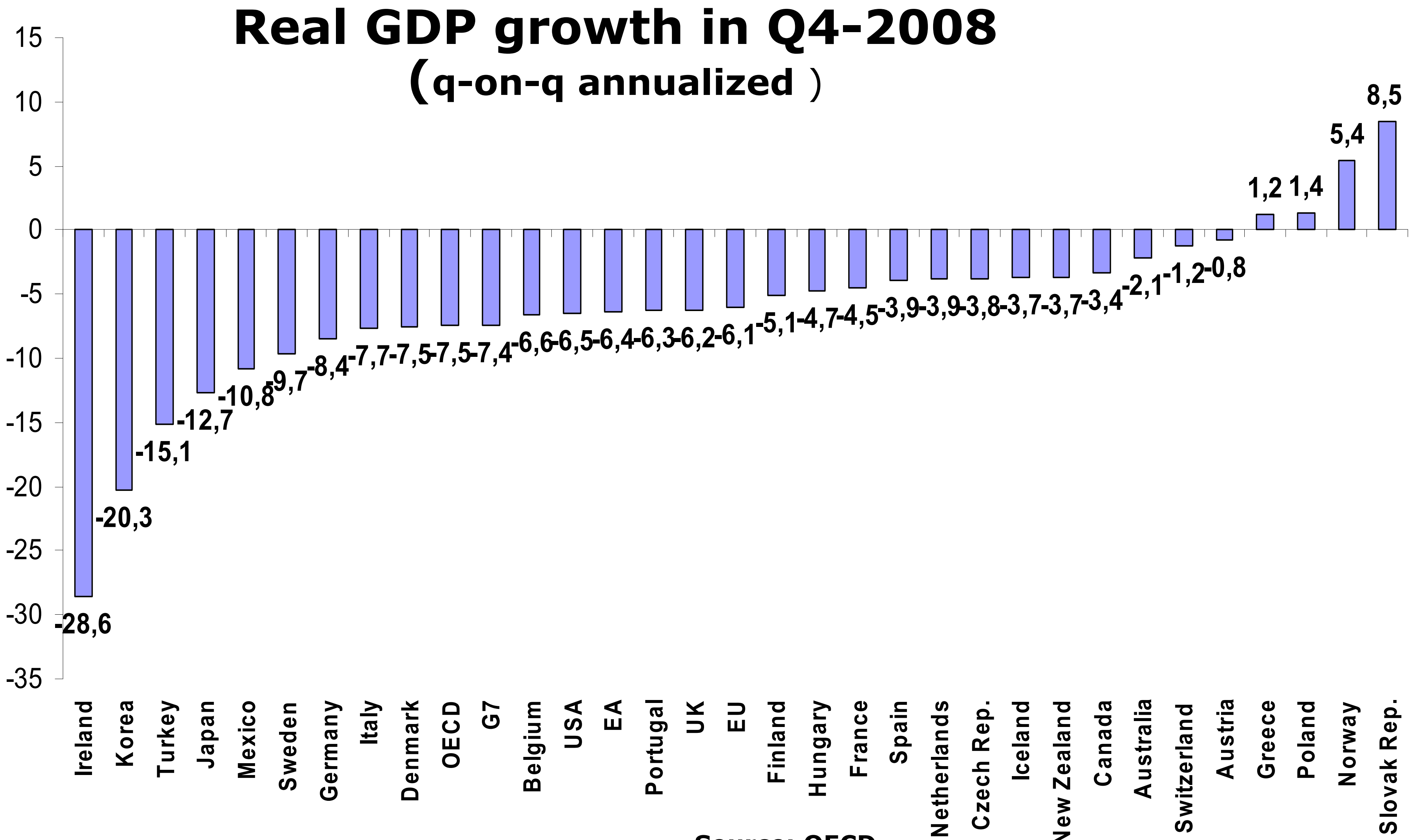
Source: World Bank, IMF

I.1 World Trade collapses in Q4-2008



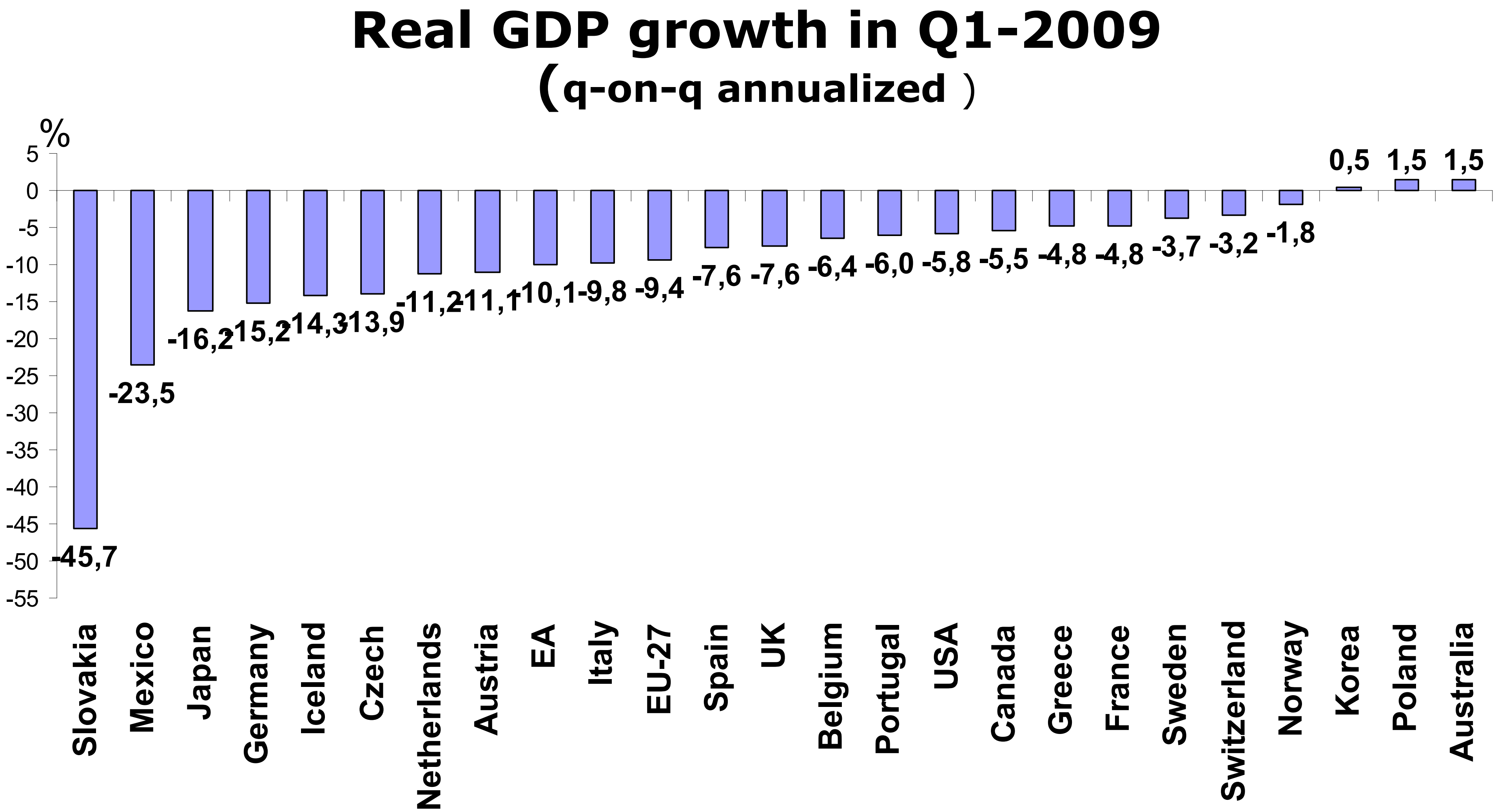
Source: IMF, OECD, Eurobank Research

I.1 Fast decline in Q4 2008



Source: OECD

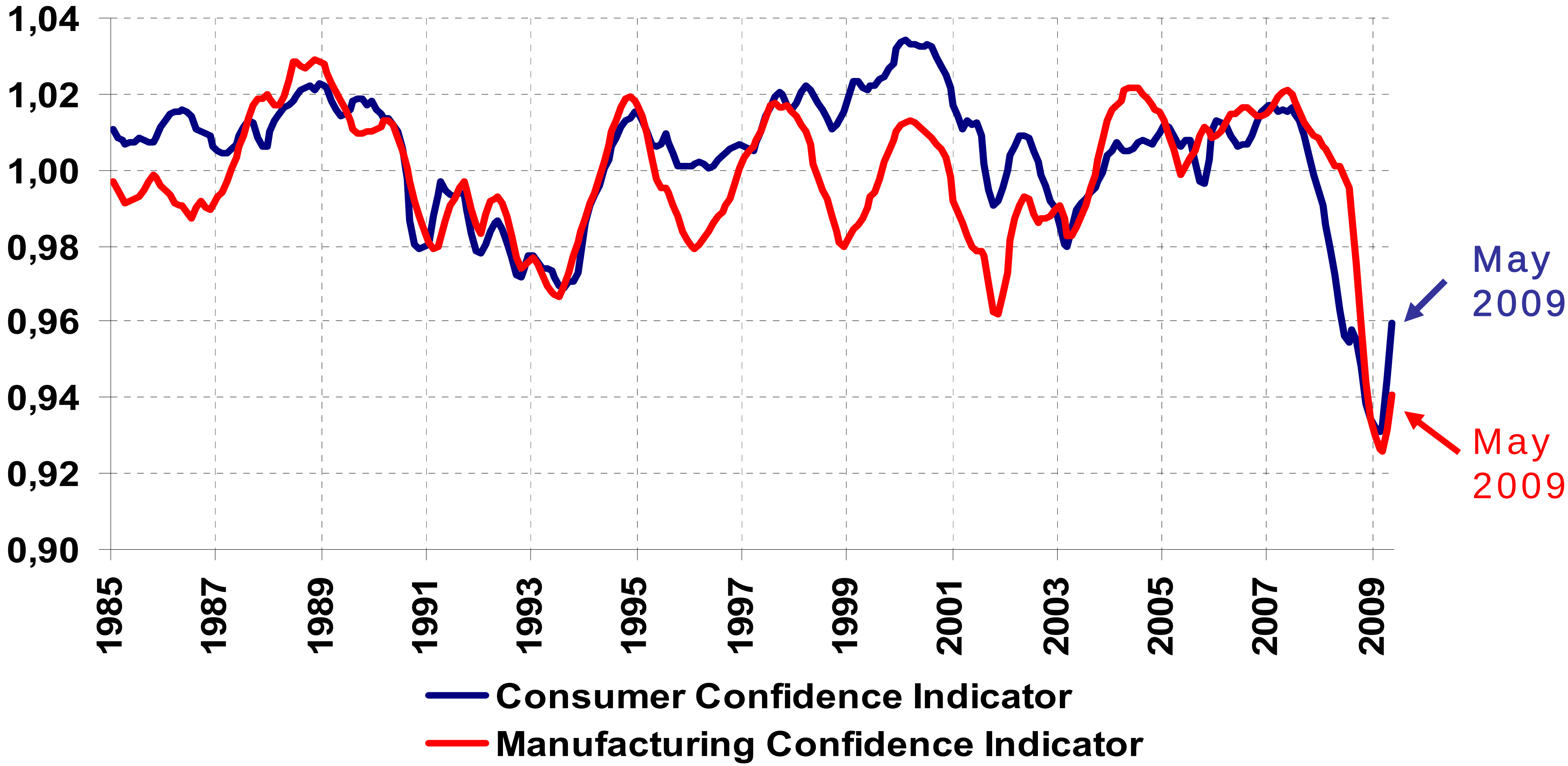
I.1 …that continues into Q1 2009



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

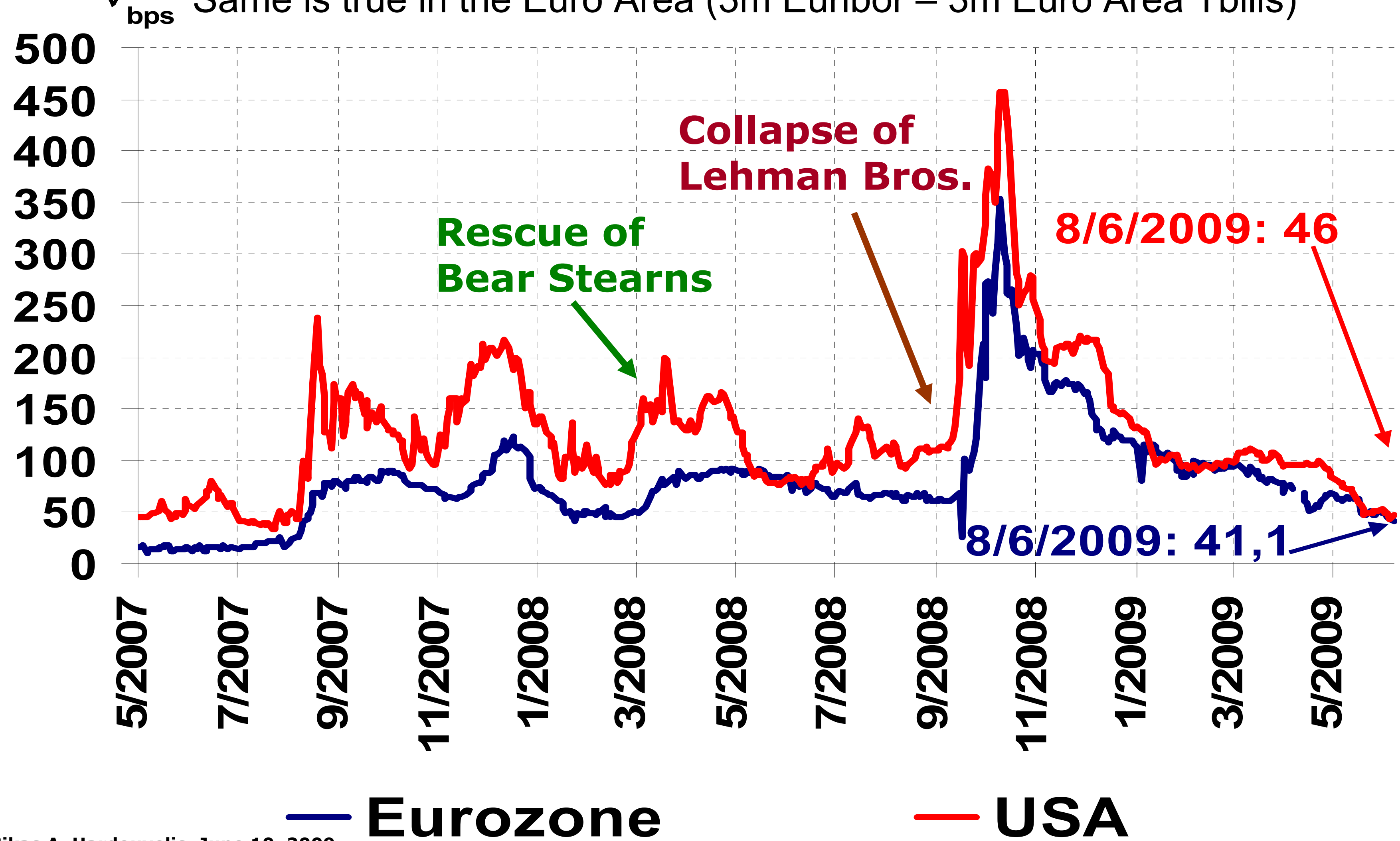
I.1 Consensus forecasts: Little has changed since February for the US, a lot for the other countries

		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)



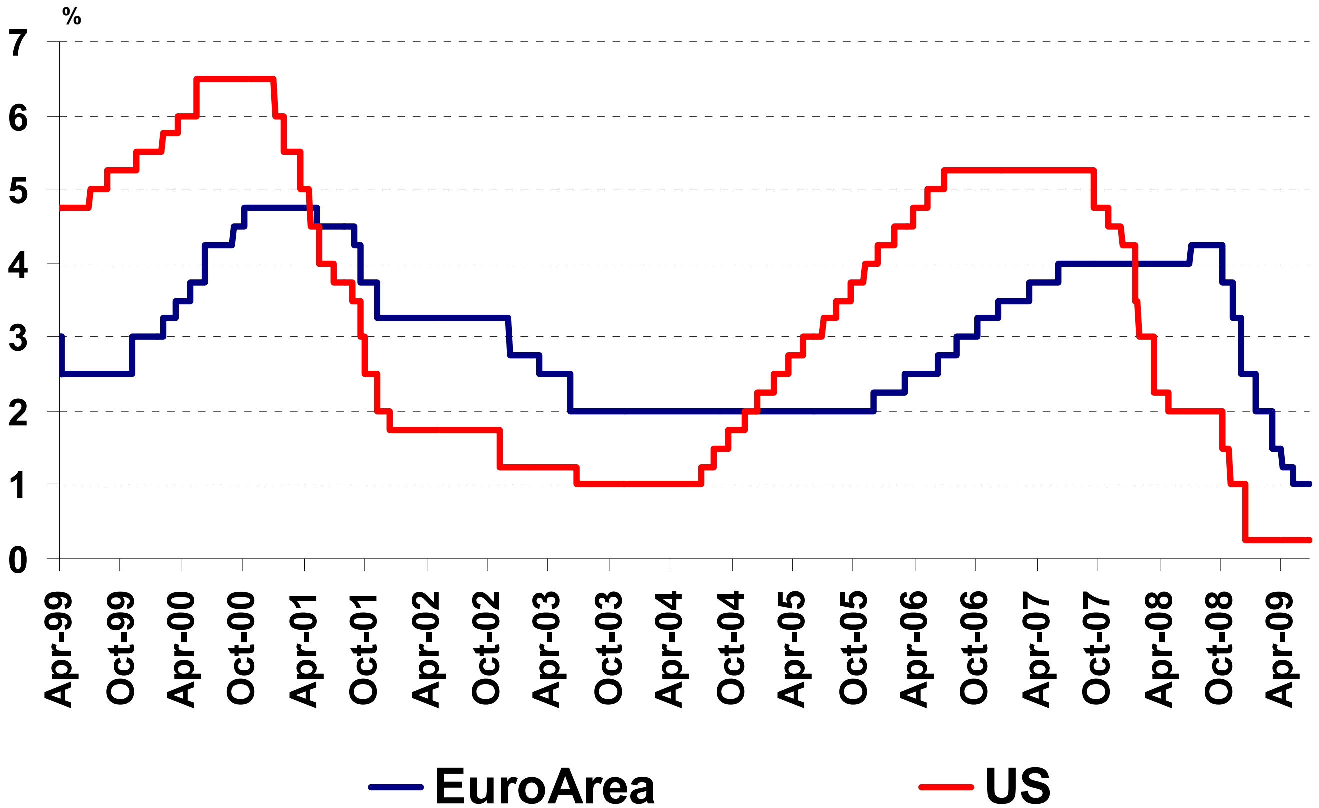
I.2 It all began in the financial sector

✓ The crisis is already 23 months old

✓ <u>**Many underlying causes**</u>:

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 **<u>spreading</u> 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

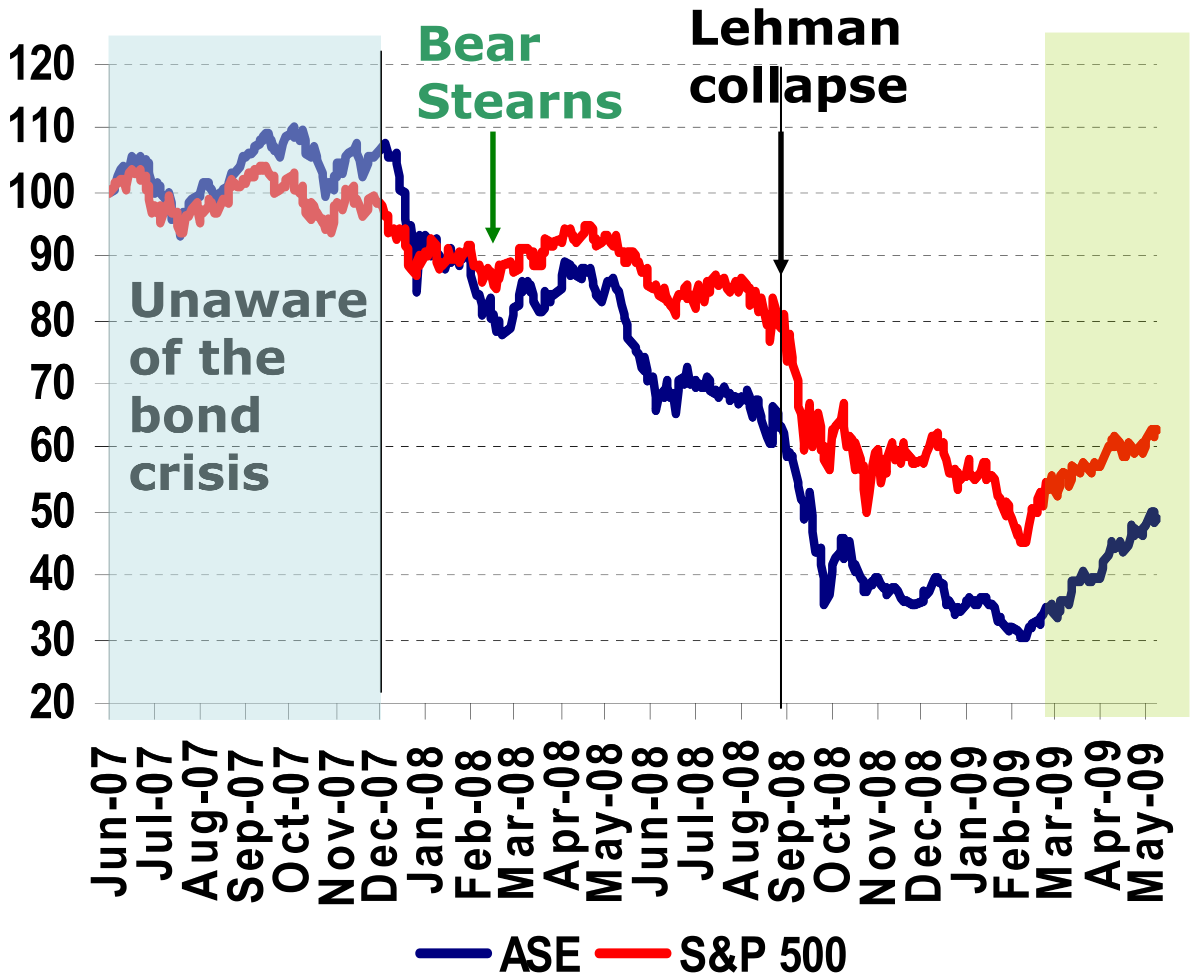
	Amount	% of 2009 GDP
US 2008 2009-19	\$ 168 bn \$ 789 bn	**1.2%** **5.5%**
EA-16 2009-10	€ 245 bn	**2.6%**
China 2009-10	CHY 4 tr	**13.0%**

	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

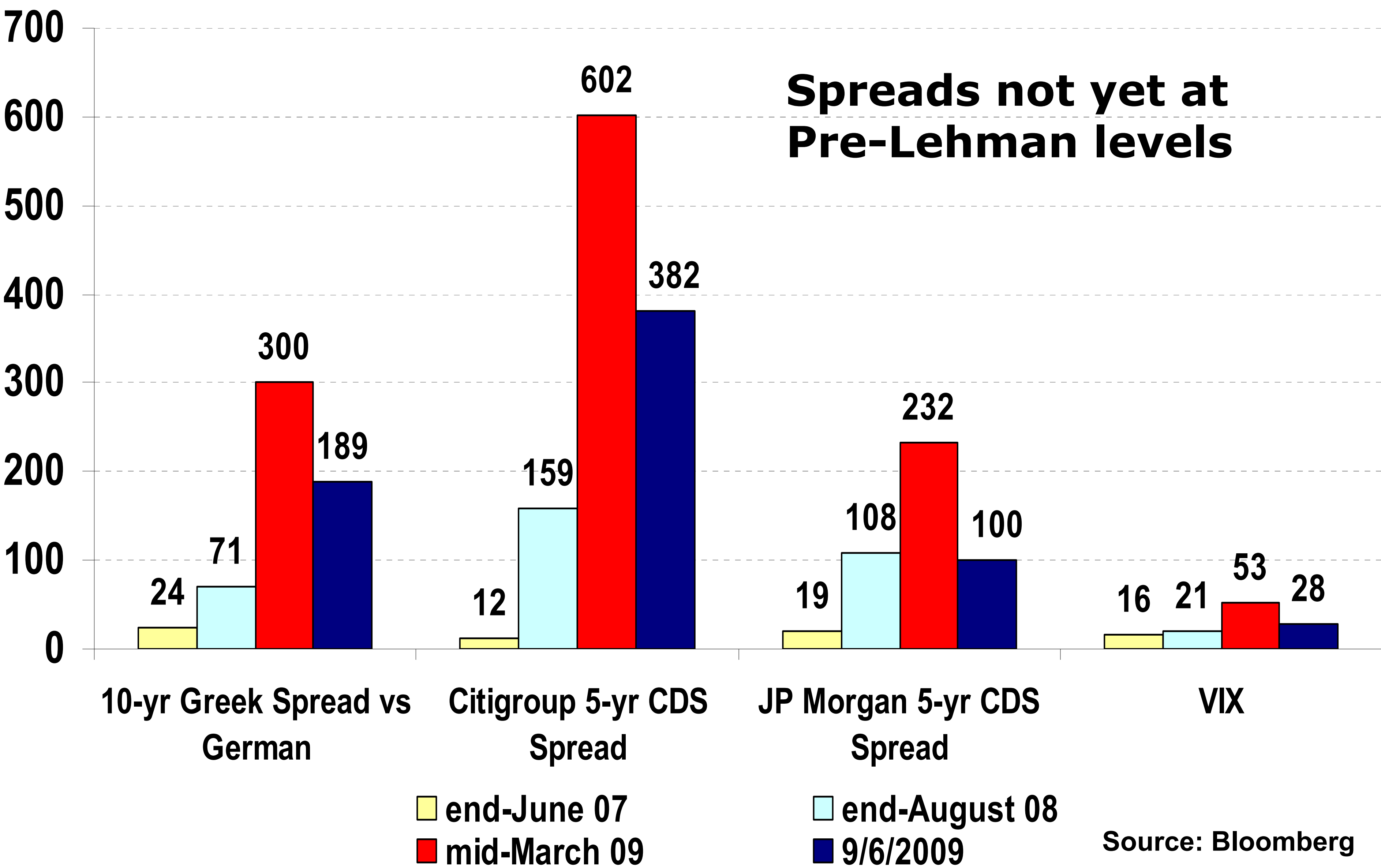
1) Is the financial crisis over?
2) How will the post-crisis global economy look like?

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

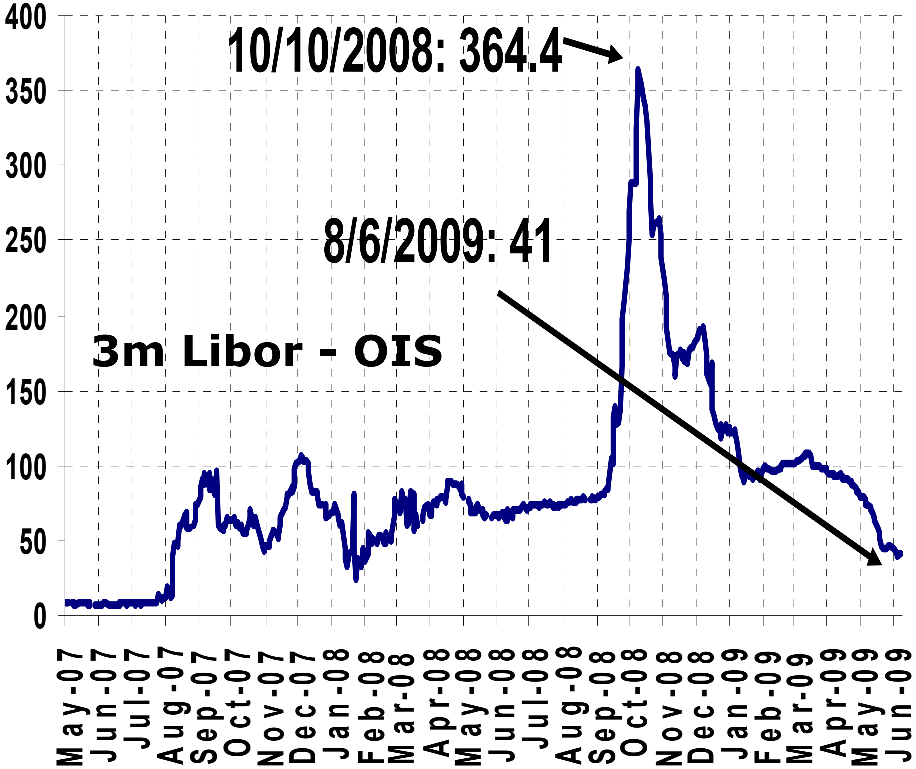


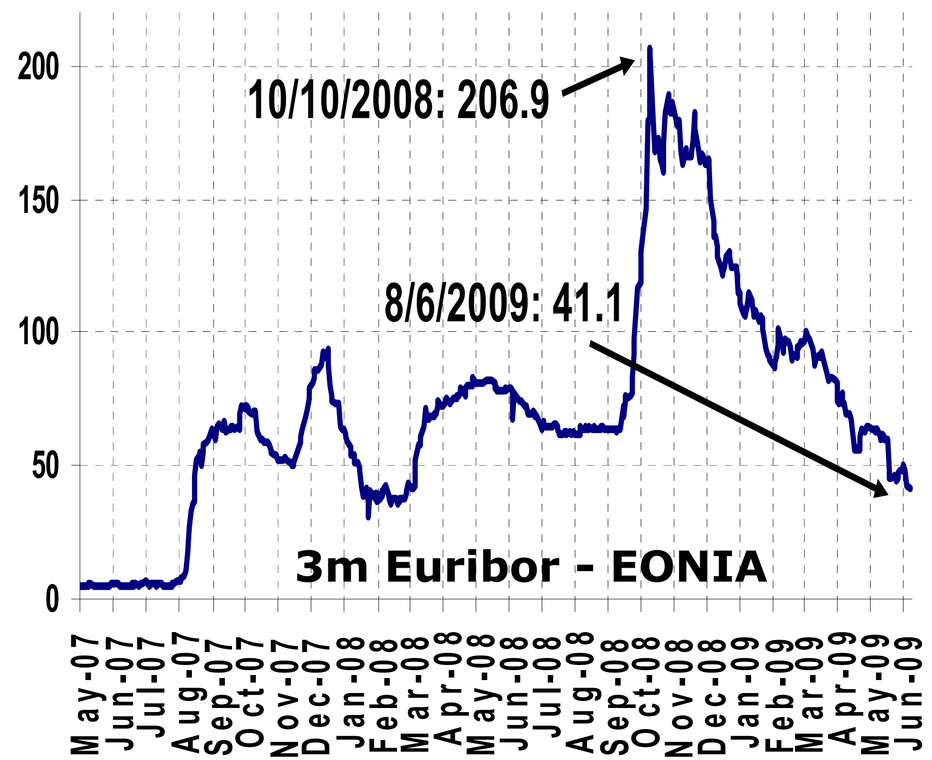
Source: Bloomberg

II.1 Liquidity normalizes, but not fully yet

US **Euro Area**

Uncovered minus covered 3-month inter-bank rates



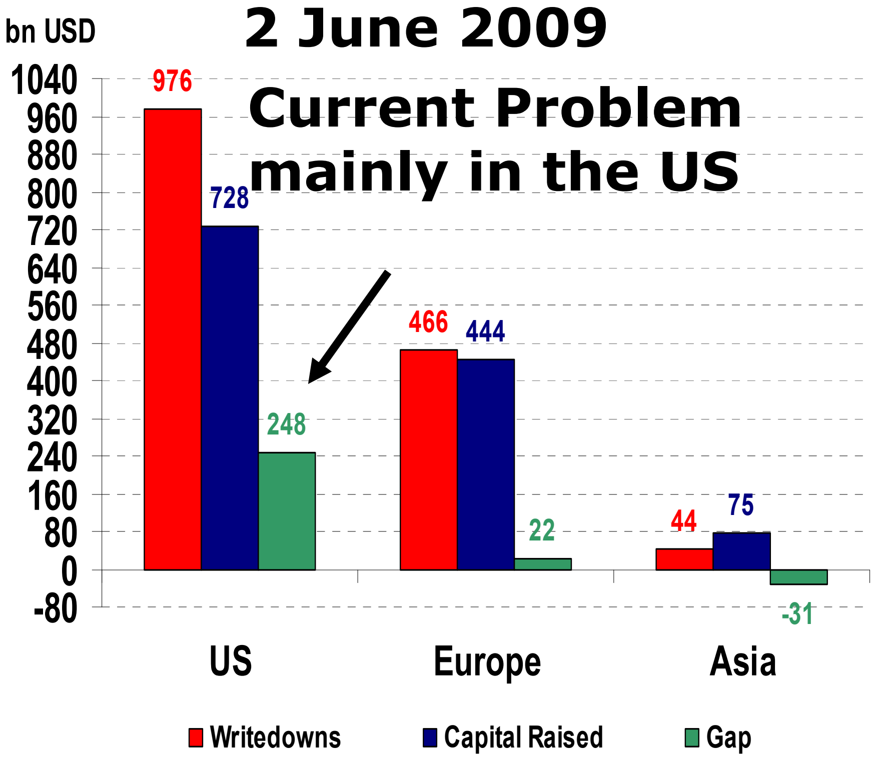


II.1 FI Insolvency: The biggest global risk

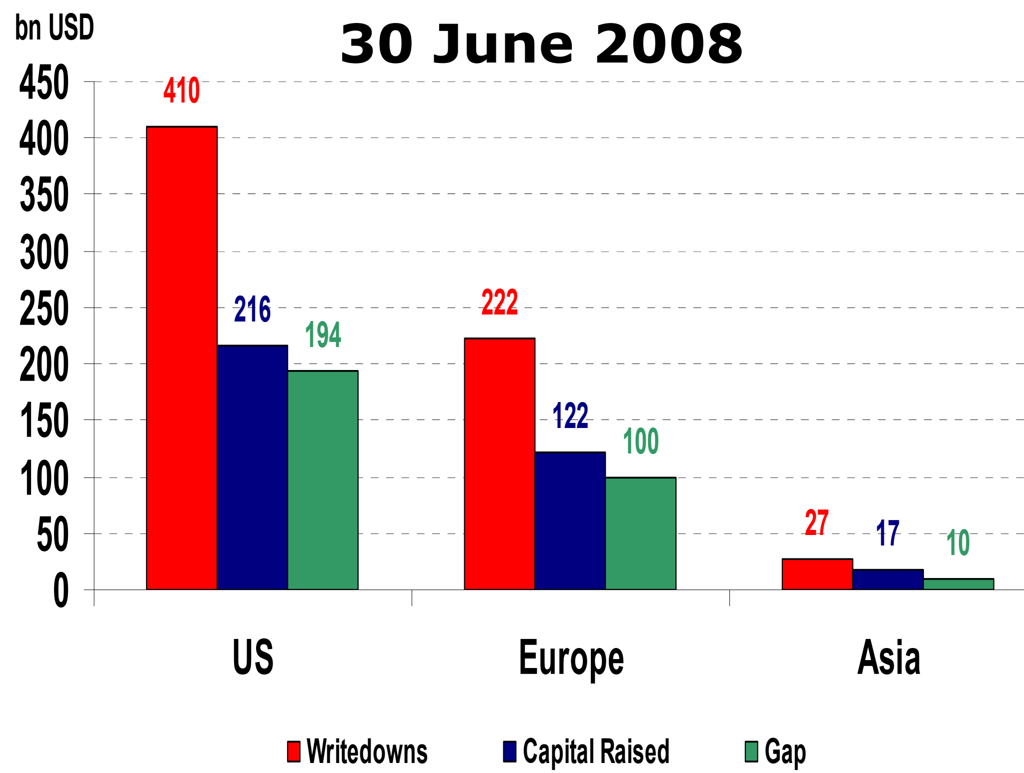
✓ **IMF** estimates that total global write-downs will reach **$4.1 trillion** at end-2010, $2.7 in USA, $1.2 in Europe, $0.2 in Japan

All Financials*

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



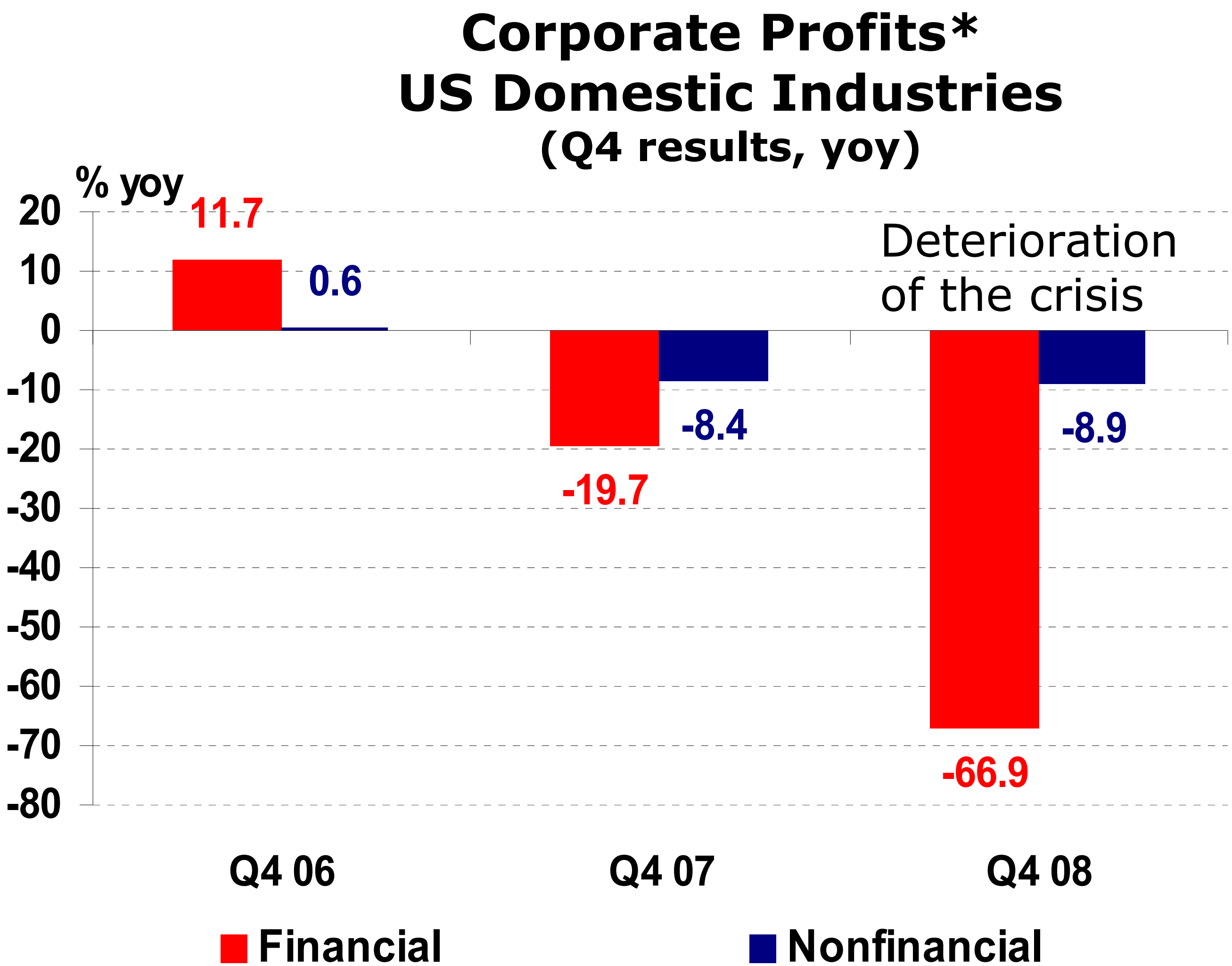
Total Writedowns: $ 658.5
Total Capital Raised: $ 355.3
Total Gap: $ 303.2



* 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 permanent marks

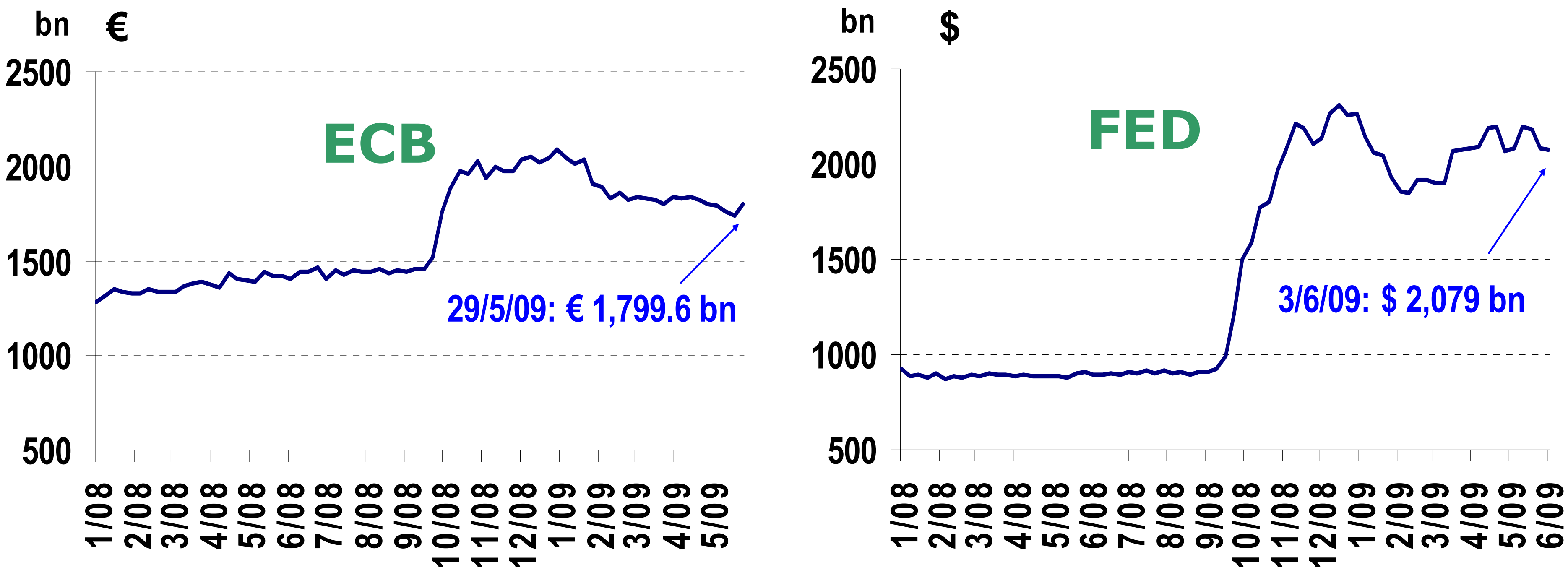
- ✓ Assuming the financial sector stabilizes gradually, still where would future growth originate from? if
  - The US consumer is forced to reduce leverage and increase savings – same is true in other countries with high household indebtness
  - The Chinese consumer is not ready yet
  - India is still 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

THANK YOU FOR YOUR ATTENTION!!

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

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http://www.eurobank.gr/research

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