

## **Public debt and financial markets in the wake of the crisis**

*Laurence Boone*

*CEPII-Groupama AM*

*October 2009*

# Agenda : cycle, phase I

---

- Financial crisis widen government deficit
  - Increased bill issuance in the first year
  - Increased sovereign bond issuance in the following years
- Financial crisis diminish appetite for risk and illiquid assets
  - This favours sovereign papers
  - And especially short -term papers, more purchase of government bills
- At this stage of the cycle
  - The increased bill issuance...
  - ...is met by investors' increased appetite for quality government bills

# Agenda : cycle, phase II

---

- Financial crisis increase government debt
  - All countries see their public debt increase
  - What is special about this crisis is the synchronicity of the crisis
  - Just before ageing cost step in for most of these countries
- The aftermath of the crisis will see elevated debt issuance level
  - Mitigated for some more month by quantitative easing in some countries
  - Met by banks' rising appetite for sovereign bonds
- Possible consequences over the coming years
  - Rising rates
  - Rates differentiation –though mitigated in the euro area

## A glance at public finance projections revisions over the last year

September 2008

% of GDP	2005	2006	2007	2008	2009	2010
Austria	-1.5	-1.5	-0.4	-1.2	-1.0	-0.5
Belgium	-2.6	0.3	-0.3	-0.4	-0.7	-0.2
Finland	2.9	4.1	5.3	3.4	3.2	3.5
France	-2.9	-2.4	-2.7	-2.9	-3.3	-2.8
Germany	-3.3	-1.5	-0.2	0.0	-0.2	0.1
Greece	-5.1	-2.8	-3.5	-2.9	-3.4	-2.9
Ireland	1.7	3.0	0.2	-5.0	-5.5	-4.5
Italy	-4.3	-3.4	-1.6	-2.8	-2.9	-2.5
NL	-0.3	0.6	0.3	1.3	1.2	1.5
Portugal	-6.1	-3.9	-2.6	-2.9	-3.2	-2.8
Spain	1.0	2.0	2.2	-1.6	-2.0	-1.5
<b>Euro</b>	<b>-2.6</b>	<b>-1.4</b>	<b>-0.6</b>	<b>-1.5</b>	<b>-1.7</b>	<b>-1.3</b>

October 2009

	2007	2008	2009	2010
<b>Austria</b>	-1.4	-0.6	-4.4	-5.2
<b>Belgium</b>	-0.2	-1.2	-5.5	-5.7
<b>Finland</b>	5.2	4.1	-3.7	-5.0
<b>France</b>	-2.7	-3.4	-8.3	-8.7
<b>Germany</b>	-0.2	0.0	-3.8	-4.3
<b>Greece</b>	-3.6	-5.3	-12.6	-13.9
<b>Ireland</b>	0.2	-7.1	-12.7	-12.8
<b>Italy</b>	-1.5	-2.5	-6.0	-6.0
<b>NL</b>	0.3	1.0	-6.1	-5.8
<b>Portugal</b>	-2.7	-2.6	-7.5	-7.6
<b>Spain</b>	2.2	-3.8	-10.1	-10.7
<b>Luxembourg</b>	3.6	2.6	-1.5	-2.0
<b>Total euro</b>	-0.6	-1.9	-6.6	-6.9

Source for all charts: Barclays Capital unless otherwise indicated

Widened deficit is first met by bills, then translate into bonds

- In 2008/09, money market funds moved away from structured products
- And bought the increased bill supply

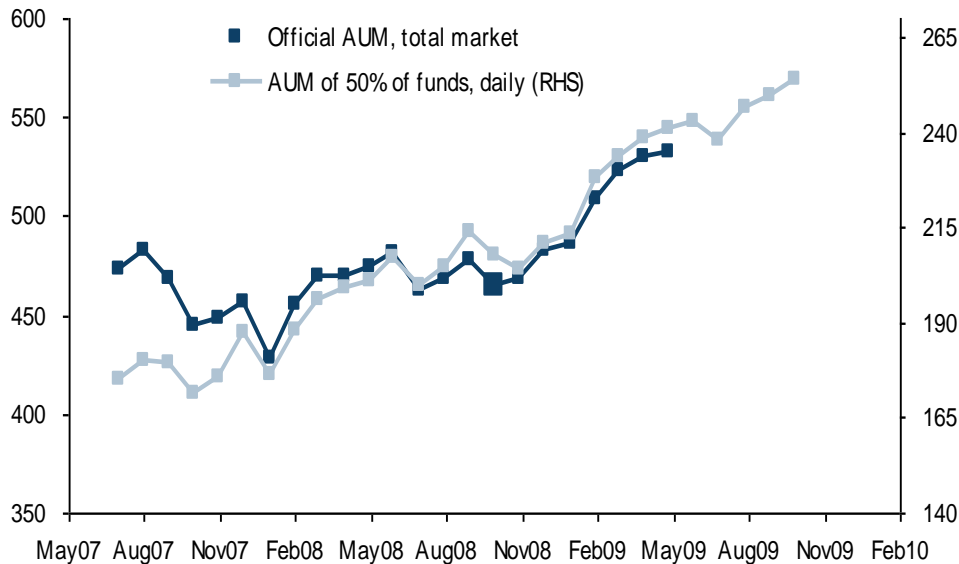
Estimated 2010 euro area government cash flows by country

Medium & Long Term Funding											
€ bn	Gross Issuance	(Δ vs. 2009e)	Redemptions	(Δ vs. 2009e)	Net Issuance	(Δ vs. 2009e)	Net Increase in Bill Issuance in 2009	Total Net funding - Bonds and Bills 2009	Net Increase in Bill Issuance 2010	Total Net funding - Bonds and Bills '2010	
Germany	210	51	148	5	62	46	65	82	-17	45	
France	175	10	93	-17	82	27	70	125	30	112	
Italy	250	0	174	10	76	-10	15	101	0	76	
Spain	80	-30	36	3	44	-33	35	113	27	71	
Holland	57	9	23	-12	34	21	-10	3	0	34	
Belgium	37.5	7	26	6	11	1	-2	8	0	11	
Austria	25	-5	11	-1	14	-4	-2.5	16	0	14	
Finland	10	2	6	-1	4	3	-2.5	-1	0	4	
Ireland	18	-16.5	1	-4	17	-13	12.7	42	0	17	
Greece	44	-8	17	-11	27	3	6.5	30	0	27	
Portugal	17	2.5	6	0	11	3	3.5	12	0	11	
Total	924	22	540	-21	383	43	191	531	40	423	

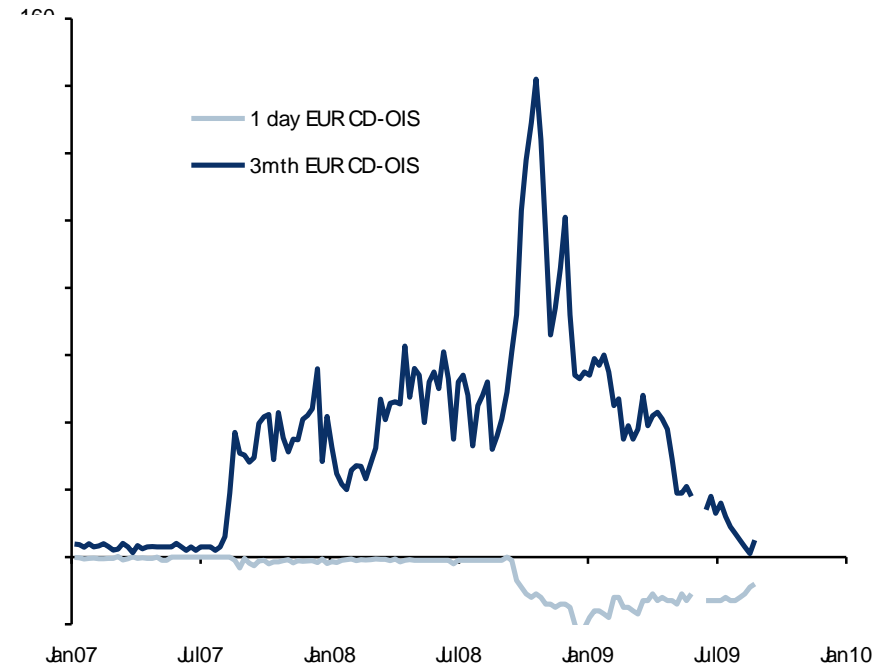
At this stage of the crisis, the increased sovereign issuance is met by rising investors appetite for short term papers

- An increase appetite for bonds away from equities
- An increase appetite for short term and liquid papers

Money market funds continue to have inflows, and are chasing assets



This has pushed CD spreads back to pre-crisis levels



Money market funds are still gathering assets, pushing rates lower as well

## Agenda : cycle, phase II

---

- Financial crisis increase government debt
  - All countries see their public debt increase
  - What is special about this crisis is the synchronicity of the crisis
  - Just before ageing cost step in for most of these countries
- The aftermath of the crisis will see elevated debt issuance level
  - Mitigated for some more month by quantitative easing in some countries
  - Met by banks' rising appetite for sovereign bonds
- Possible consequences over the coming years
  - Rising rates
  - Rates differentiation –though mitigated in the euro area

## The real economy and the banking crisis

Country	Time period	Output loss GDP real growth at trough (%) Unemployment	Inflation, cumulative and rates at beginning and end of period	Short and long term interest rate	Deficit data	Debt data
<b>Finland</b>	Q2 90-Q2 93	-12%; -2.3% q/q (Q1 91) Unemployment: +13.3 pp (de 4.4 à 16.2)	+12.2% (3.8-3.5)	Short term; -4.9pp (de 13.1 à 10.4) Long term: -3.8(de 13.2 à 9.6)	-1.0% of GDP(91), -8.2 (93), -1.2 (97)	Gross: 16% (90), 61.6% (95) Net: -34.8% (90), -4.0 (95)
<b>Japan</b>	Q2 97 ..(Q3 99)...Q4 01	-0.2%; 0.7% q/q (Q3 99 and Q3 01) Unemployment: +1.4pp (+2.0pp; initial rate: 4.7%)	0.1 and -1.7 over the longer period (from 0.5 to -0.7; and - 1.1)	Short term; -0.5pp (-0.8pp; initial rate: 0.55) Long term: -0.8 (-1.3; initial rate:2.6)	-4.0 % of GDP (97) -8.0 (02) -6.7 (05)	Gross: 100.5% (97), 152.3% (02), 175.3 (05) Net: 34.8% (97), 72.6 (02), 84.6 (05)
<b>Norway</b>	Q1 91 – Q4 93	-5.8%; -4.6% q/q (Q1 93) Unemployment: +0.4 pp (de 5.3 à 5.7)	+6.3 (from 3.9%to 1.9% y/y)	-5.8 (de 11.1 à 5.2); -4.7 (de 10.5 à 5.7)	0.1 (91), -1.9 (92) 0.3 (94)	Gross: 29.4% (90), 40.9% (95) Net: -41.0% (90), -36.1 (95)
<b>Sweden</b>	Q1 91 – Q1 93	-5.4%; -1.5% (Q4 92) Unemployment: +4.7 pp (de 2.4à 8.2)	7% (de 7.9 à 3.7% y/y)	-2.9 (de 12.5 à 9.6); -1.7 (de 11.4 à 9.8)	-0.1 (91) -11.2 (93) -1.6 (97)	Gross: 46.0% (90), 81.0% (95) Net: -7.9% (90), 25.6 (95)
<b>US</b>	1988	-1.3%; -0.8% q/q (Q4 90) Unemployment: +1.24pp (de 5.3à 6.9)	4.2 (de 4.2 à 4.5 % y/y)	-0.3pp (De 8.4 à 8.1) +0.3 pp (de 8.4 à8.7)	-3.6 (88) -5.8 (92)	Gross: 61.1% (88), 70.2% (92) Net: 45.2% (90), 53.7 (95)

The cost of the crisis a close to 20% of GDP increase in the debt to GDP ratio

### General government balances and debt ratios to GDP (%)

	fiscal balance					gross debt				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
<b>Austria</b>	-1.4	-0.6	-4.4	-5.2	-4.6	60	63	71	74	79
<b>Belgium</b>	-0.2	-1.2	-5.5	-5.7	-4.8	84	90	98	100	105
<b>Finland</b>	5.2	4.1	-3.7	-5.0	-3.2	35	34	42	46	49
<b>France</b>	-2.7	-3.4	-8.3	-8.7	-7.4	64	67	77	84	91
<b>Germany</b>	-0.2	0.0	-3.8	-4.3	-2.6	65	66	74	75	78
<b>Greece</b>	-3.6	-5.3	-12.6	-13.9	-13.5	95	98	111	122	136
<b>Ireland</b>	0.2	-7.1	-12.7	-12.8	-12.5	25	44	61	72	85
<b>Italy</b>	-1.5	-2.5	-6.0	-6.0	-5.5	103	106	115	118	124
<b>NL</b>	0.3	1.0	-6.1	-5.8	-3.9	46	59	60	68	72
<b>Portugal</b>	-2.7	-2.6	-7.5	-7.6	-7.2	64	66	76	82	89
<b>Spain</b>	2.2	-3.8	-10.1	-10.7	-10.2	36	40	53	64	74
<b>Luxembourg</b>	3.6	2.6	-1.5	-2.0	-1.7	7	15	16	17	18
<b>Total euro</b>	-0.6	-1.9	-6.6	-7.0	-5.8	66	69	78	84	87

## Higher debt to GDP ratio translate into higher sovereign debt issuance

Total bond issuance and forecasts for 2005–2010 (€bn),  
per year per country of the euro area

bn	2005	2006	2007	2008	2009	2010
Germany	149.7	162	141	146	159	210
France	111	104	98	129	165	175
Italy	180.3	170.4	173.4	186.3	260	250
Spain	36.7	30	25.3	53.1	110	80
Belgium	22.6	20.1	28	30.2	31	37
Holland	31.8	22.8	21.1	28.5	48	57
Portugal	16.5	13.6	9.7	13	14	17
Finland	5	6	5	5	8	10
Austria	17.6	18.7	18.1	10.1	28	26
Greece	29.4	26.5	31.9	38.6	52	44
Ireland	1.7	0	6	11	35	18
<b>Euro Area</b>	<b>602</b>	<b>575</b>	<b>558</b>	<b>637</b>	<b>908.5</b>	<b>924</b>

Note: Less than 1 year notes are excluded, net of buy back for France

Total bond issuance and forecasts for 2006–2010 (\$bn),  
per year, in the US

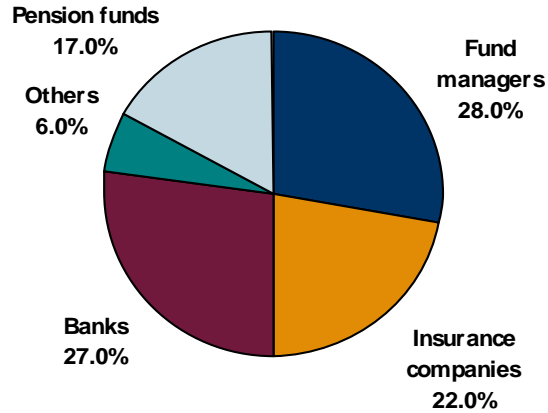
2009 Treasury supply off the charts					
Treasury	2006	2007	2008	2009E	2010E
2s	256	224	373	498	528
3s	81	30	53	431	480
5s (+ 5y TIPS)	184	170	264	466	544
7s	0	0	0	303	419
10s (+10y TIPS)	118	113	141	269	300
30s (+20y TIPS)	41	98	49	142	178
Coupon Gross	680	635	880	2109	2449
Coupon Net	191	101	332	1,557	1,790
Fed Purchase	-	-	-	300	-
Duration					
Supply, 10-yr Eq	368	335	471	1,070	1,530

Source: National budgets, Barclays Capital

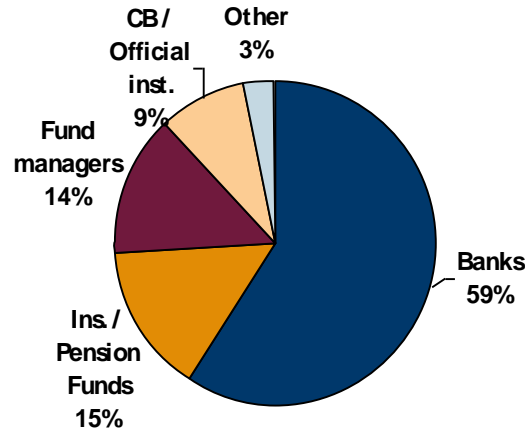
# Banks' appetite for sovereign bonds

## Examples of bond issuance in selected euro countries

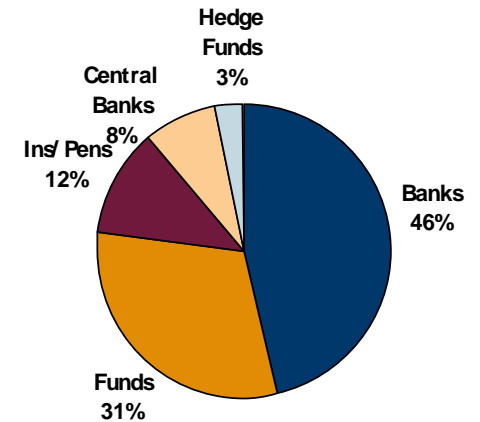
France: OAT 04/41



Ireland: 01/14



Greece: 07/19

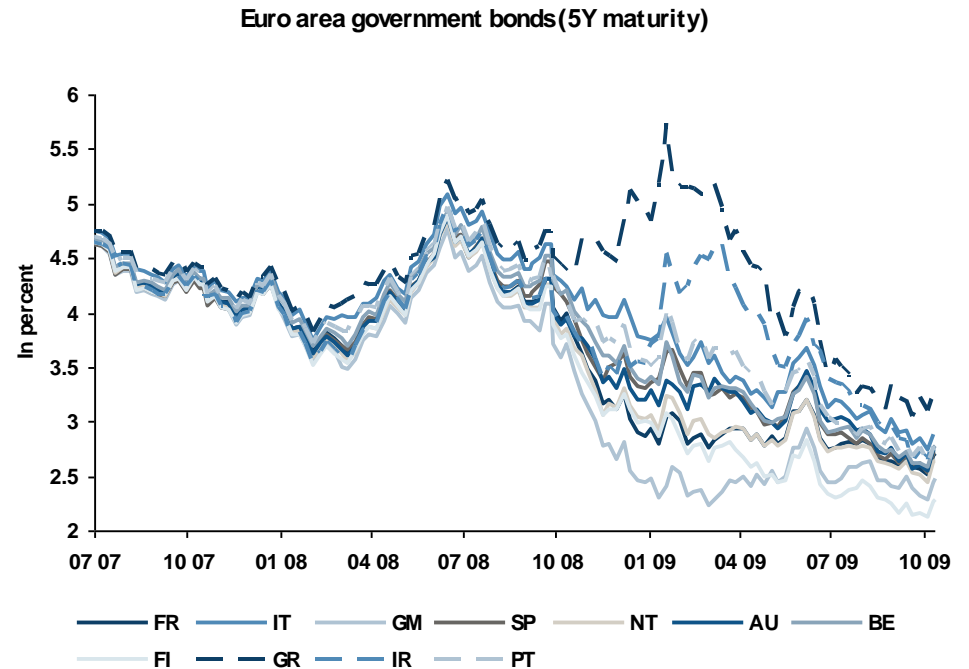


	Govt paper holdings			Balance sheets				Previous maximum % of total assets	Difference to previous maximum % of total assets	Local currency bn	Data set	Definition
	12m chg Local currency bn	Sep-09 Local currency bn	% of total assets	12m chg Local currency bn	Sep-09 Local currency bn	Growth (exc govt paper) %						
Euro	222	1,343	4.3%	-101	31,496	-1.0%	7.5%	3.2%	1,016	1999 to Aug 09	□ govt debt/ Credit institutions assets	
US(USTs & agencies)	233	1,295	12.5%	574	10,400	3.5%	21.4%	8.9%	925	1991 to Sep 09	USTs & Agencies/ domestic USbank assets	
Memo: US(USTs)	61	133	1.3%	574	10,400	5.2%	9.1%	7.8%	812	1991 to Sep 09	USTs/ domestic USbank assets	
UK	155	158	4.4%	129	3,585	-0.7%	4.4%	0.0%	0	1997 to Aug 09	Gilt/ Sterling assets of UK resident banks	
Japan	28,980	116,865	14.7%	19,301	795,961	-1.2%	14.7%	0.0%	0	1993 to Aug 09	JGB/ private bank assets	
Total (\$bn)	1,082	4,596	6.9%	843	66,944	-0.3%			2,297			

Source: Federal Reserve, BoJ, ONS, ECB, Barclays Capital

## In the aftermath of the crisis: rising and differentiated spread?

- There could be further differentiation across countries
- Rates could be increasing
  - Chinn and Frankel (2003): debt increases by 1 pp of GDP increases EU real rates by 7-12 bp pa
  - EC (2004): 1 pp of GDP increases EU real rates by 15-20 bp pa
  - Haugh et al. (2009): 1 pp increases in debt interest payments increases euro spreads vs Germany by 11bp
  - ..etc



Source: RVI, Barclays Capital

## Adjusting public finances: previous experiences

Debt level				
	Starting	Ending	Debt reduction	Primary surplus per year
Belgium (1994-2007)	134	84	50	5.3
Ireland (1994-2006)	94	24	70	4.1
Spain (1997-2007)	67	36	31	2.5
Netherlands (1994-2007)	79	46	33	2.5
Finland (1995-2008)	58	33	25	1.9
Denmark (1993-2008)	80	22	58	3.4
New Zealand (1986-2001)	72	30	42	3.5
Canada (1996-2008)	102	63	39	3.3
Sweden (1996-2008)	73	38	35	1.8
Iceland (1995-2005)	59	25	34	1.7
Norway (1979-1984)	57	35	21	4.8

Source: European Commission 2009 Ageing report. Age-related government expenditures, 2007-2060, pp of GDP

# Disclaimer

---

This presentation has been prepared by Barclays Capital – the investment banking division of Barclays Bank PLC (“Barclays Capital”, together with its affiliates worldwide, “Barclays”). This presentation is for discussion purposes only, and shall not constitute any offer to sell or the solicitation of any offer to buy any security, provide any underwriting commitment, or make any offer of financing on the part of Barclays, nor is it intended to give rise to any legal relationship between Barclays and you or any other person, nor is it a recommendation to buy any securities or enter into any transaction or financing. Investors must consult their own regulatory legal, tax, accounting and other advisers prior to making a determination as to whether to invest in any securities or enter into any transaction of financing to which this presentation relates. Any pricing in this presentation is indicative. Although the statements of fact in this presentation have been obtained from and are based upon sources that Barclays Capital believe to be reliable, Barclays Capital does not guarantee their accuracy or completeness. All opinions and estimates included in this presentation constitute the Barclays Capital’s judgement as of the date of this presentation and are subject to change without notice. Any modelling or back testing data contained in this presentation is not intended to be a statement as to future performance. Past performance is no guarantee of future returns. No representation is made by Barclays Capital as to the reasonableness of the assumptions made within or the accuracy or completeness of any models contained herein.

Neither Barclays, nor any officer or employee thereof accepts any liability whatsoever for any direct or consequential losses arising from any use of this presentation or the information contained herein, or out of the use of or reliance on any information or data set out herein.

Barclays and its respective officers, directors, partners and employees, including persons involved in the preparation or issuance of this presentation, may from time to time act as manager, co-manager or underwriter of a public offering or otherwise deal in, hold or act as market-makers or advisors, brokers or commercial and/or investment bankers in relation to any securities or related derivatives which are identical or similar to those to which this presentation relates.

This presentation is being made available on a confidential basis in the United Kingdom to persons who are investment professionals as that term is defined in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion Order) 2001. Outside of the United Kingdom, it is directed at persons who have professional experience in matters relating to investments. Any investments to which this presentation relates are available only to such persons and will be entered into only with such persons.

Barclays Capital, the investment banking division of Barclays Bank PLC, is authorised and regulated by the United Kingdom Financial Services Authority and is a member of the London Stock Exchange. Copyright in this presentation is owned by Barclays Capital (© Barclays Bank PLC, 2004). No part of this presentation may be reproduced in any manner without the prior written permission of Barclays Capital. Barclays Bank PLC is registered in England No. 1026167. Registered office 1 Churchill Place, London, E14 4HP.