

Main fiscal variables and trends, and the economic and financial crisis

António Afonso

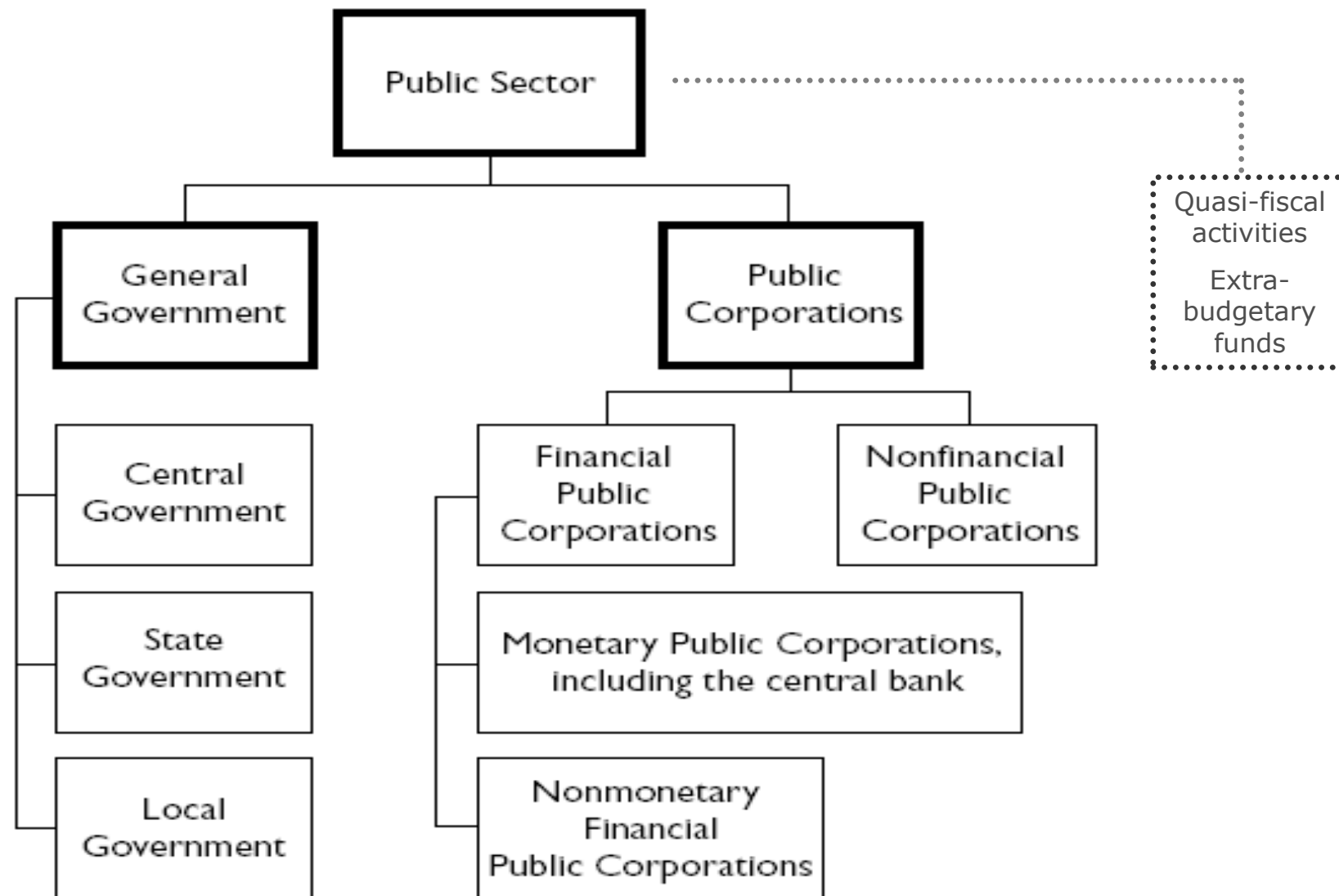
(ISEG/UL- University of Lisbon;

UECE-Research Unit on Complexity and Economics)

2020

- Some basics
- Budget balance and general government debt
- Public expenditure, public revenue
- The 2008-2009 crisis
- Fiscal response to the economic crisis
- Fiscal costs

The government



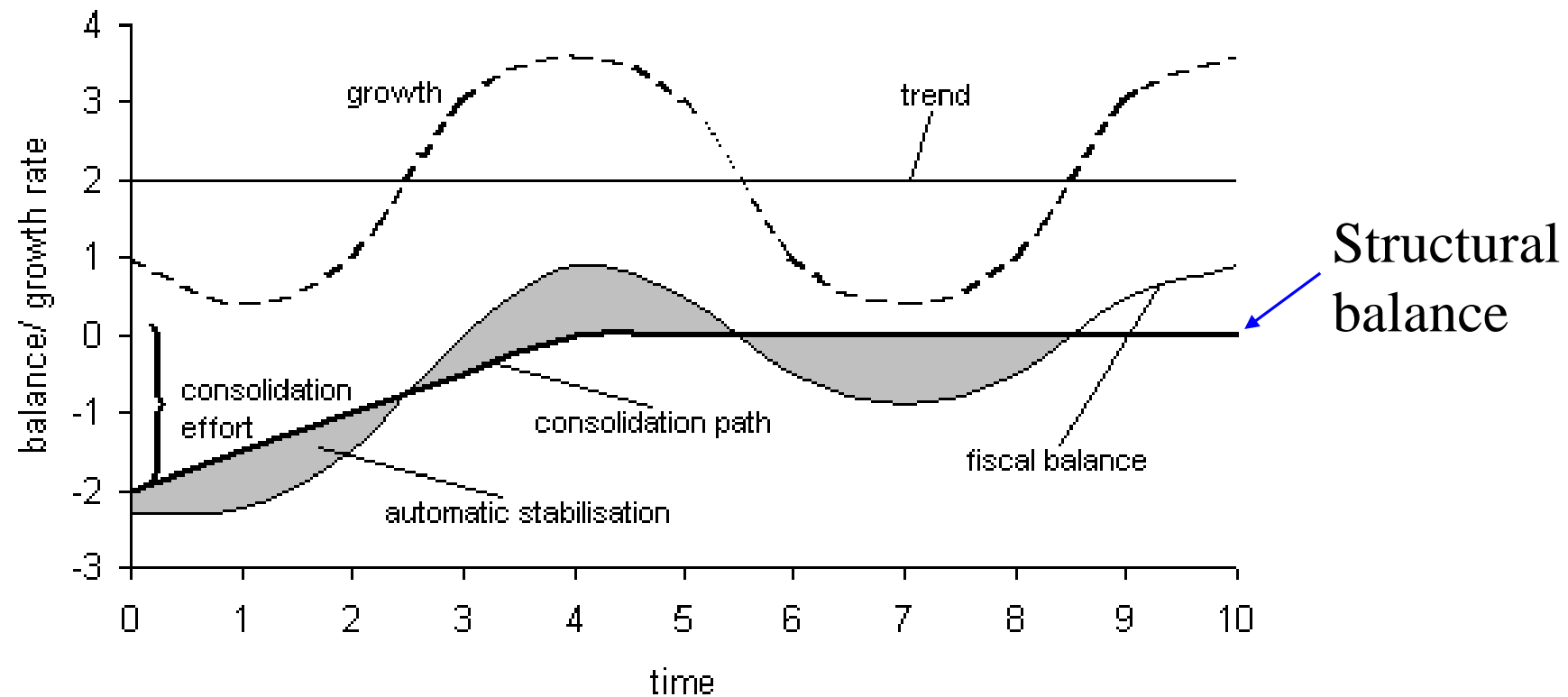
Government accounts

- **Total revenue**
 - Tax revenue (VAT, excise taxes, income taxes, etc.)
 - Non-tax revenue (licenses, fees, etc.)
 - *Grants*
- **Total expenditure**
 - Current expenditure
 - Current transfers (pensions,
 - Interest payments
 - Other current expenditure (wages and salaries, purchases of goods and services, etc.)
 - Capital expenditure (investment, capital transfers)
- **Overall balance** (Total revenue minus total expenditure; +: surplus / -: deficit)
- **Primary balance** (Overall balance minus interest payments)
- **External financing**
- **Domestic financing**
 - Bank financing
 - Nonbank financing
 - Privatization proceeds
- *[Arrears accumulation]*

Debt = Accumulation of past deficits over time (Gross debt vs. net debt)

Cyclically adjusted balance/structural balance

The budget balance can be decomposed into a cyclical and a structural, or cyclically-adjusted, component.



Large deficits after the boom years and the crisis

General government budget balance (% of GDP)

	2000	2007	2010	2014		2000	2007	2010	2014
BE	-0,04	-0,05	-3,74	-2,61	MT	-5,72	-2,30	-3,54	-2,72
BG	-0,54	1,16	-3,12	-1,92	NL	1,97	0,18	-5,13	-3,19
CZ	-3,62	-0,74	-4,73	-2,81	AT	-1,68	-0,87	-4,51	-2,05
DK	2,26	4,81	-2,53	-1,26	PL	-3,03	-1,88	-7,89	4,97
DE	1,14	0,24	-4,17	-0,03	PT	-3,27	-3,15	-9,82	-4,04
EE	-0,23	2,39	0,18	-0,36	RO	-4,67	-2,91	-6,79	-2,16
IE	4,88	0,16	-30,61	-4,84	SI	-3,71	-0,05	-5,86	-3,95
EL	-3,73	-6,46	-10,68	-2,20	SK	-12,27	-1,81	-7,66	-3,26
ES	-0,94	1,97	-9,61	-5,78	FI	7,02	5,34	-2,49	-2,52
FR	-1,51	-2,73	-7,06	-4,03	SE	3,59	3,61	0,29	-1,49
HR			-6,36	-5,44	UK	3,53	-2,82	-10,07	-5,25
IT	-0,83	-1,63	-4,47	-2,57	EA-17	-0,11	-0,67	-6,21	-2,57
CY	-2,34	3,50	-5,29	-5,82	EU-28			-6,51	-2,70
LV	-2,79	-0,39	-8,14	-1,01					
LT	-3,20	-1,01	-7,18	-2,29					
LU	5,97	3,68	-0,81	-0,51					
HU	-3,04	-5,14	-4,31	-3,01					

Source: European Commission spring 2014 economic forecast,.

Notes: The Irish figure for 2010 includes significant one-off costs, largely related to measures to support the banking sector, which total around 19% of GDP. Excluding one-off costs, the budget balance would have been -13.2% of GDP for Ireland and -6.0% for the euro area.

Increasing government spending

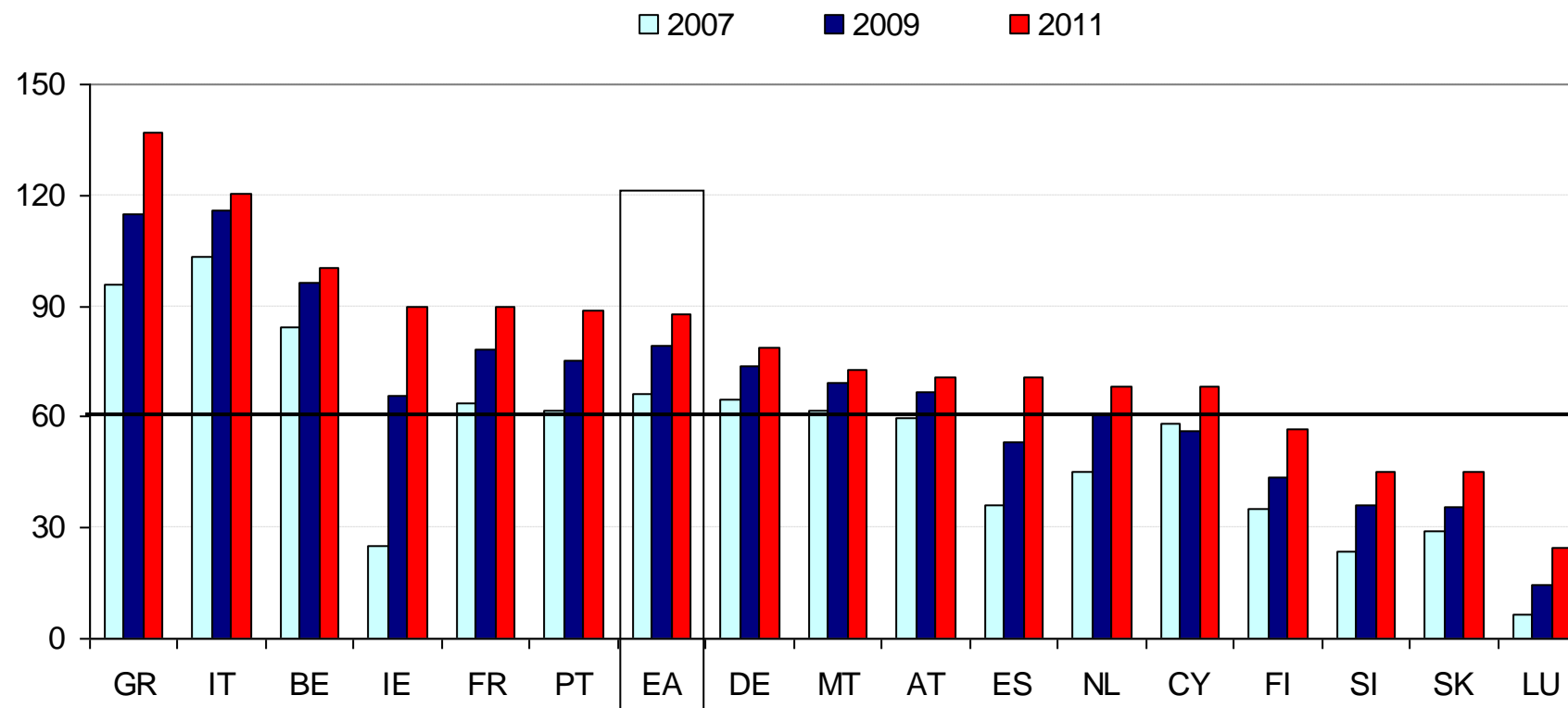
General government spending (% of GDP)

	2000	2007	2010	2014		2000	2007	2010	2014
BE	49,04	48,20	52,45	53,94	MT	39,45	41,78	41,59	44,35
BG	41,27	39,19	37,42	38,65	NL	44,17	45,25	51,44	50,36
CZ	41,65	41,05	43,79	42,99	AT	51,78	48,47	52,82	51,76
DK	53,57	50,78	57,53	56,32	PL	41,08	42,18	45,43	41,26
DE	45,10	43,51	47,85	44,64	PT	41,57	44,30	51,47	46,82
EE	36,12	33,98	40,47	38,30	RO	38,56	38,24	40,10	36,07
IE	31,18	36,70	65,49	40,28	SI	46,51	42,28	49,45	49,29
EL	47,12	47,20	51,28	47,98	SK	52,14	34,21	39,95	37,73
ES	39,18	39,15	46,31	43,78	FI	48,34	47,39	55,48	57,83
FR	51,67	52,59	56,54	57,10	SE	55,09	50,93	52,03	52,38
HR			46,90	47,27	UK	36,42	43,29	49,88	45,97
IT	45,78	47,67	50,52	50,55	EA-17	46,16	45,98	51,04	49,39
CY	37,07	41,33	46,17	47,29	EU-28			50,58	48,55
LV	37,61	35,95	43,44	35,71					
LT	39,78	35,31	42,22	34,82					
LU	37,59	36,26	43,52	43,33					
HU	47,72	50,71	49,89	51,26					

Source: European Commission spring 2014 economic forecast,.

Notes: The Irish figure for 2010 includes significant one-off costs, largely related to measures to support the banking sector, which total around 19% of GDP.

Government debt (% of GDP)



Source: European Commission, Spring 2011 forecast.

Note: countries ranked according to the debt level in 2011.

Expenditure ratios

	2007	2010	2007-10
Total expenditure	46.0	50.4	4.5
Transfers	15.8	17.8	1.9
Public consumption	20.0	21.9	1.9
<i>Ad memoriam: fiscal balance</i>	-0.7	-6.0	-5.3

Euro area I2 (% of GDP)

	Peack		2000	2007	2010	2007-2010	peack-2010
Belgium	59.3	1983	49.1	48.4	53.1	4.7	-6.2
Germany	54.8	1995	45.1	43.6	46.6	3.0	-8.2
Ireland	67.0	2010	31.3	36.7	67.0	30.3	0.0
Greece	52.9	2009	46.7	46.6	49.5	2.8	-3.4
Spain	46.6	1993	39.1	39.2	45.0	5.8	-1.7
France	56.2	2010	51.6	52.4	56.2	3.8	0.0
Italy	55.6	1993	46.2	47.9	50.5	2.7	-5.1
Luxembourg	45.2	1981	37.6	36.2	41.2	5.1	-4.0
Netherlands	58.1	1983	44.2	45.3	51.2	5.9	-6.9
Austria	56.1	1996	52.2	49.0	53.0	4.0	-3.1
Portugal	50.7	2010	41.1	44.4	50.7	6.3	0.0
Finland	60.0	1996	48.3	47.2	55.1	7.9	-4.9
Euro area	51.0	1993	46.2	46.1	50.5	4.4	-0.4
Sweden	67.4	1993	55.1	51.0	53.0	2.1	-14.4
United Kingdom	51.5	2009	36.8	44.0	50.9	7.0	-0.5
Japan	42.5	1998	39.0	35.9	42.3	6.4	-0.2
United States	43.3	2010	33.9	36.8	43.3	6.5	0.0

Sources: European Commission's economic forecast autumn 2006 and spring 2011.

Note: for Germany data before 1991 represents just West Germany.

(% of GDP)

	Primary expenditure				Public consumption			
	1999	2007	2009	2010	1999	2007	2009	2010
Euro Area (12)	44.0	43.1	48.1	47.7	19.9	20.0	22.1	21.9
Germany	44.9	40.8	44.9	44.2	19.2	17.9	19.7	19.5
France	49.6	49.7	53.8	53.7	23.2	23.0	24.5	24.6
Italy	41.5	42.9	47.3	46.1	18.2	19.7	21.5	21.2
Spain	36.4	37.6	44.0	43.0	17.2	18.4	21.1	20.8
Greece	37.0	41.9	47.6	44.0	16.8	17.9	20.6	18.2
Ireland	31.7	35.7	46.1	63.8	13.8	16.3	19.6	19.1
Portugal	38.1	41.4	46.9	47.7	17.9	19.8	21.8	21.4

	Transfers and subsidies				Public investment			
	1999	2007	2009	2010	1999	2007	2009	2010
Euro Area (12)	18.1	17.1	19.2	19.2	2.5	2.6	2.8	2.5
Germany	20.4	18.3	19.8	19.4	1.9	1.4	1.6	1.6
France	19.2	19.0	20.8	21.1	2.9	3.2	3.4	3.0
Italy	18.1	18.1	20.2	20.3	2.4	2.3	2.5	2.1
Spain	13.3	12.7	15.6	16.3	3.3	4.0	4.4	3.7
Greece	14.3	17.6	20.8	20.6	3.1	3.4	3.0	2.8
Ireland	9.5	10.9	15.8	16.6	3.1	4.7	4.2	3.9
Portugal	12.2	15.3	17.8	17.7	4.0	2.7	2.9	3.3

Source: European Commission (Ameco database).

General government expenditure (% of GDP)			
	1913	1960	1990
France	17.0	34.6	48.8
Germany	14.8	32.4	44.1
Italy	17.1	30.1	52.4
Japan	8.3	17.5	31.3
United Kingdom	12.7	32.2	38.5
United States	7.5	27.0	36.0

Sources: European Commission, Tanzi & Schuknecht (2000)

Public wages in the euro area

Table: Compensation per public and private employees
(1999-2010, accumulated % growth in nominal terms)

	Compensation per government employee	Compensation per private employee	Compensation per employee, total economy	HICP
Weighted average	40.4	27.3	30.2	26.5
Belgium	43.1	34.6	36.6	27.6
Germany	20.8	14.6	15.1	19.8
Ireland	90.3	60.4	68.6	34.6
Greece	106.0	77.1	78.8	46.9
Spain	51.8	43.1	45.9	39.8
France	35.9	37.2	36.8	23.1
Italy	51.6	25.7	30.5	30.1
Luxembourg	58.2	41.9	43.4	36.1
Netherlands	44.2	43.6	44.0	29.0
Austria	35.8	29.0	28.7	23.1
Portugal	62.9	49.5	52.5	33.8
Finland	49.1	43.1	44.8	23.4

Sources: OECD Economic Outlook Jun 2011. Missing government employment data for Germany, Greece and Austria have been based on Economic Outlook June 2005 (1998, 1999), Economic Outlook December 2007 (2000-2006) and ECB calculations. In case of HICP data the sources are Eurostat and ECB calculations.

Definitions: Compensation of private employees defined as total economy compensation of employees minus compensation of government employees. Private employment defined as total economy employment minus government employment minus self-employment. Compensation per private employee defined as compensation of private employees divided by private employment.

Notes: The concept of total compensation of employees in the government sector is in line with ESA95. For statistical issues regarding the definition of government employment see the OECD publication "Measuring public employment in OECD countries: sources, methods and results", OECD 1997. In view of differences with alternative data sources, OECD figures for a number of countries (in particular Germany, Spain, Greece and Portugal) have to be taken with caution.

Euro area: total revenue and revenue structure (% of GDP)

	<i>2007</i>	<i>2010</i>	<i>2007-10</i>
Total revenue	45.3	44.5	-0.9
Direct taxes	12.4	11.3	-1.1
Indirect taxes	13.5	13.0	-0.5
Social contribution	15.1	15.6	0.5
Other	4.4	4.6	0.2

Source: European Commission (Ameco database).

Marginal tax rate

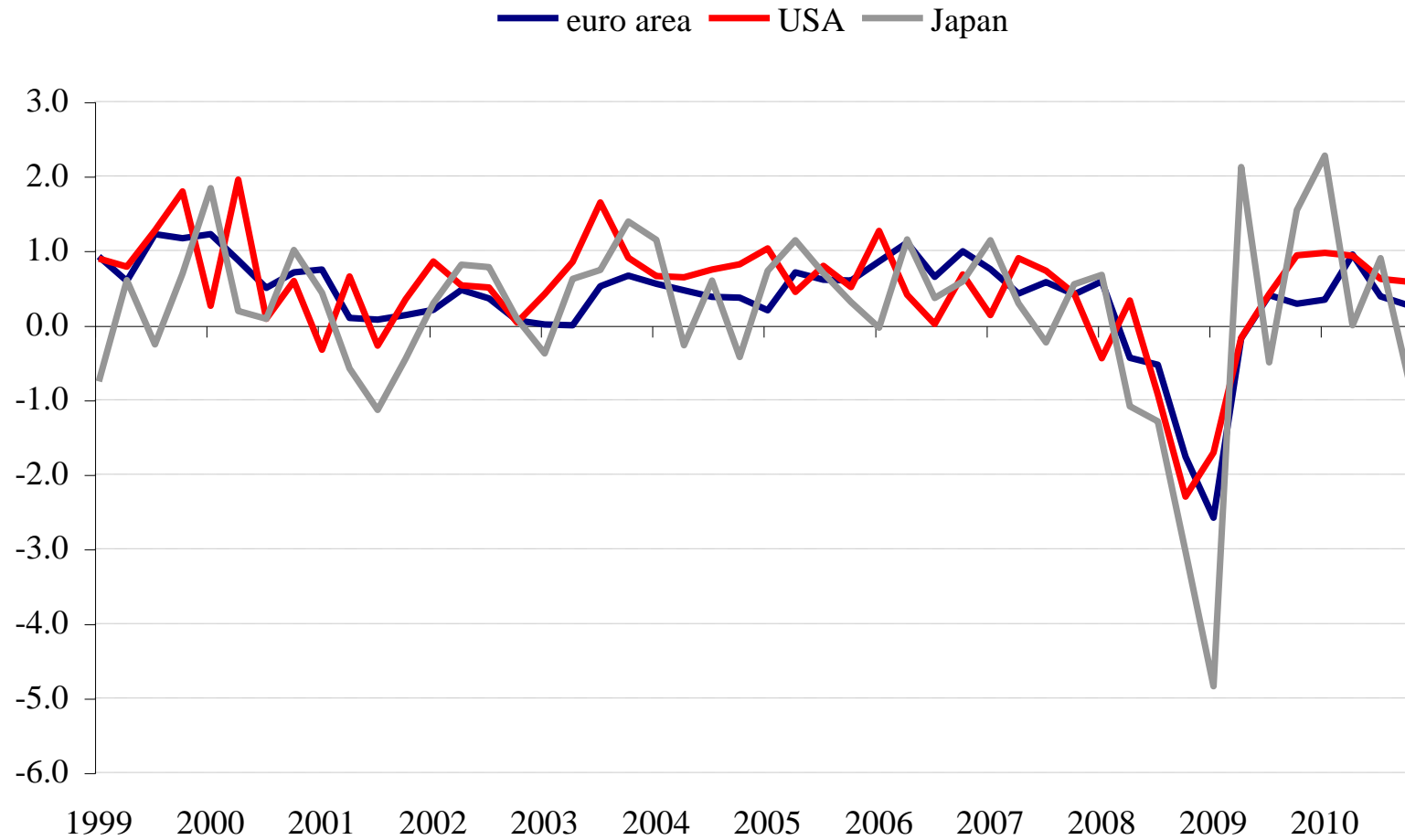
	single earner, no children, average income	married, 2 children, incomes of 100 and 67% of average income
United States	43.3	34.0
Japan	33.2	30.5
United Kingdom	40.6	46.5
Germany	66.5	63.4
France	55.8	52.0
Italy	52.7	52.7
Spain	45.5	45.5
Euro Area (EU-15)	52.8	52.3

Source: OECD, 2008

- Financial turmoil started in August 2007.
- **Financial crisis** erupted in September 2008 after the collapse of Lehman Brothers.
- Triggered a deep **economic recession in all major advanced economies** in late 2008 - early 2009.
- Unprecedented **monetary and fiscal policy responses** in support of both the banking sector and the economy at large.

Real GDP growth

(q-o-q % change)

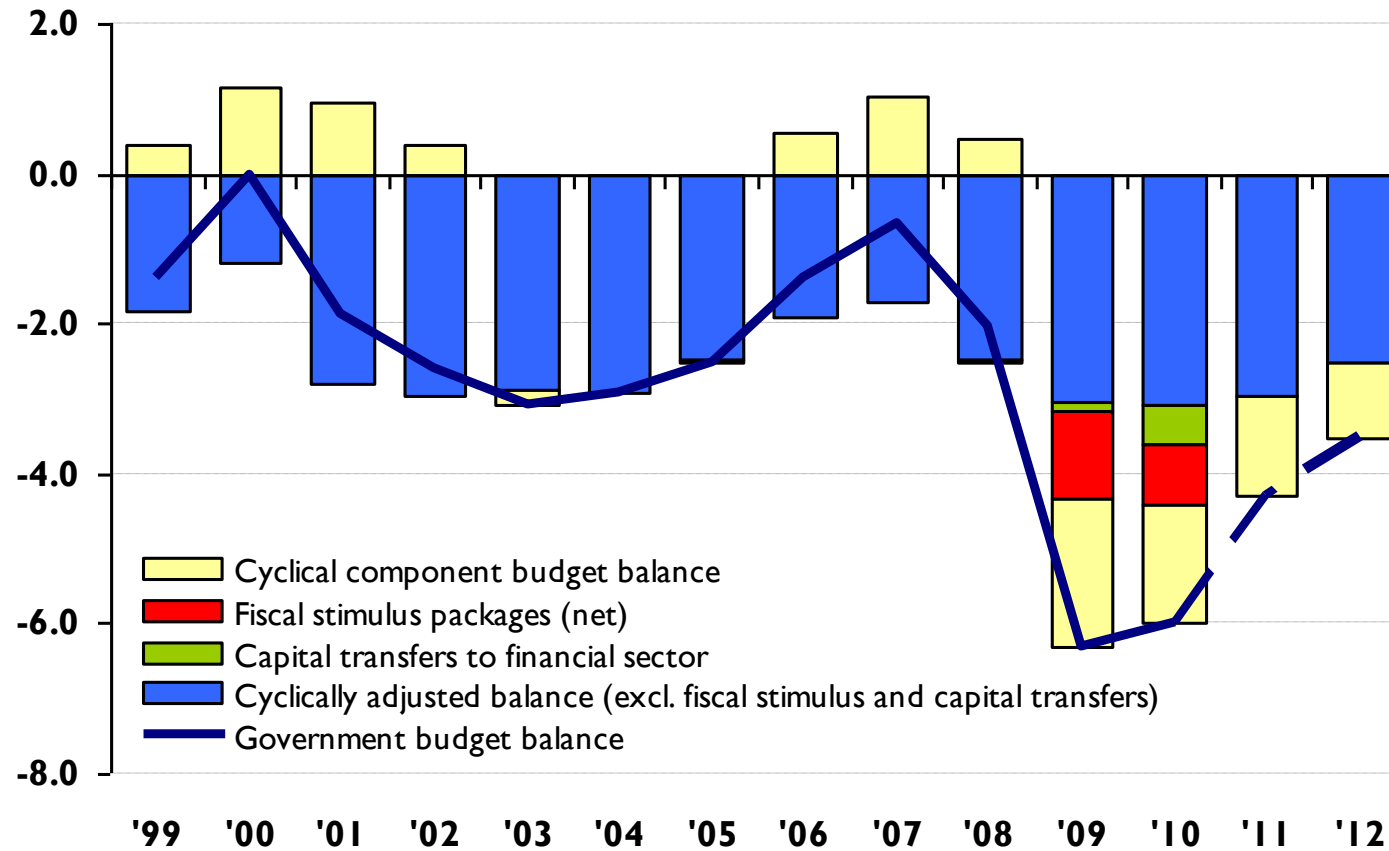


Source: BIS, Eurostat and ECB calculations. Latest observation: **2010 Q4**.

- The chart depicts the depth of the “great recession”.
- Indeed, after the intensification of the global financial crisis with the collapse of Lehman Brothers, all major advanced economies experienced a severe and synchronised downturn. Towards the end of 2008 and mid-2009, economic activity fell for several quarters in all economies.
- Accordingly, in 2009 as a whole, euro area GDP shrank by more than 4%, which compares to a decline of 3.5% [revised in July 2011, previously 2.6%] in the United States and 6.3% in Japan.
- Subsequently, however, the global economy recovered from this recession. This upturn was initially sustained by the monetary and fiscal policy stimulus measures, some normalisation of global financing conditions and improvements in consumer and business confidence.
- In addition, a prolonged inventory cycle supported the global recovery, as firms rebuilt their stocks in response to the normalisation of global economic conditions.
- Accordingly, the euro area expanded by 1.7% in 2010, whereas the United States and Japan grew by 3.0% and 4.0%, respectively, in the same year.

Accommodation of automatic stabilisers

Strong impact from **automatic stabilisers** (cyclical response of the budget to the recession), given the large size of the public sector in the euro area: **no easy reversal**



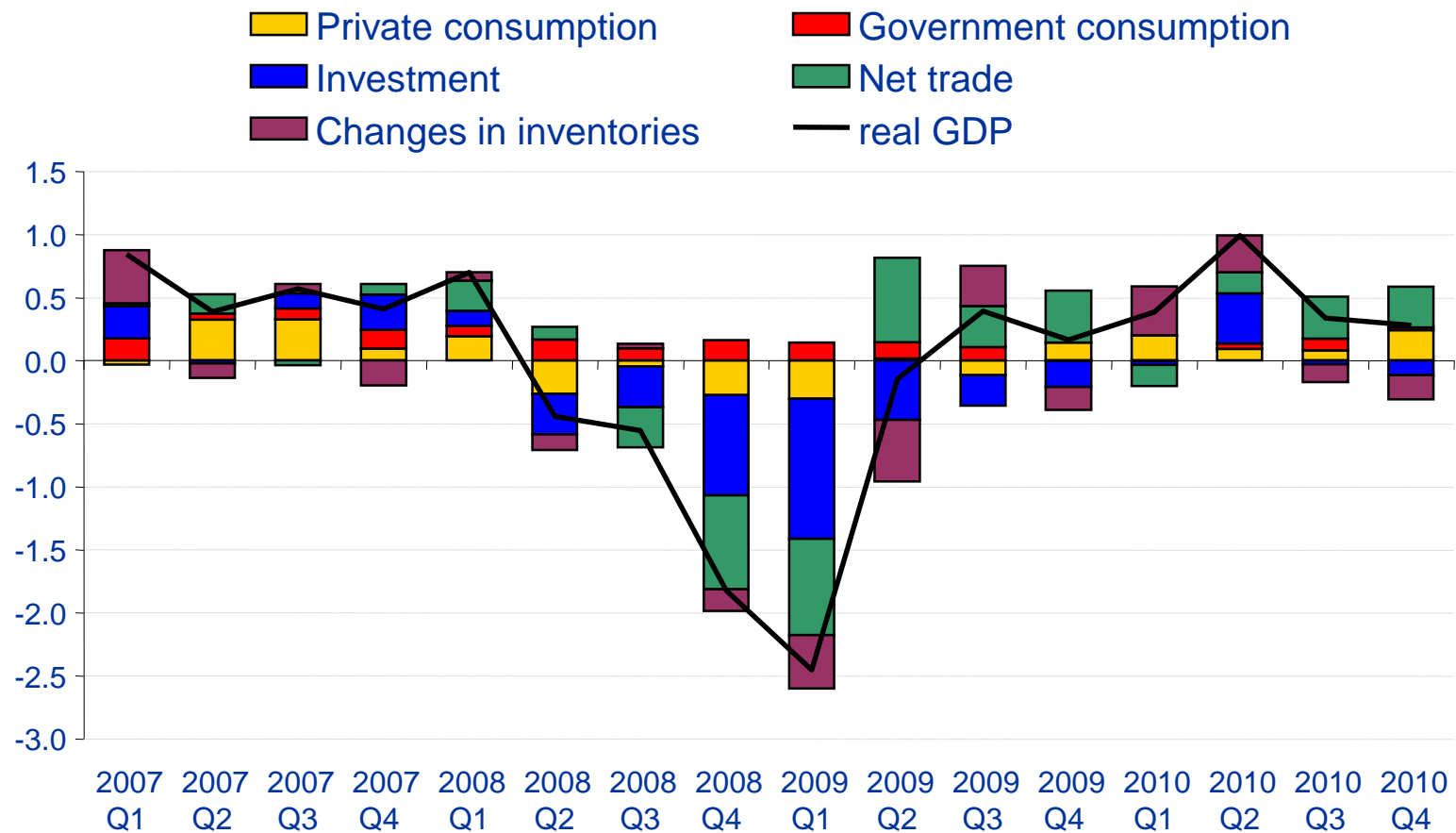
Sources: European Commission Forecast (Spring 2011) and ECB calculations.

Note: The crisis-related capital transfers to the financial sector and the fiscal stimulus packages net of fiscal consolidation are assumed to be zero in 2011 and 2012.

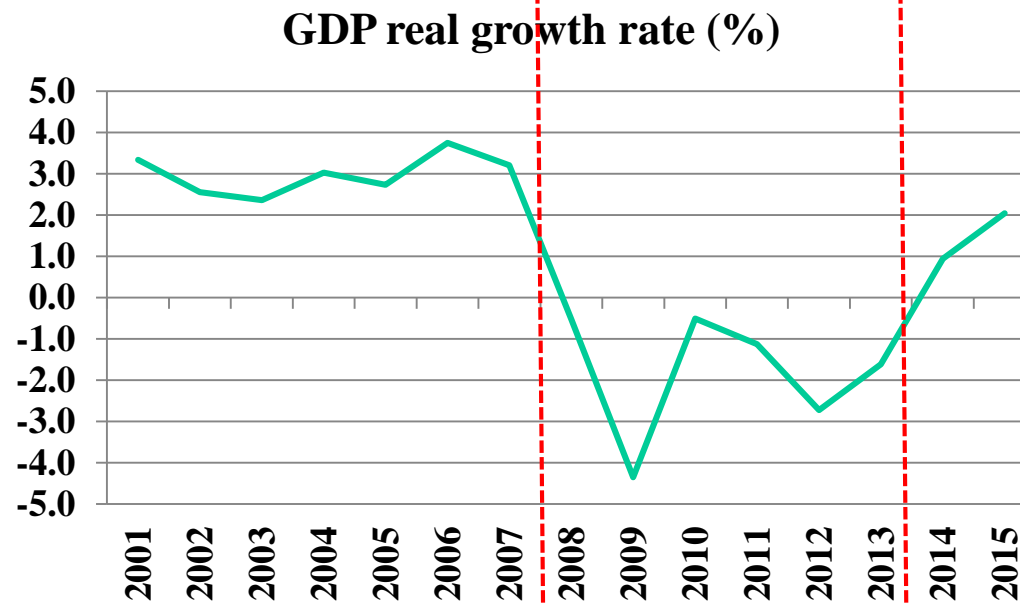
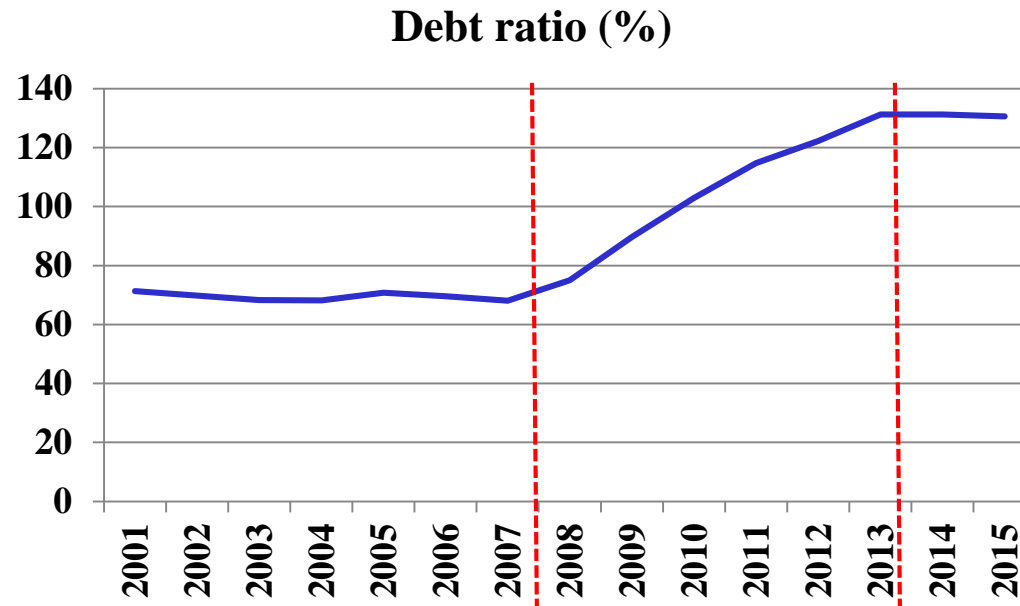
The economy

Real GDP and contribution of demand components

(contributions to quarter-on-quarter growth rates)



Sources: Eurostat and ECB calculations. Latest observation: **2010Q4**.



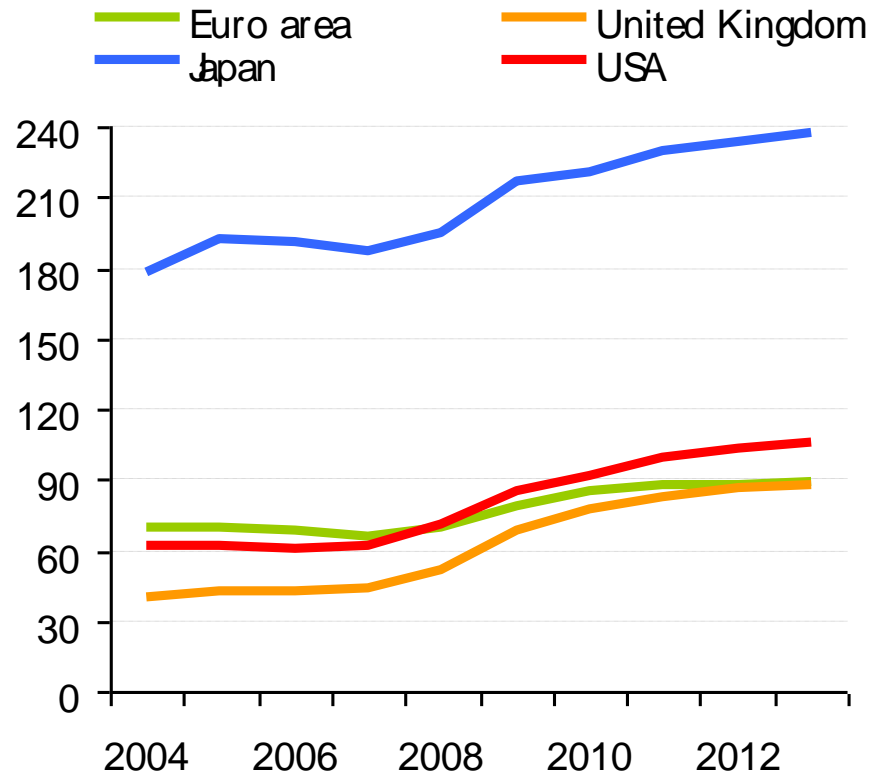
Simple averages for Greece, Ireland, Italy, Portugal, Spain.

Source: European Commission spring 2014 economic forecast.

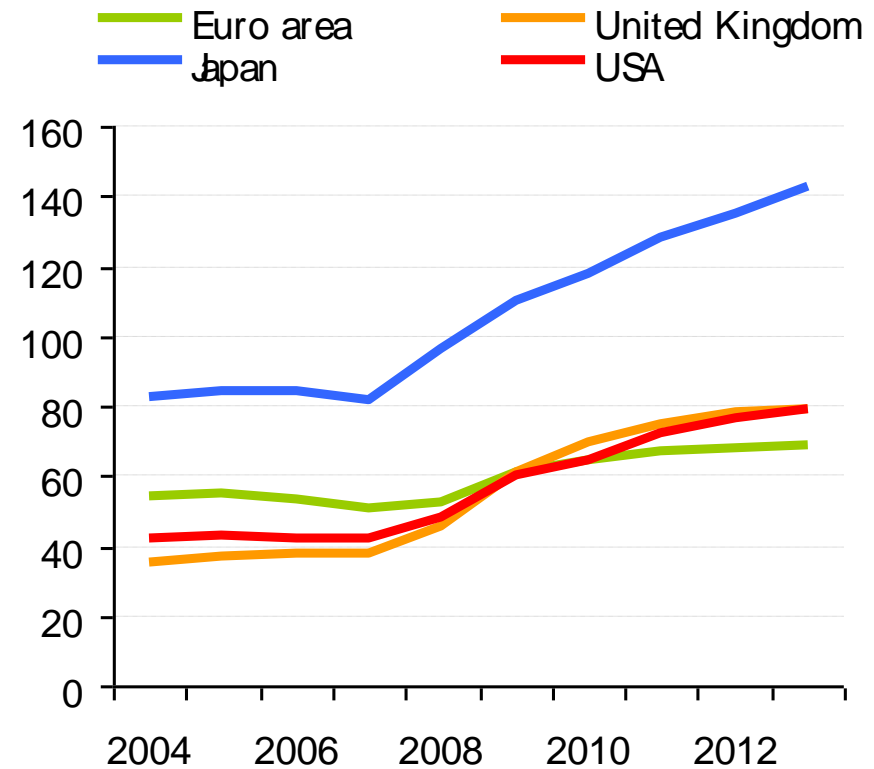
- Economic activity in the euro area has been expanding since the middle of 2009, most recently with quarter-on-quarter growth rates of 0.3% in the third and fourth quarters of 2010. In a historical perspective, the current recovery appears to be one of the weakest, following one of the sharpest declines during the preceding downturn.
- In terms of demand components, net trade has been the most important factor influencing growth throughout the recovery, as a consequence of the strong and sustained rebound in foreign demand. At the same time, owing to the unprecedented sharp fall in world trade, net trade was also a major contributor to the negative GDP growth rates in the recession.
- Although less than net trade, private consumption has been another factor supporting euro area growth, with increasing contributions in recent quarters. This reflects, in part, the success of the various government support programs introduced in many euro area countries, such as car scrappage schemes, while the more recent developments also reflect lower savings which in turn is probably linked to an increase in consumer confidence.
- The variation of stocks has also played an overall supportive role during the recovery, although their contribution is characterized by very high volatility.
- Total investment, on the other hand, has continued to decline for most quarters of the current recovery. This is due both to sluggish construction developments, in particular in countries that earlier enjoyed a housing boom, as well as to the high degree of spare capacity triggered by the sharpness of the downturn.
- Finally, following a supportive role during the downturn, government consumption has contributed only marginally to the recovery.

Rising gross and net government debt

General government **gross** debt
(2004-2013, percentage of GDP)



General government **net** debt
(2004-2013, percentage of GDP)

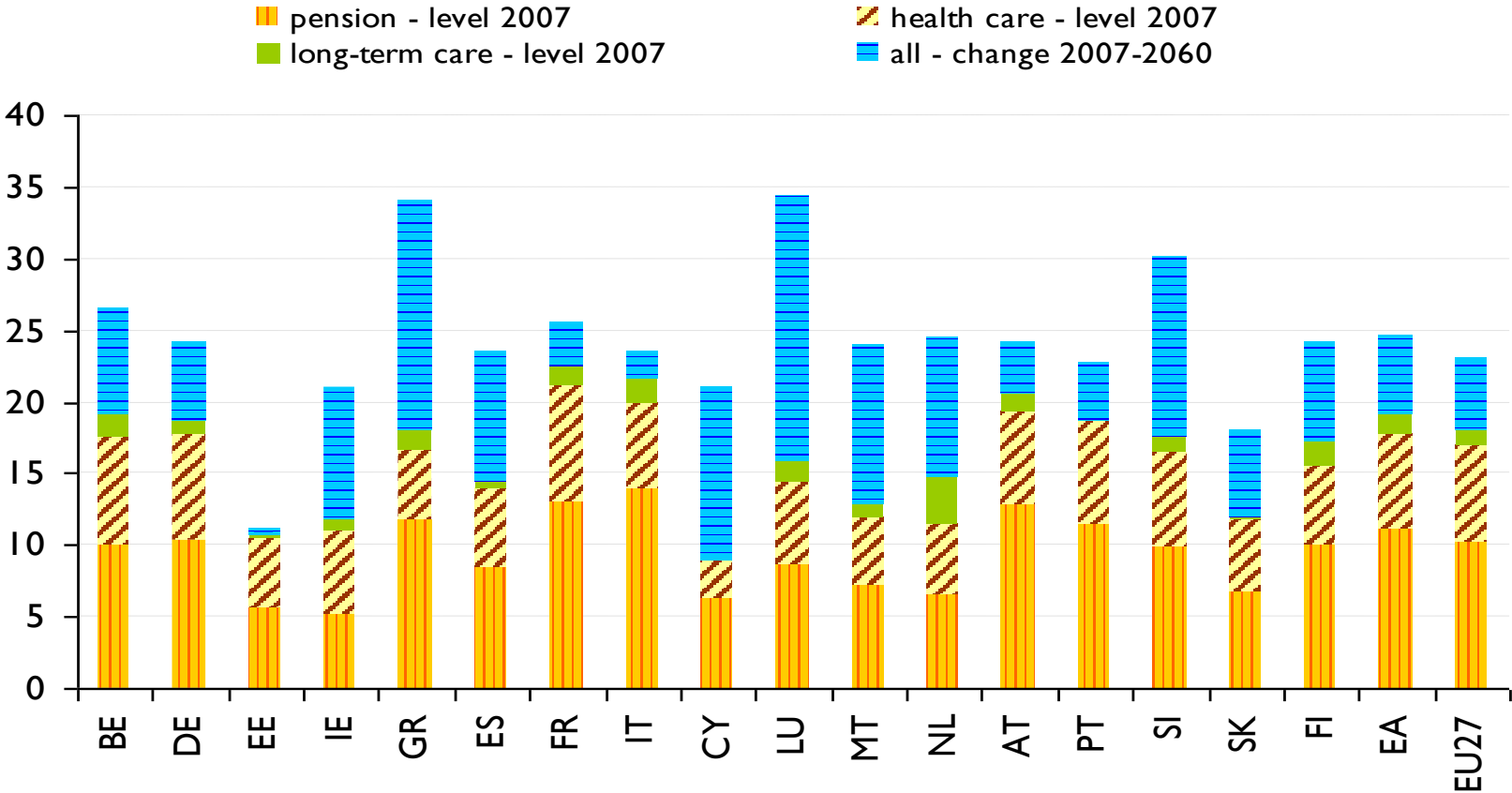


Source: IMF World Economic Outlook April 2011.

Fiscal costs (1/6)

Pensions, healthcare and long-term care as % of GDP for 2007-2060

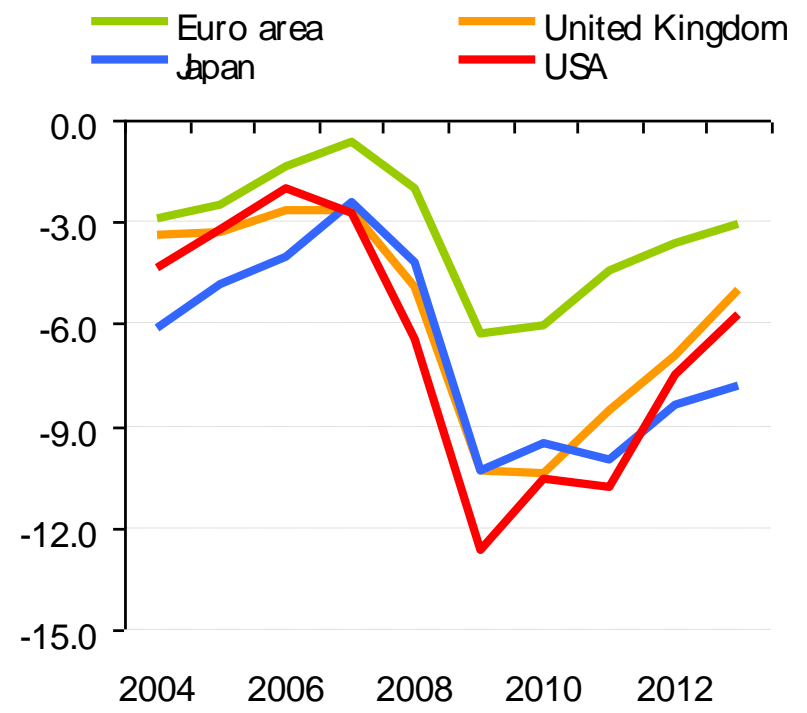
Fiscal costs (2/6)



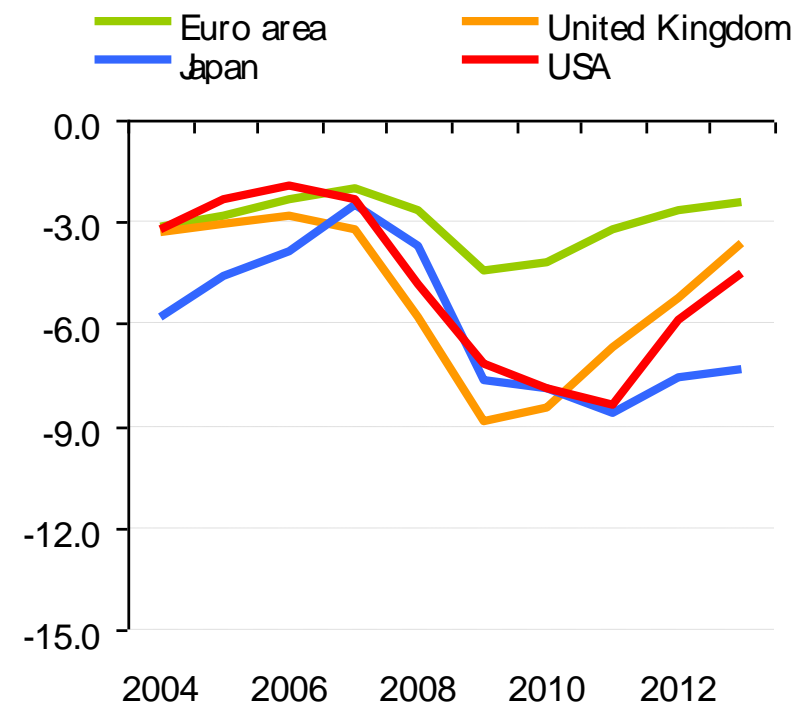
Source: 2009 Ageing Report, Economic Policy Committee's Ageing Working Group (AWG) and the European Commission.

Rising fiscal imbalances

General government budget balance (2004-2013, percentage of GDP)



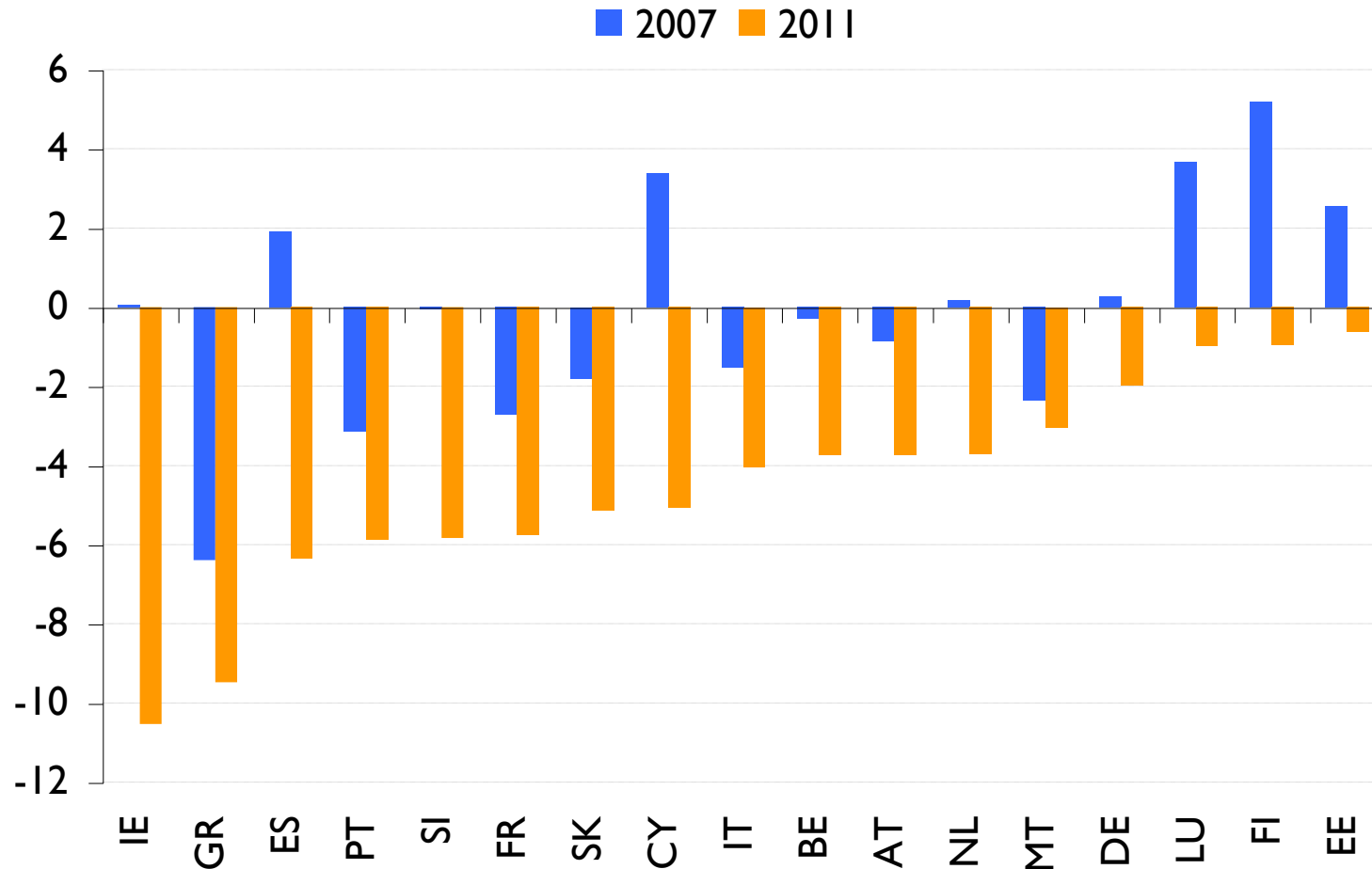
General government structural balance (2004-2013, percentage of GDP)



Source: IMF World Economic Outlook April 2011.

Rising fiscal imbalances: differences across the euro area

General government budget balance in the euro area countries
(2007, 2011; percentage of GDP)

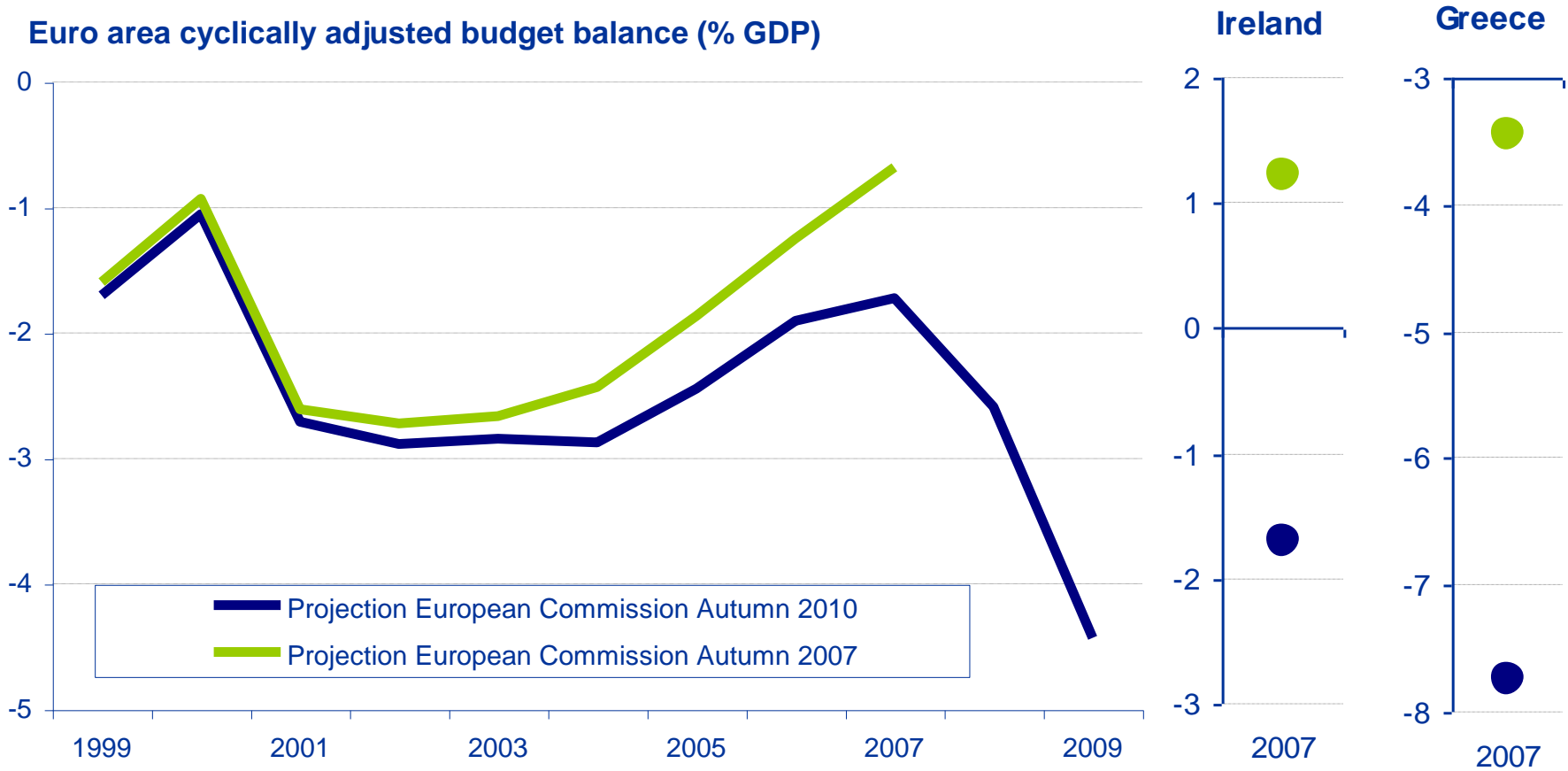


Source: EC's
spring 2011
economic
forecast.

Large variation in budgetary deterioration in the euro area, despite the common shock of the crisis. Country-specific factors: vulnerability of the national banking sector, private sector in general, the size of fiscal stimulus measures, the size of the public sector, fiscal starting position.

Cyclically adjusted deficits were distorted by revenue windfalls and difficulty to fully correct deficits for the cycle

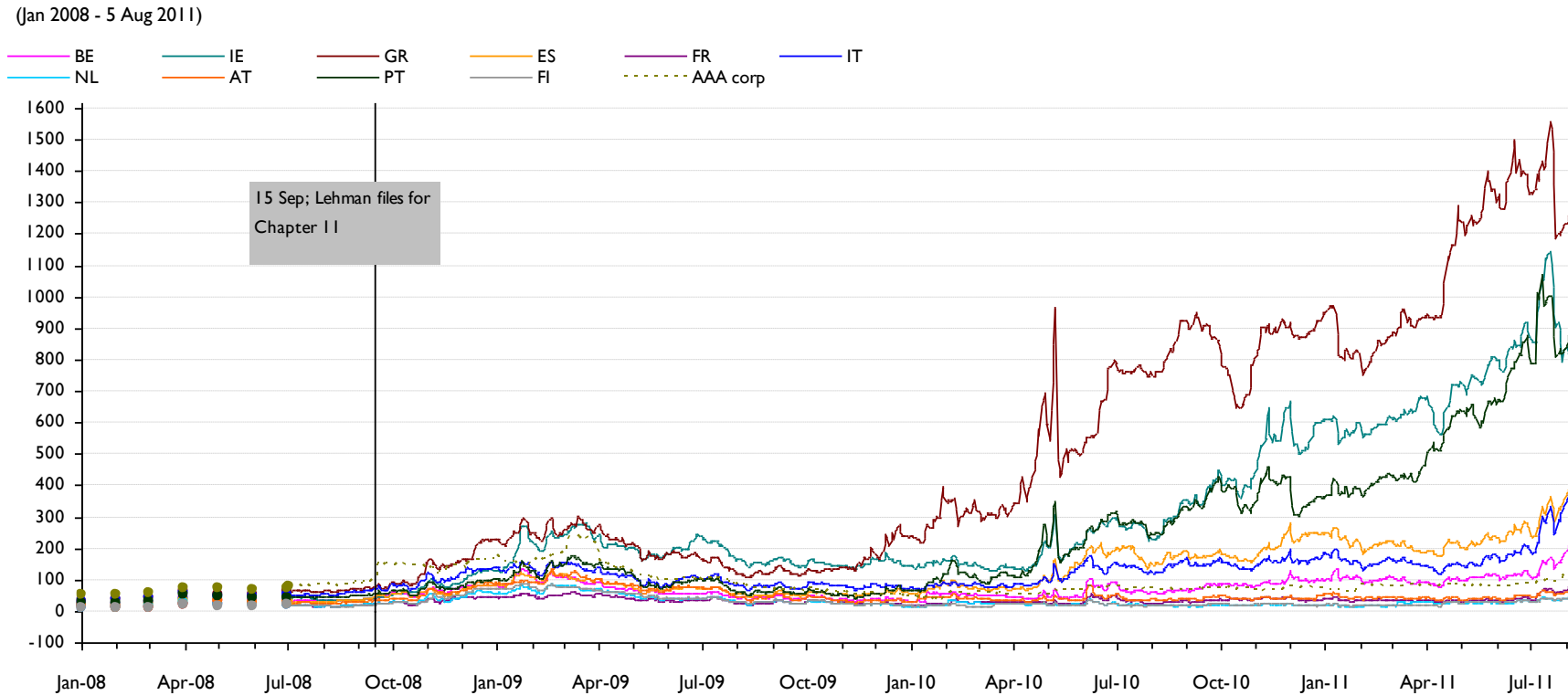
Fiscal costs (5/6)



- Cyclically adjusted deficits were distorted by revenue windfalls (linked to the bursting of the housing bubble in some countries) and difficulty to fully correct deficits for the cycle.

Diverging bond yields

Spread over German 10-year government bond yield
(end-of-month until mid-2008, daily data thereafter; in basis points)



Sources: Bloomberg, Thomson Reuters Datastream and ECB calculations.

Data: Bond yield spreads vis-à-vis the German 10-year government bond, end-of-the-month and end-of-day data (last value 5 Aug 2011, 18:00 CET; 5 Aug 2011, 19:00 CET for AAA corporate).

Sample: EA countries excluding Cyprus, Luxembourg, Malta, Slovenia and Slovakia for which data is not comparable and therefore not shown here. Euro Area corporate AAA rated bond yields (maturity 7-10 years).