

National Bank of Poland

Inflation projection
of the National Bank of Poland
based on the NECMOD model

Economic Institute



GDP projection – July 2011

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q1

PROJECTION

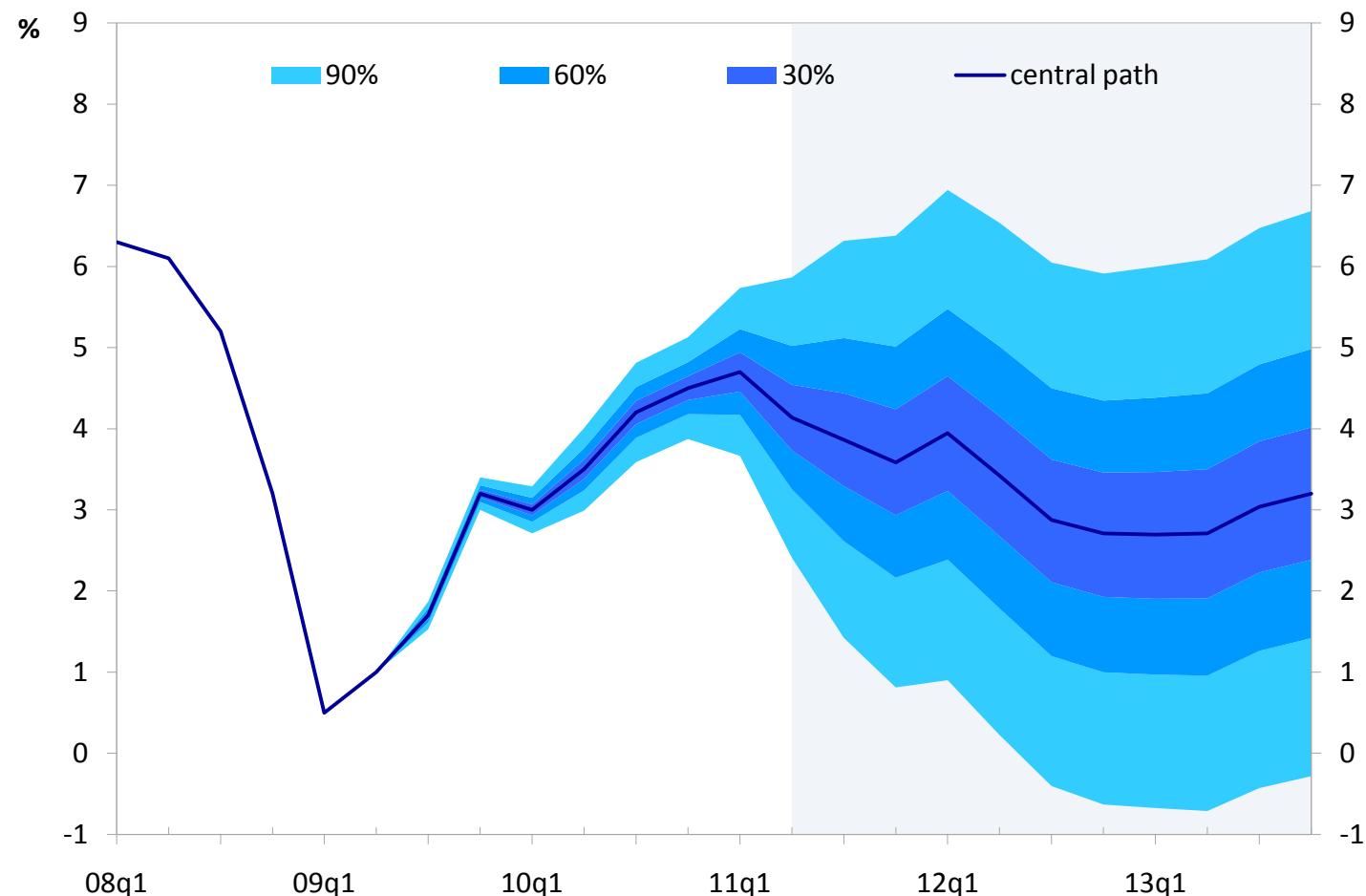
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



Inflation projection – July 2011

CHANGES IN
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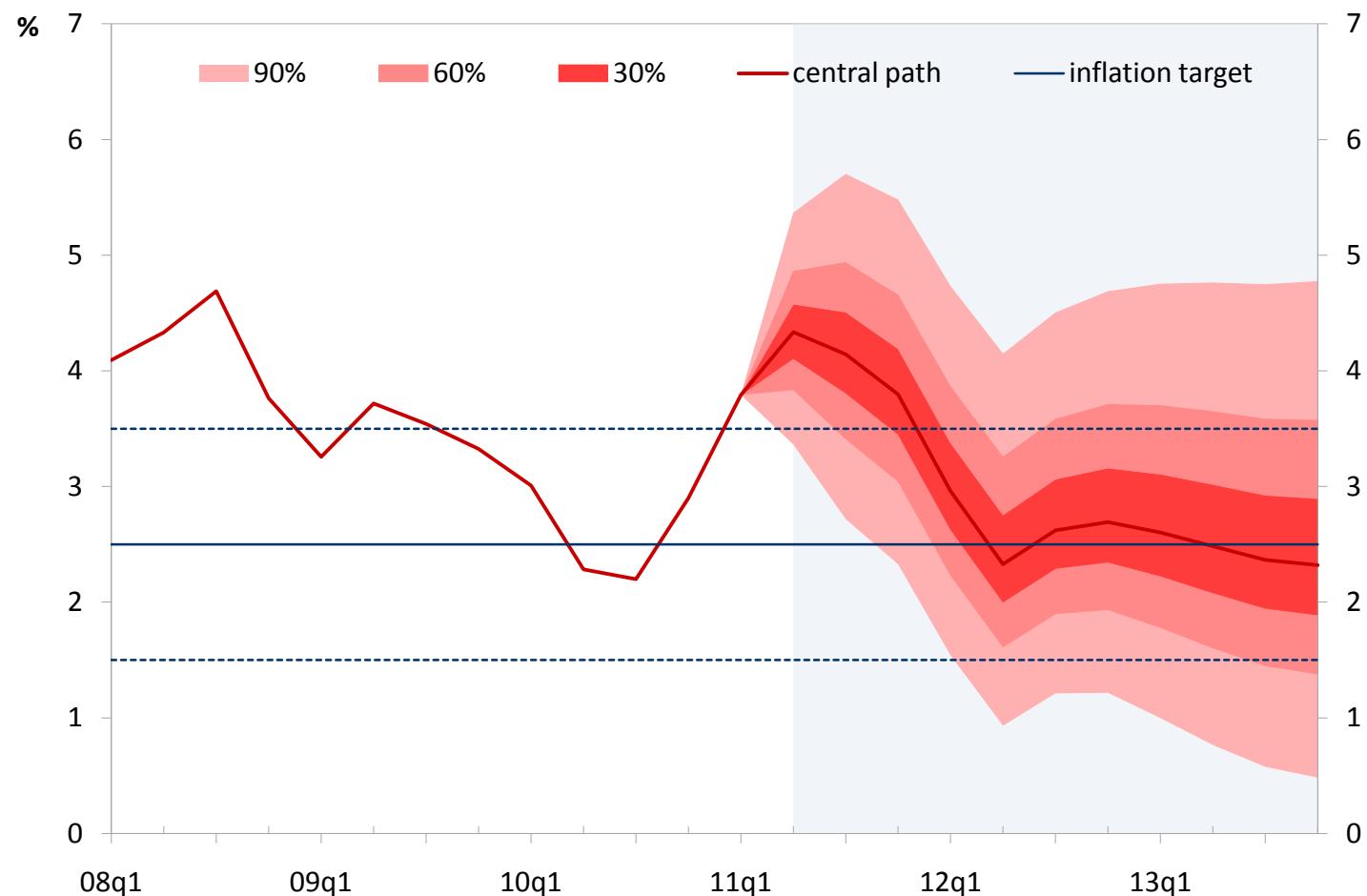
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JULY PROJECTION COMPARED TO MARCH PROJECTION

- Changes in the projection
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July projection compared to March projection: CPI inflation

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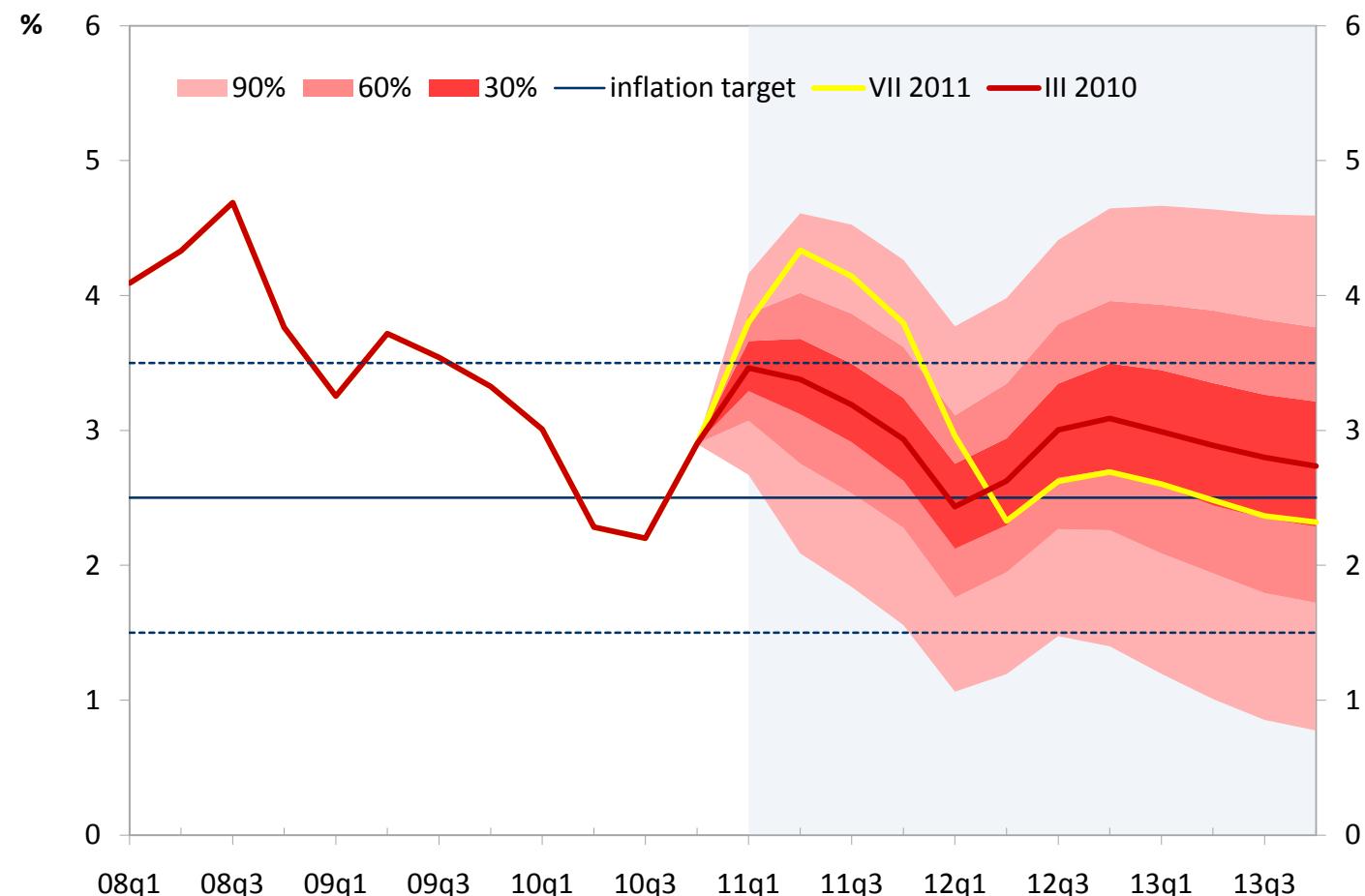
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Decomposition of deviations between July and March projections

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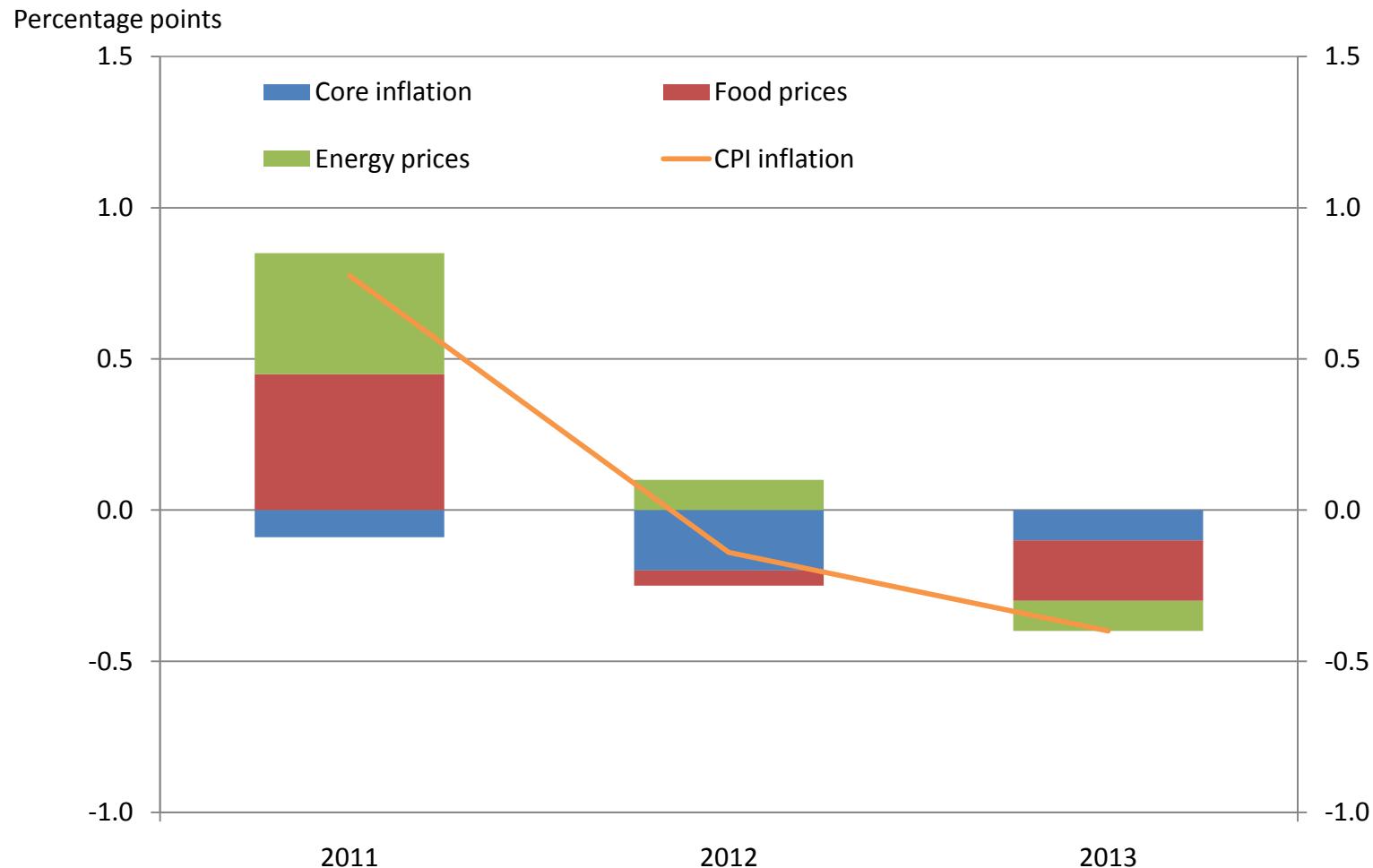
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July projection compared to March projection: GDP

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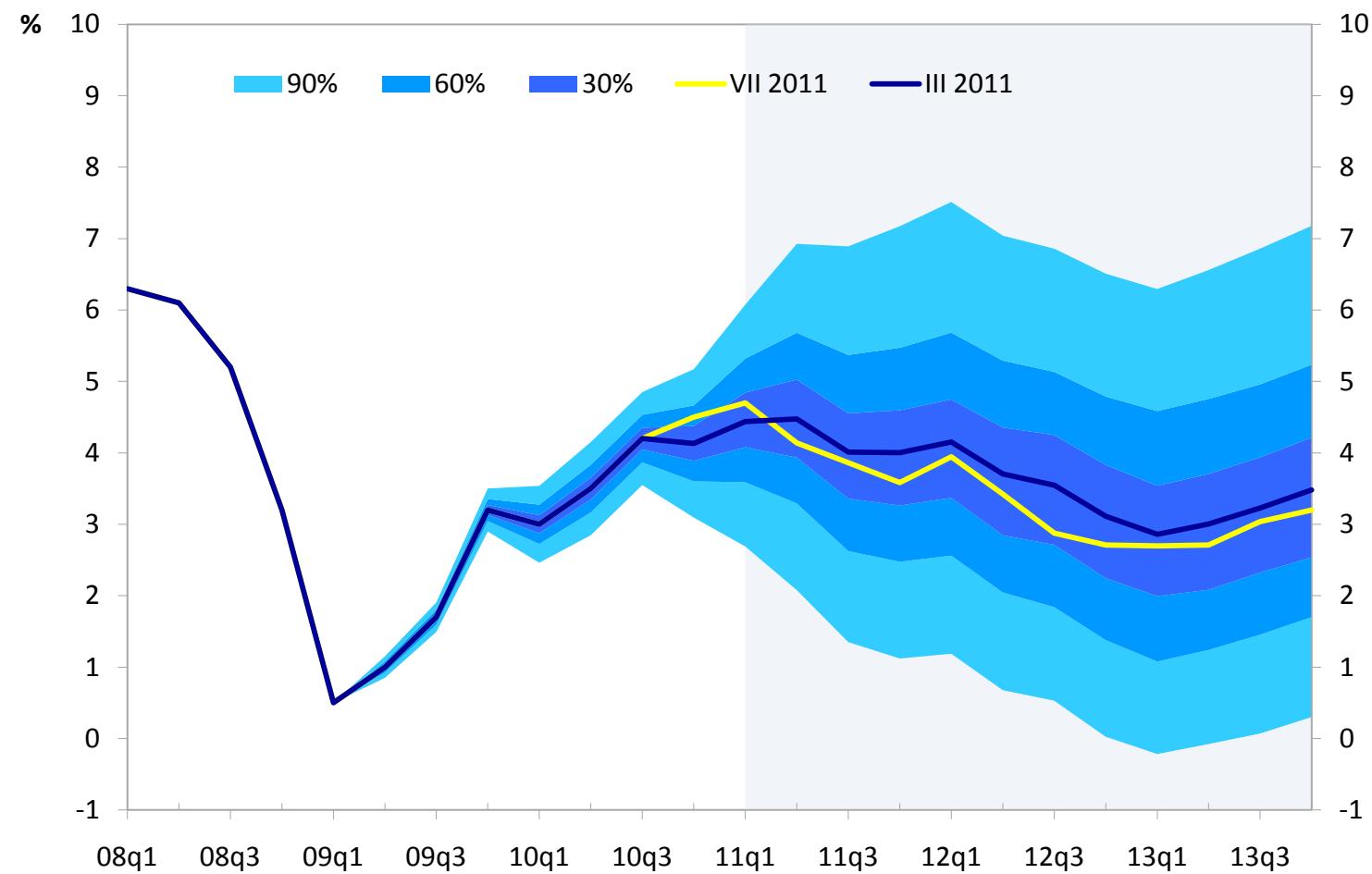
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Decomposition of deviations between July and March projections

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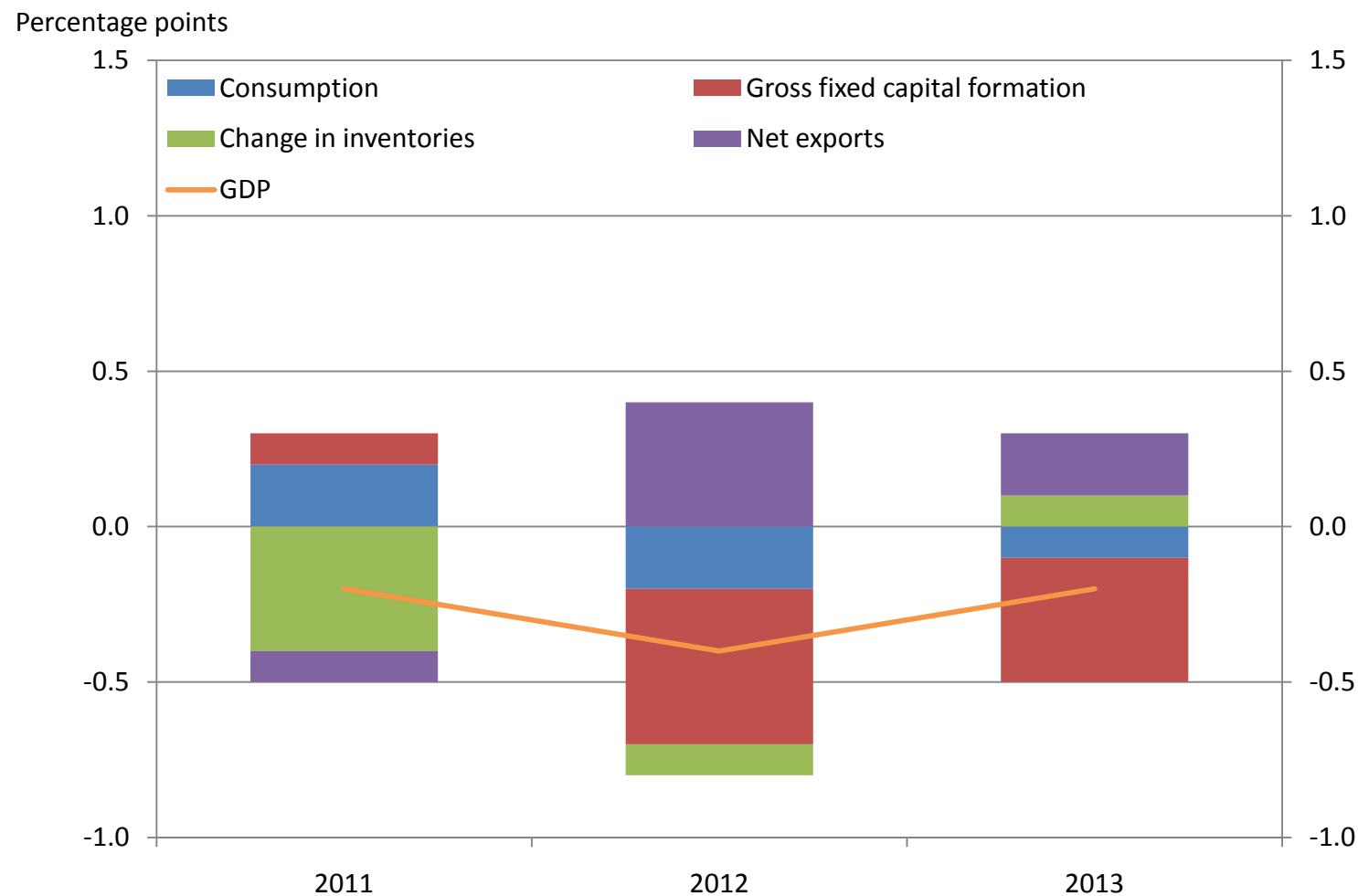
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Changes in the projection scenario

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- Systemic changes aimed at decreasing public sector deficit.
- Revision of the assumption of the EU funds utilisation rate.
- Higher forecast of agricultural and energy commodities prices in the world markets.
- Higher interest rate path.
- Higher realisation of GDP and inflation.

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External environment

- GDP growth abroad
- Price growth abroad
- Interest rates abroad
- Energy commodity price index
- Agricultural commodity price index
- EUR/USD exchange rate
- Transfers from EU

Economic growth abroad

(similar)

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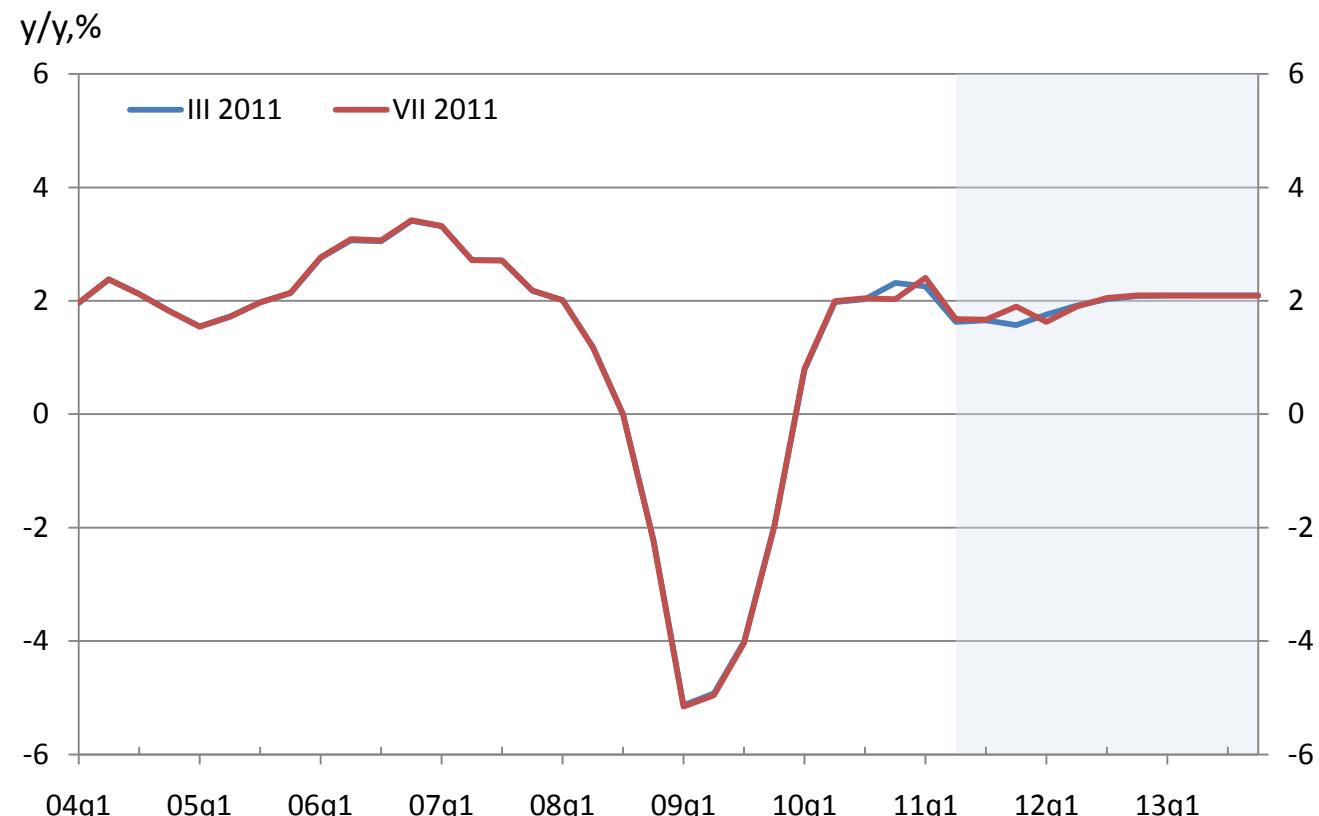
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In NECMOD model, the foreign sector is now represented by four economies (with weights, respectively):

- **Euro area excl. Germany** (43%)
- **Germany** (43%)
- **United Kingdom** (8%)
- **United States** (6%)

Inflation abroad

(slightly lower)

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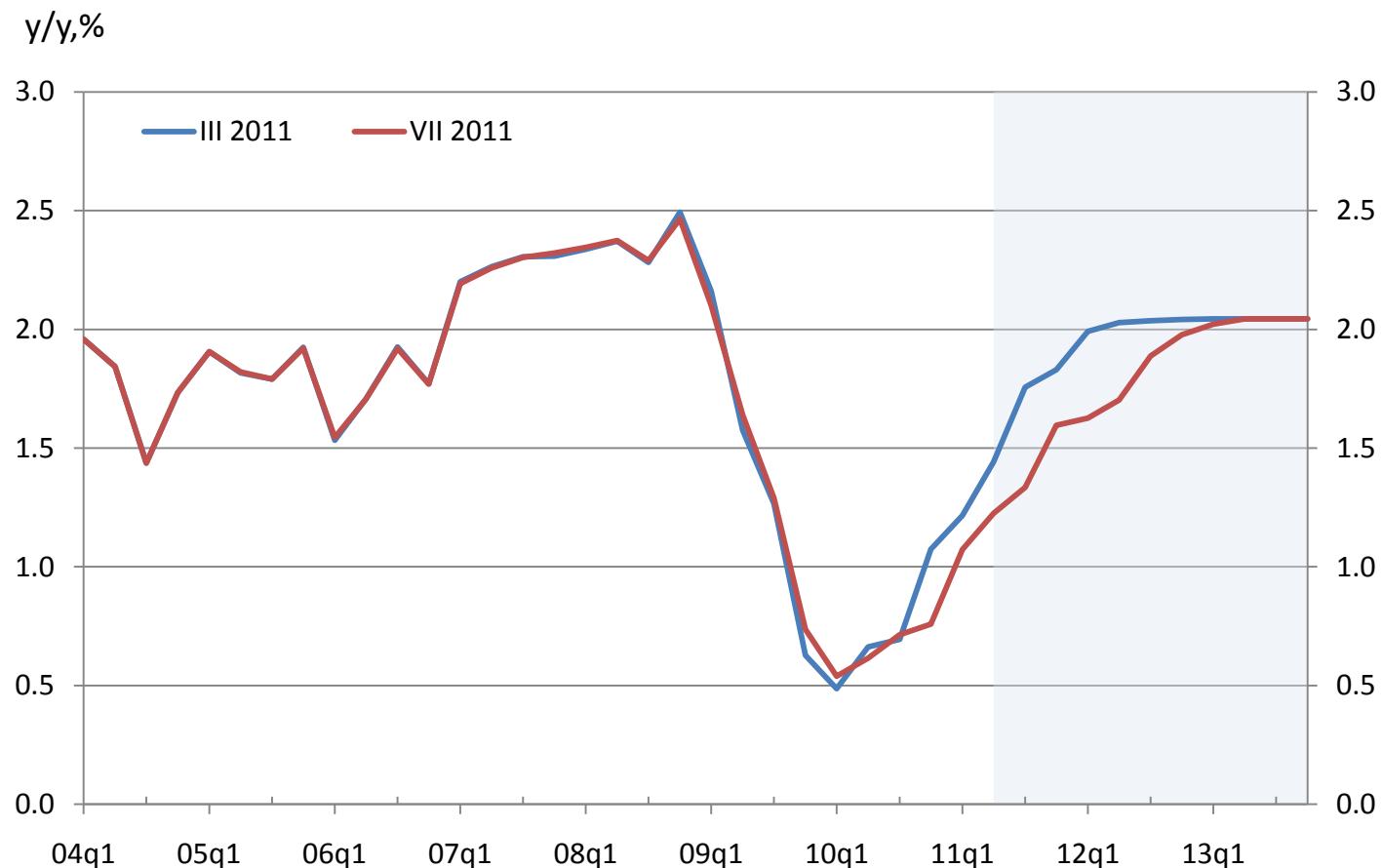
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In order to obtain series comparable to previous forecasting rounds, weights used in March projection have been applied.

Interest rates abroad (higher)

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Agricultural commodity price index*

(higher)

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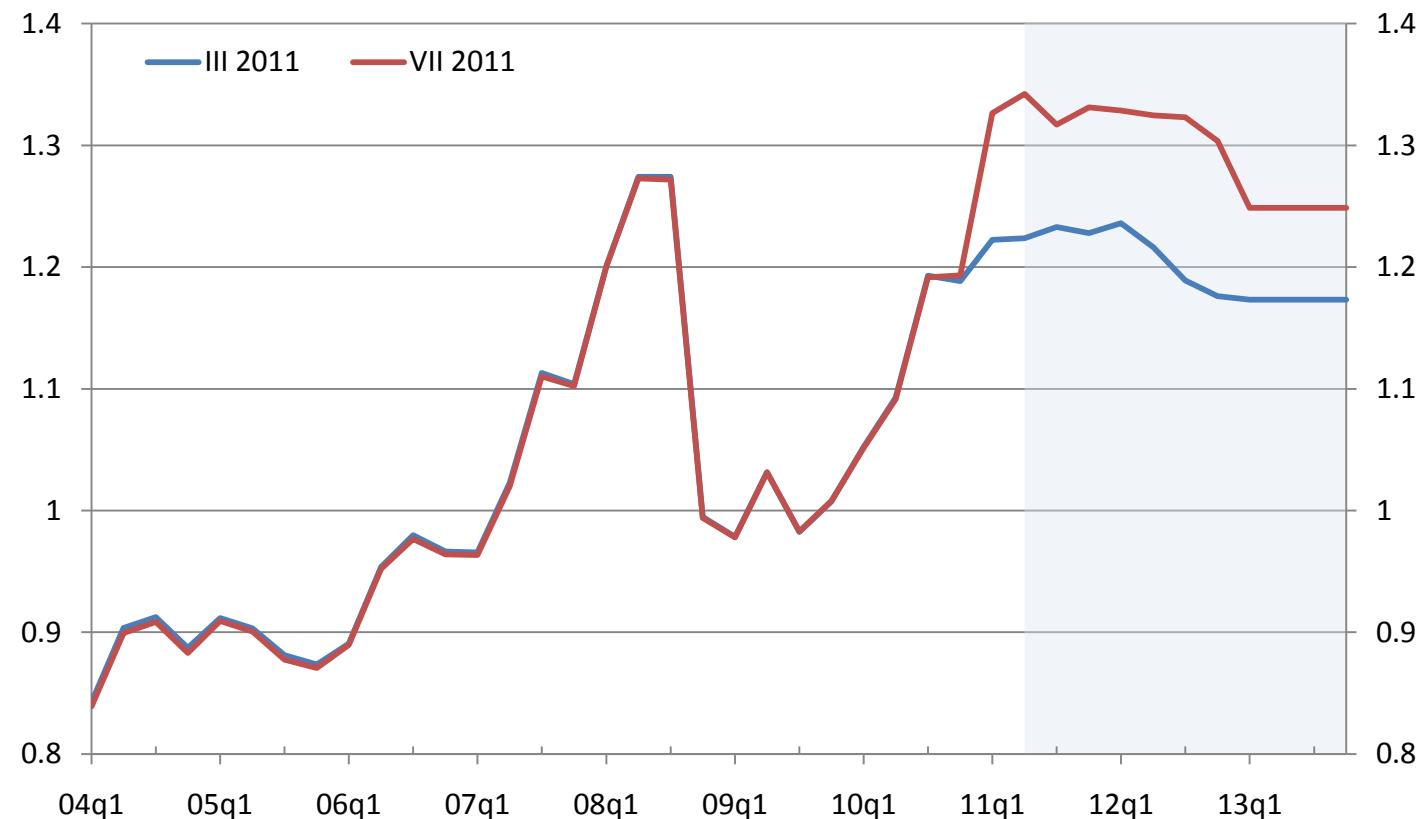
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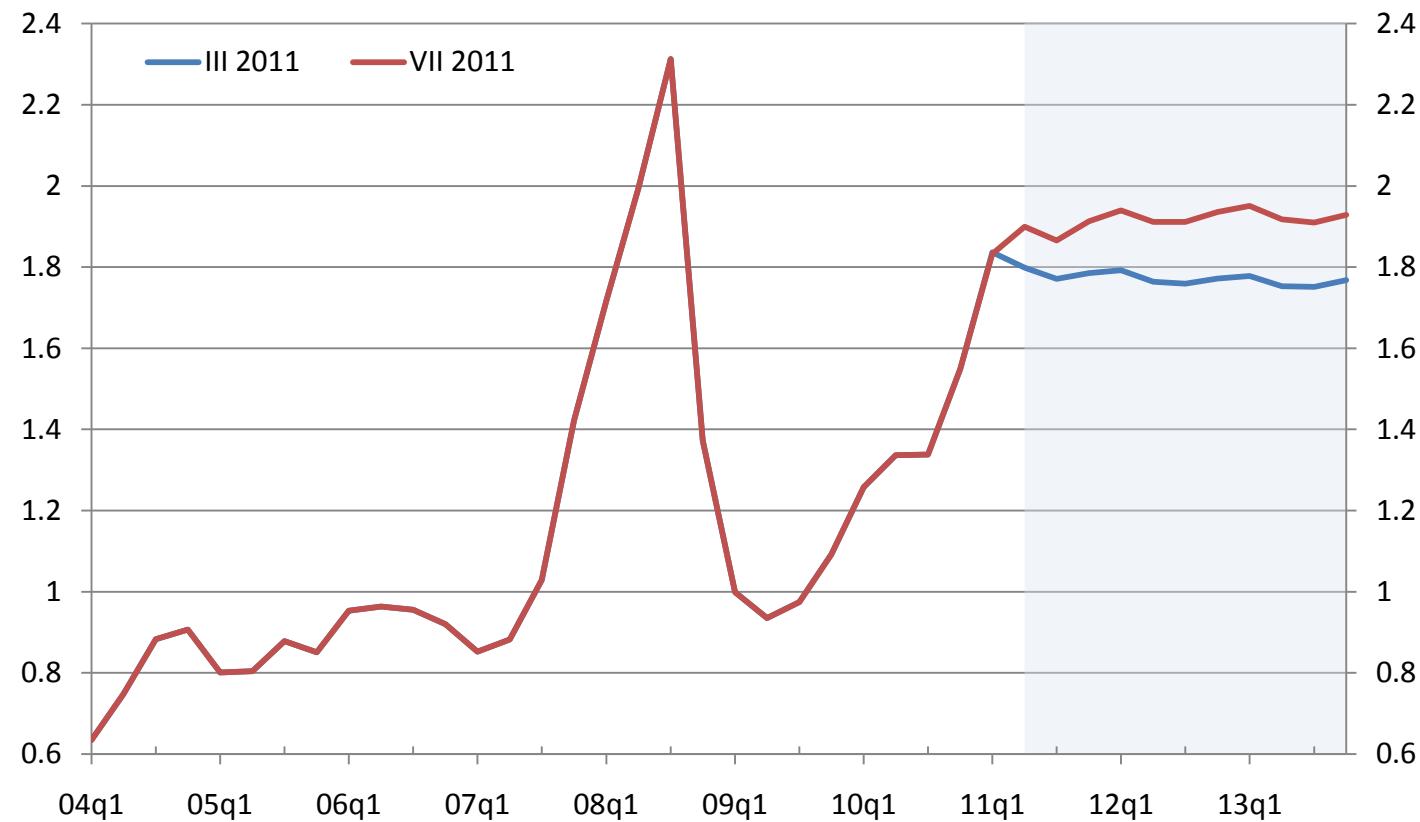
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*Global index of agricultural commodity prices consists of prices of: wheat, pork, beef, poultry, fish, rape oil, sugar, oranges, bananas, and the beverages index.

Energy commodity price index* (higher)

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*Global index of energy commodity prices consists of: hard coal, crude oil, natural gas

USD/EUR exchange rate (stronger EUR in relation to USD)

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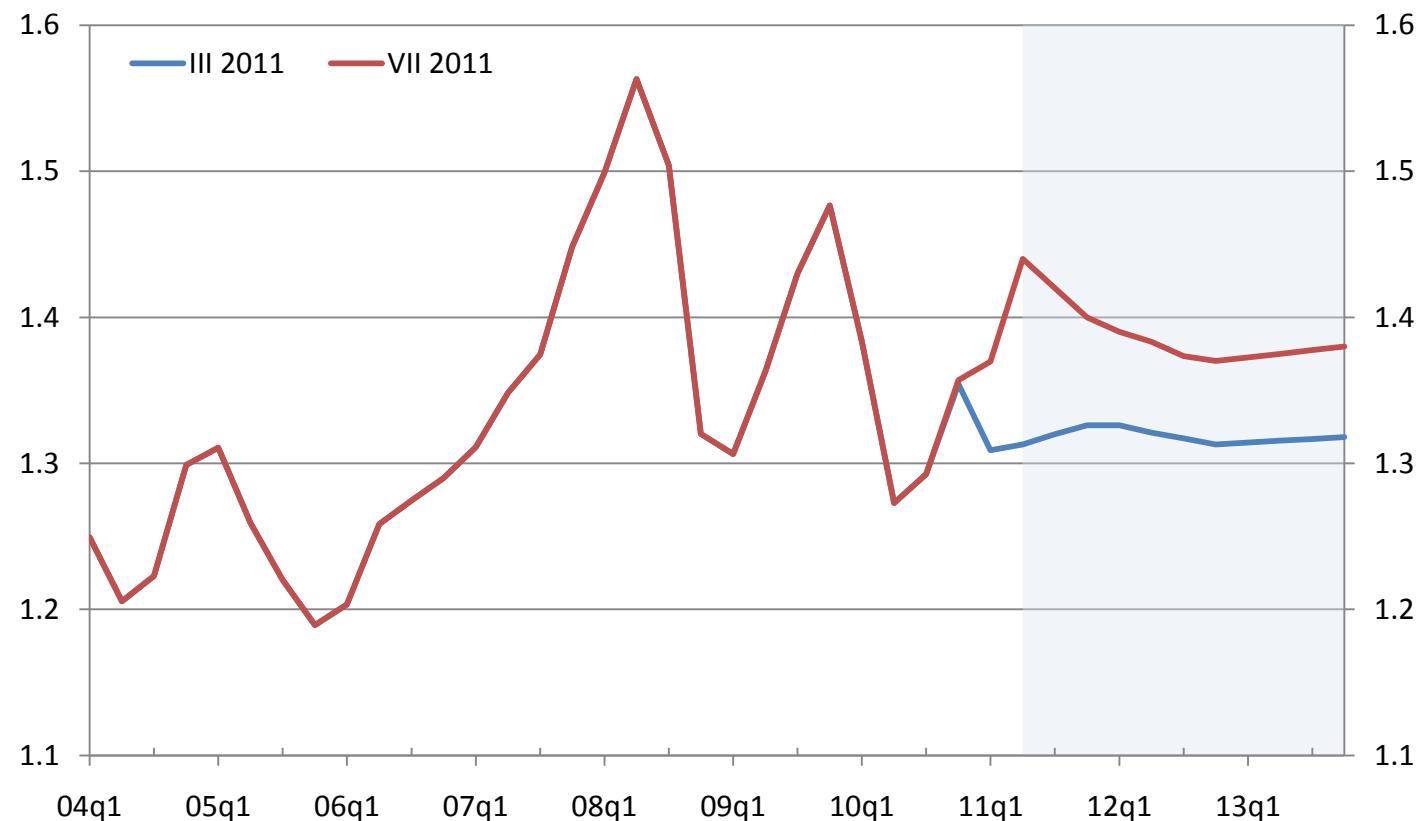
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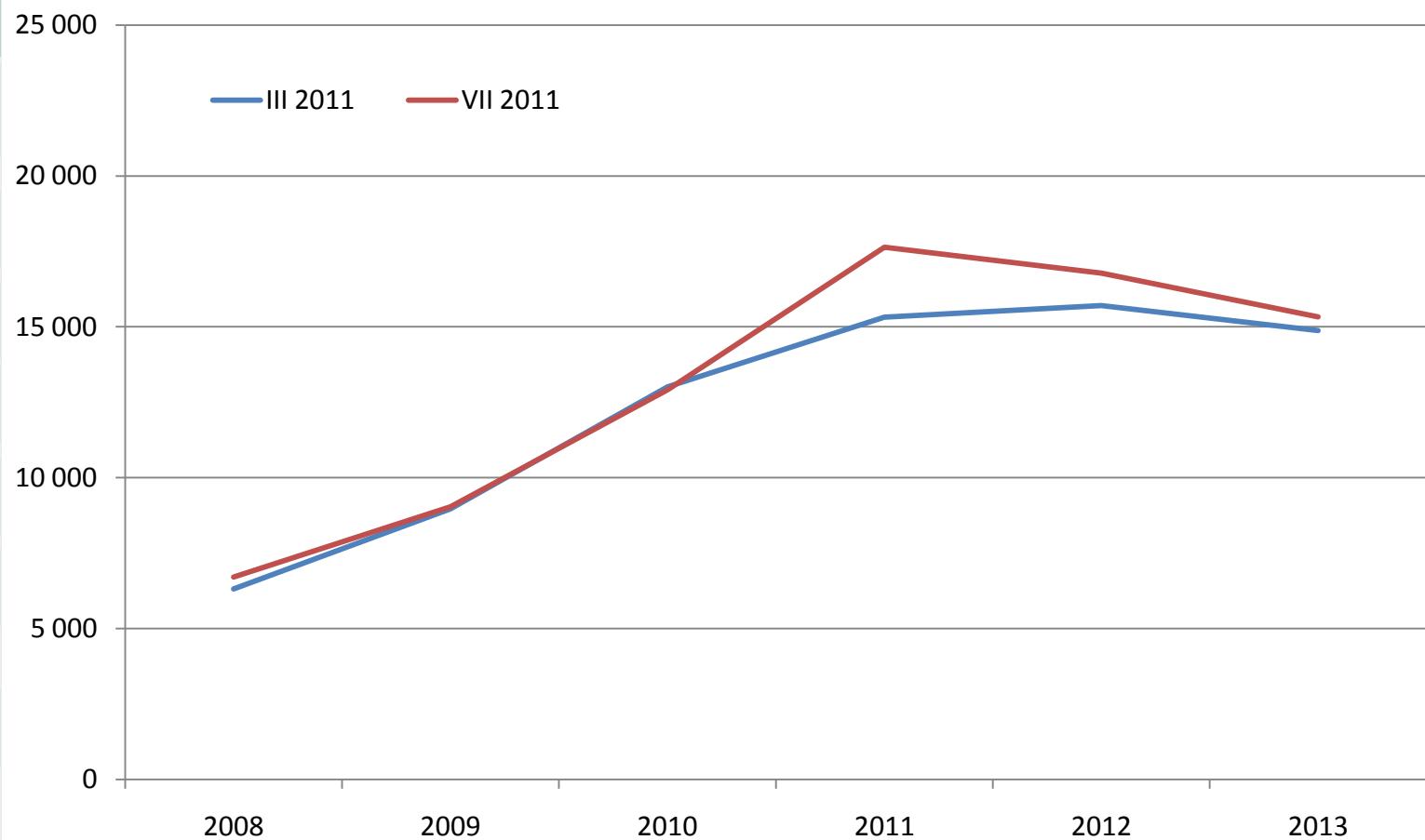
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EU transfers utilisation in 2011-2013 (mln euro)

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Transfers from the EU: decomposition

(billion euro)

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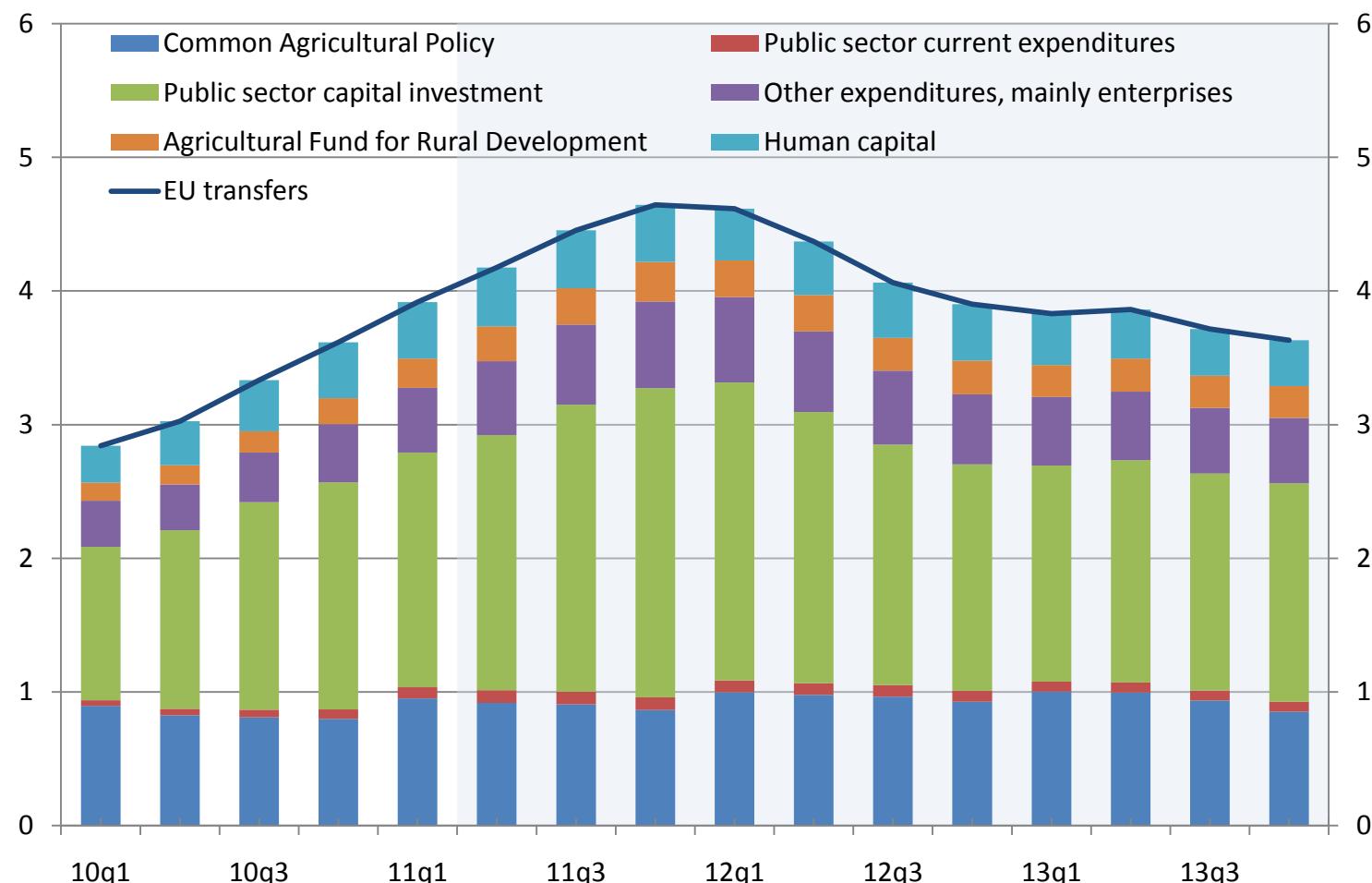
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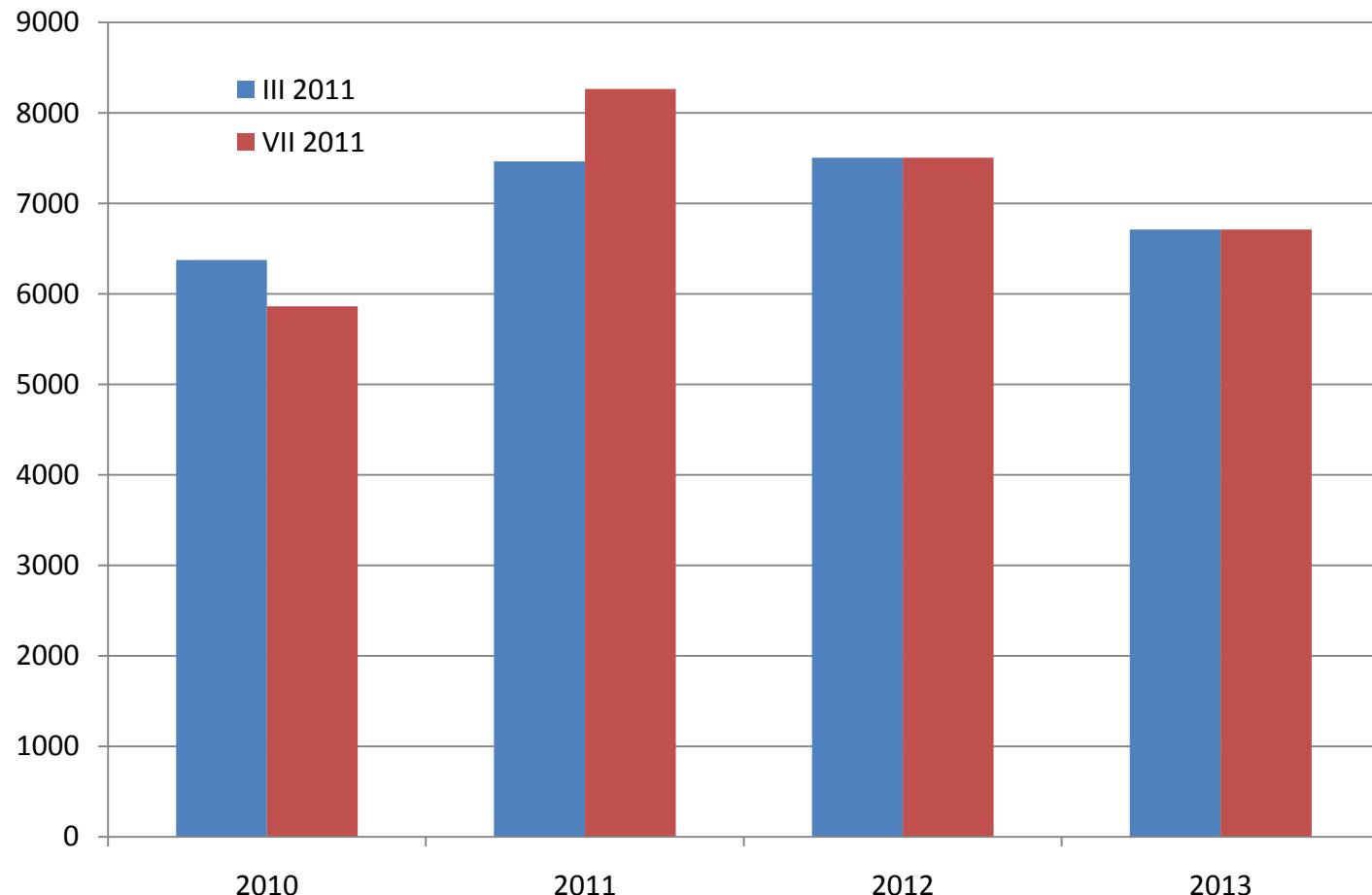
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Utilisation of EU transfers aimed at public sector investments

(mln euro)

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Polish Economy in 2011 Q1

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GDP and components

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	10Q4	11Q1	11Q1, realisation
GDP (y/y, %)	4,5 (4,1)	4,7 (4,4)	4,4
Domestic demand (y/y, %)	6,3 (5,0)	5,0 (4,8)	4,5
Private consumption (y/y, %)	4,0 (3,7)	3,7 (3,4)	3,9
Public consumption (y/y, %)	7,5 (2,5)	4,5 (3,1)	1,5
Gross fixed capital formation (y/y, %)	1,3 (4,2)	5,5 (6,2)	6,0
Exports (y/y, %)	6,9 (10,1)	8,6 (10,6)	5,9
Imports (y/y, %)	11,7 (12,4)	9,3 (11,6)	6,2
Net exports contribution (percentage points)	-1,8 (-0,8)	-0,3 (-0,4)	-0,1

* Values from the March projection are given in brackets (seasonally adjusted data). Indicators with values higher than in the March projection are marked green, whereas indicators with lower values are marked red.

Labour market

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UNCERTAINTY

	10Q4	11Q1	11Q1, realisation
ULC (y/y, %)	1,4 (1,2)	2,0 (1,0)	2,3
Labour productivity (y/y, %)	3,3 (2,7)	2,7 (2,9)	2,4
Gross wages (y/y, %)	6,0 (3,9)	4,5 (4,1)	4,5
Total employment LFS (y/y, %)	1,2 (1,4)	1,9 (1,6)	1,9
Unemployment LFS (%)	9,4 (10,1)	8,8 (10,1)	8,8
Participation rate (%)	55,8 (56,2)	55,7 (56,3)	55,7

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Inflation

	10Q4	11Q1
CPI inflation (y/y, %)	2,9 (2,9)	3,8 (3,5)
Core inflation (y/y, %)	1,3 (1,3)	1,7 (2,0)
Food price inflation (y/y, %)	4,4 (4,4)	5,5 (4,8)
Energy price inflation (y/y, %)	6,6 (6,6)	8,9 (7,0)

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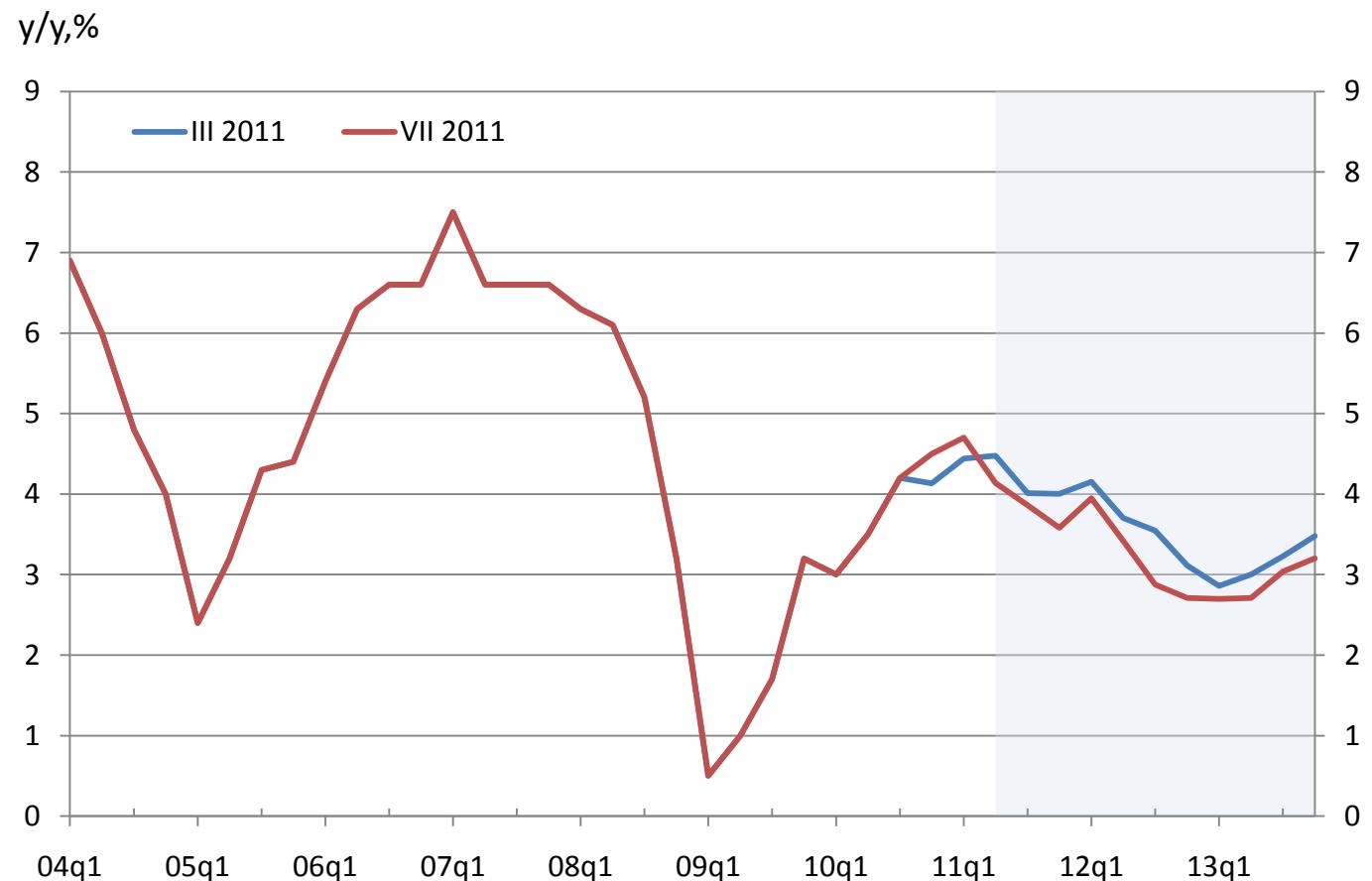
» Inflation

UNCERTAINTY

PROJECTION FOR 2011-2013

- GDP and components
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GDP (lower)



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GDP: decomposition

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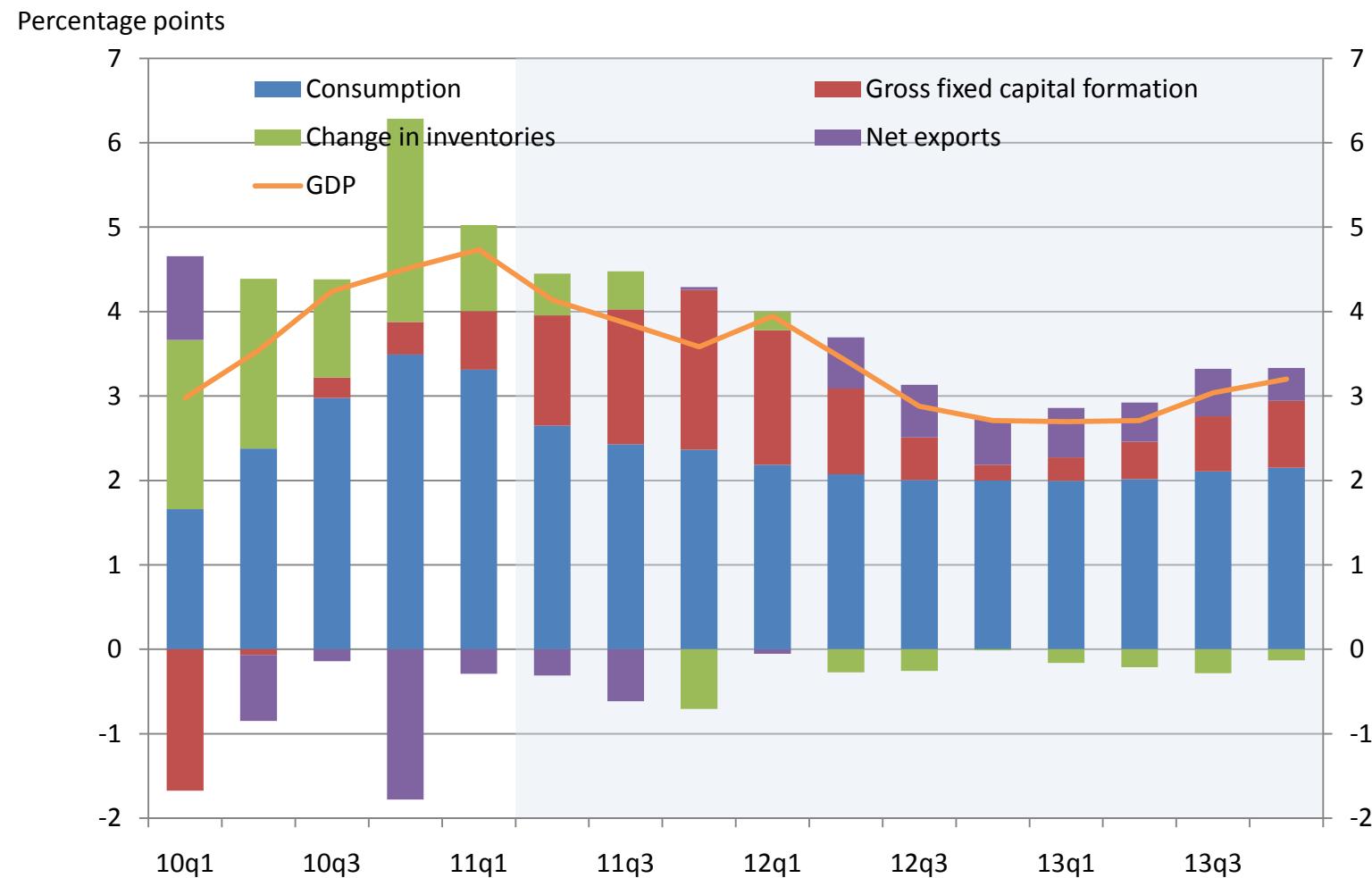
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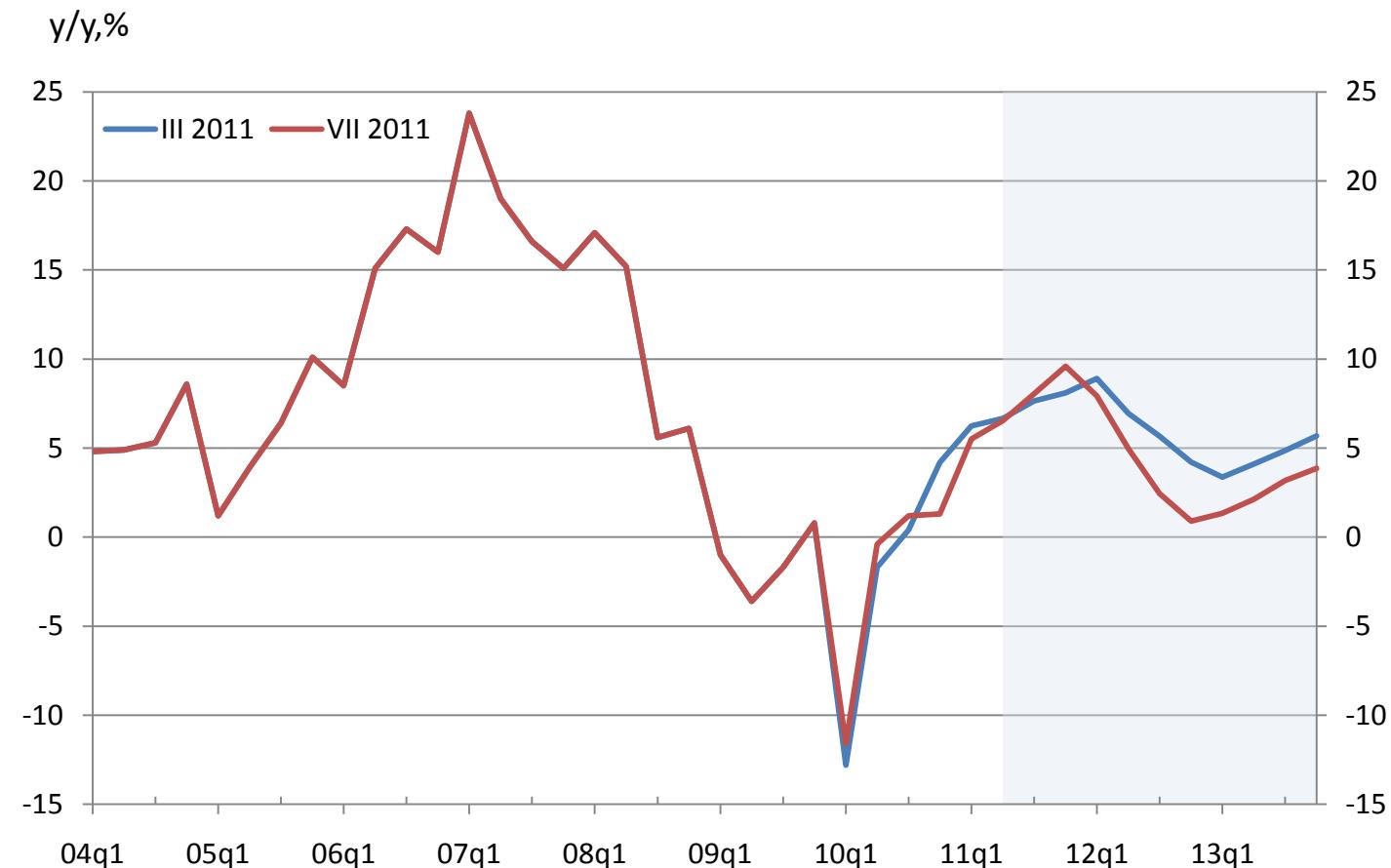
» Inflation

UNCERTAINTY



Gross fixed capital formation (lower)

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Gross fixed capital formation: decomposition

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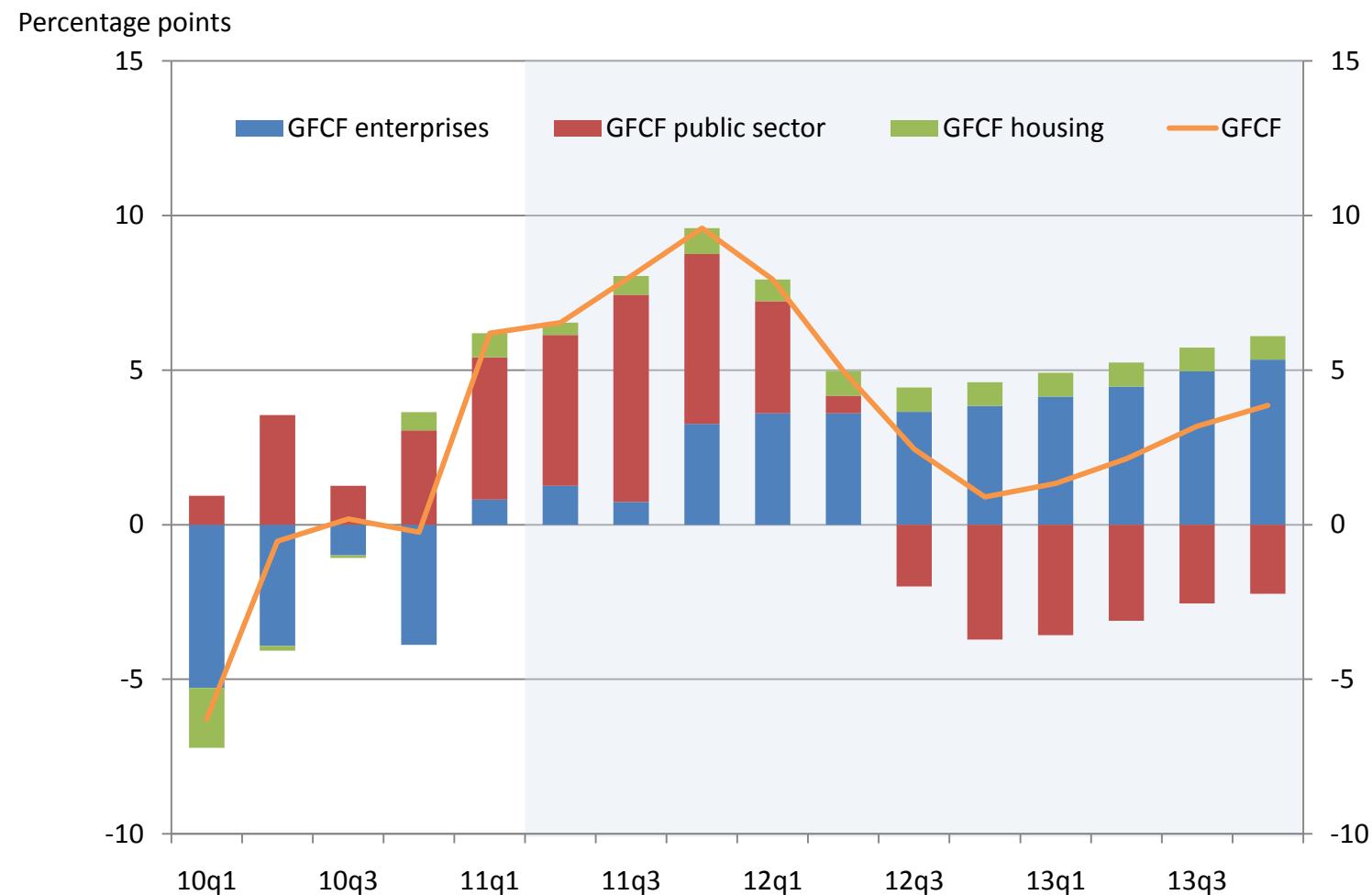
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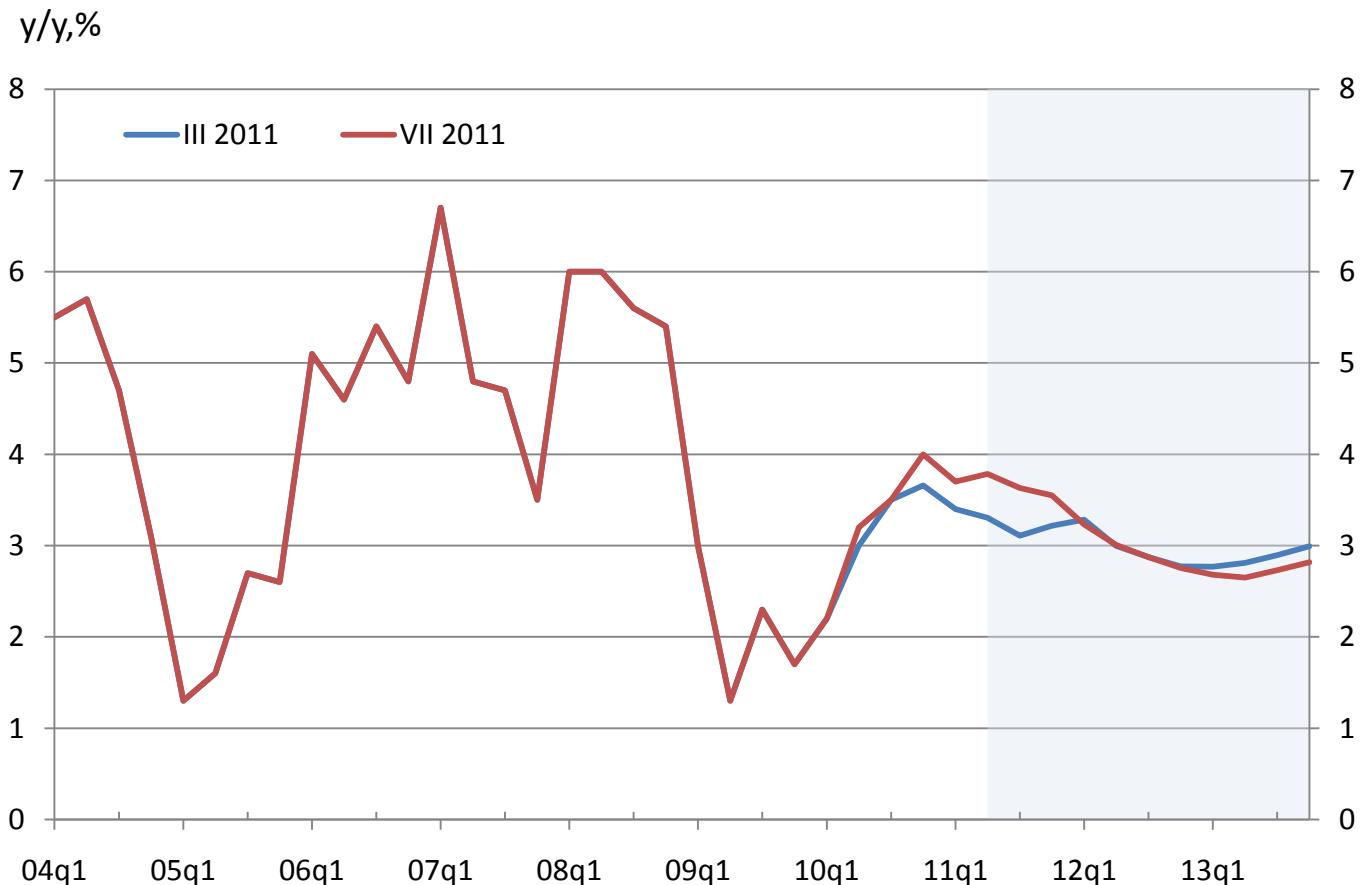
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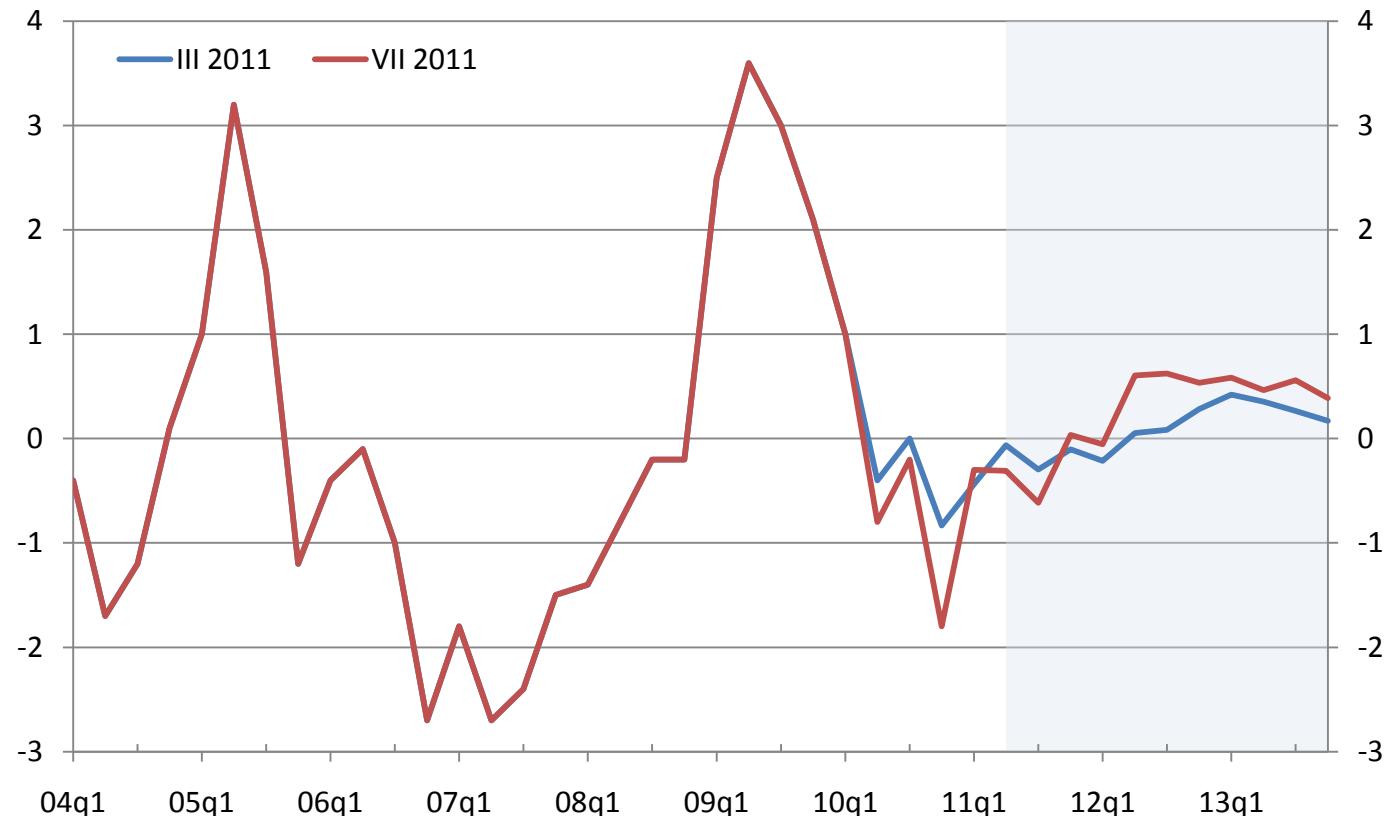


Private consumption (higher in short-term horizon)



Net exports contribution (higher)

percentage points



Trade with other countries

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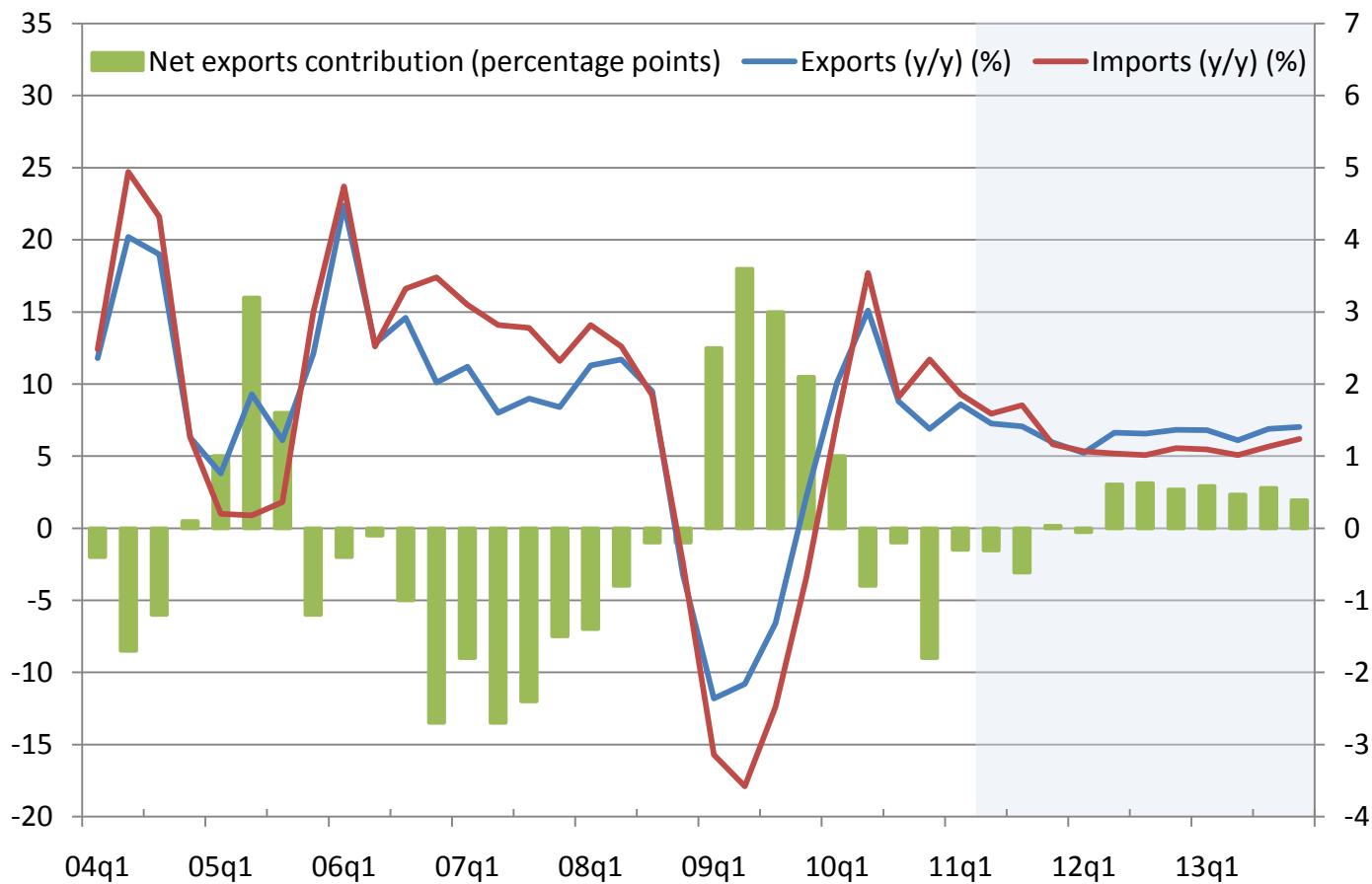
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Employment

(higher)

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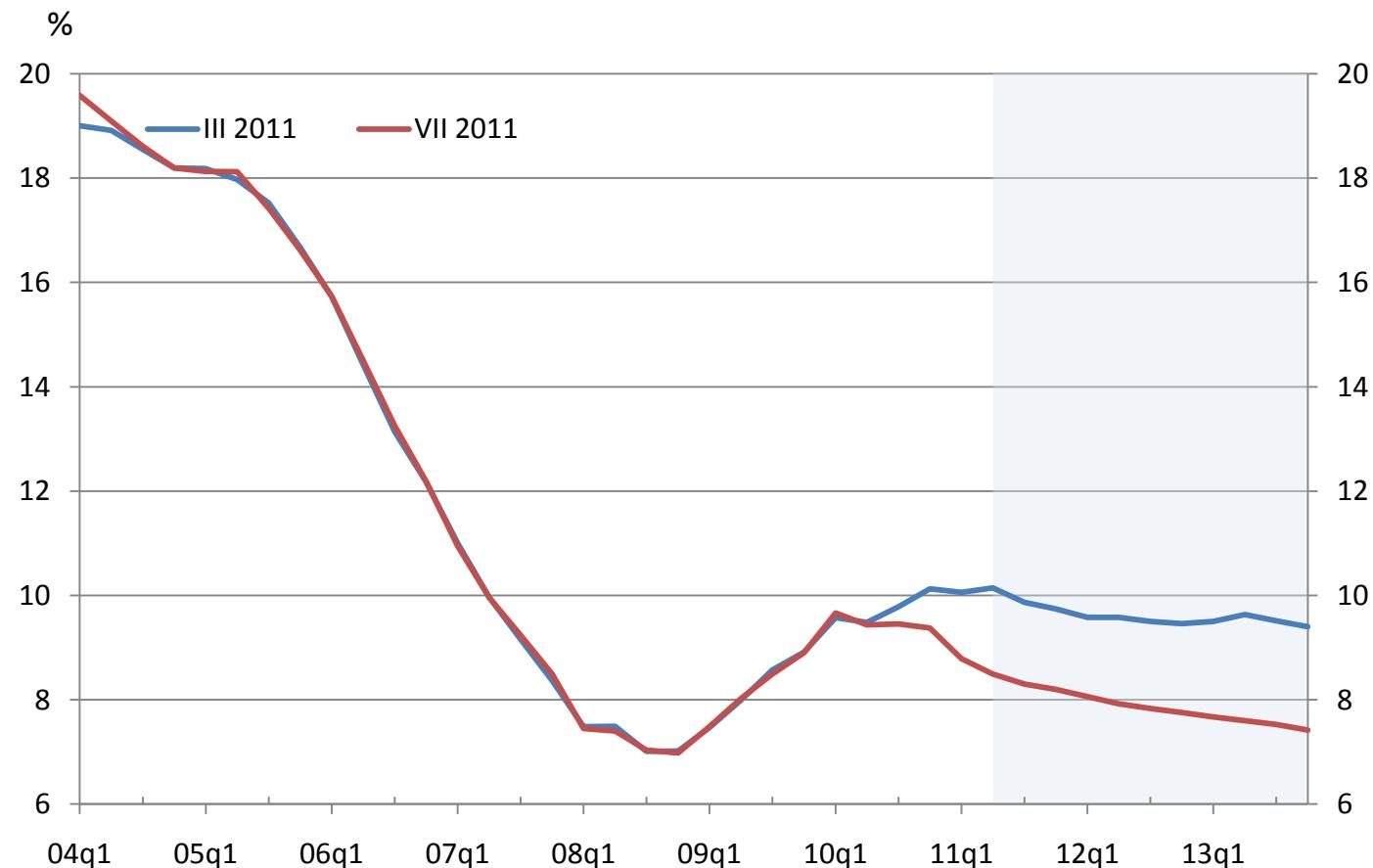
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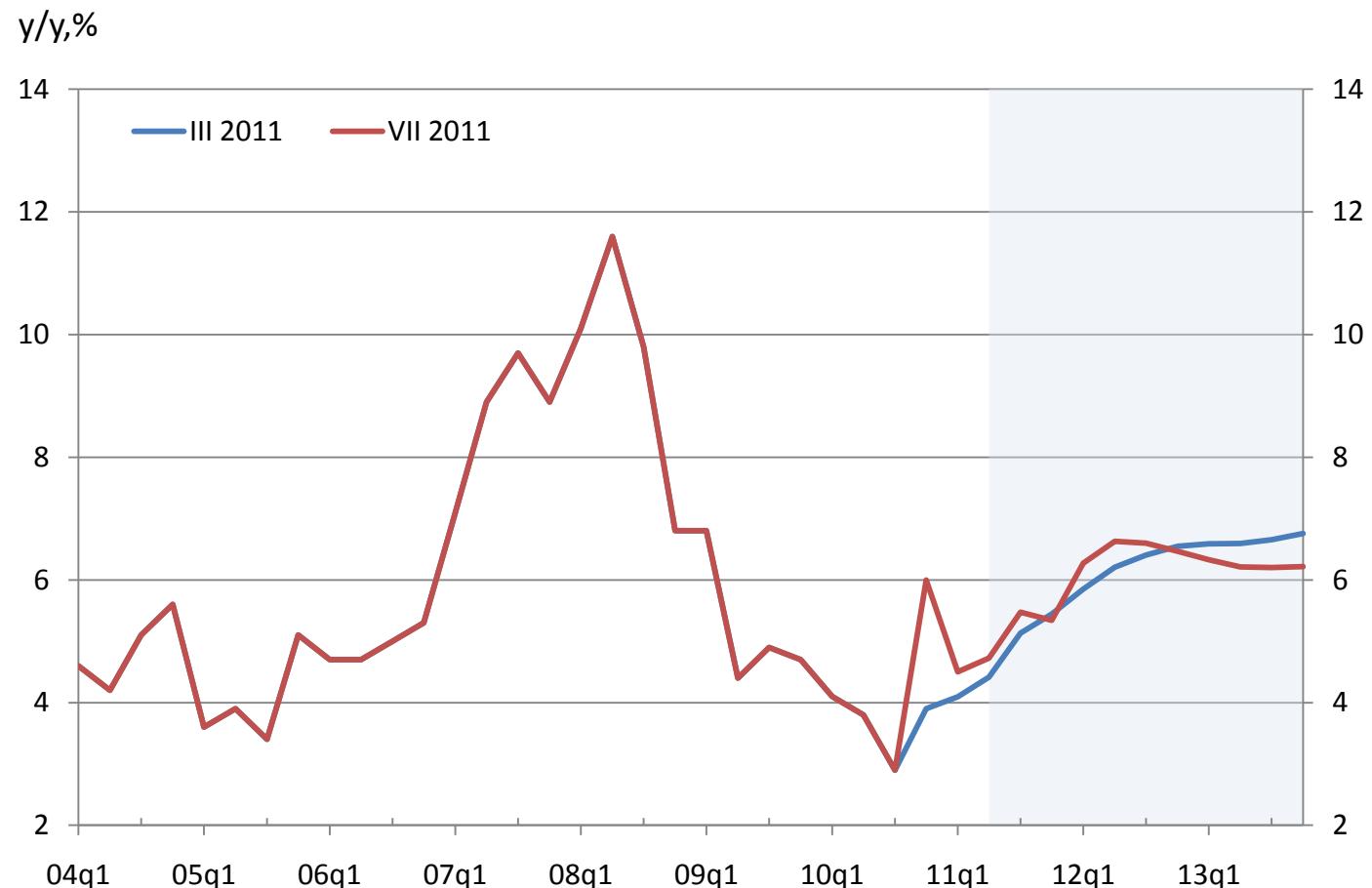


Unemployment (lower)

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Gross wages (similar, lower in longer horizon)



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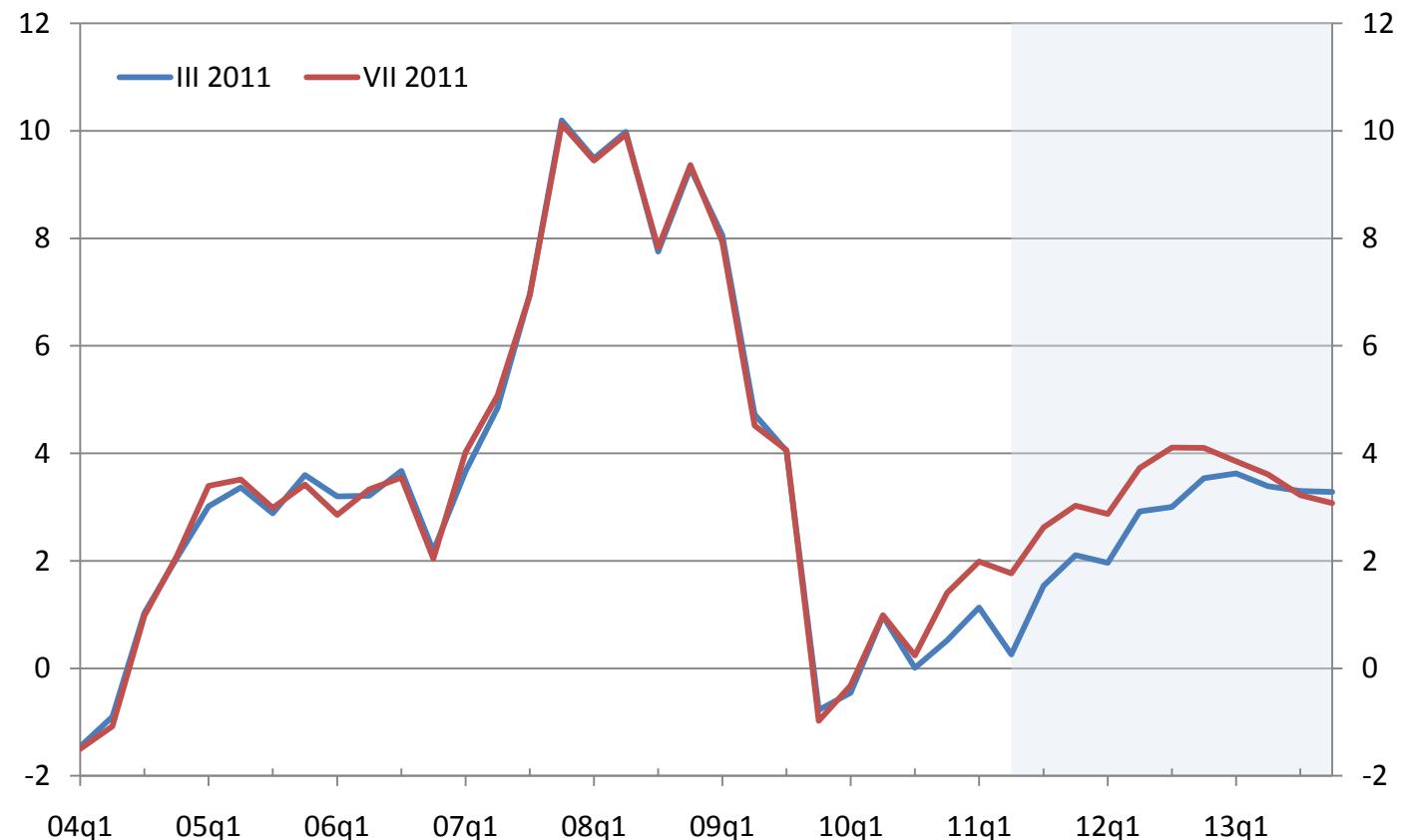
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Unit labour costs (higher)

y/y, %



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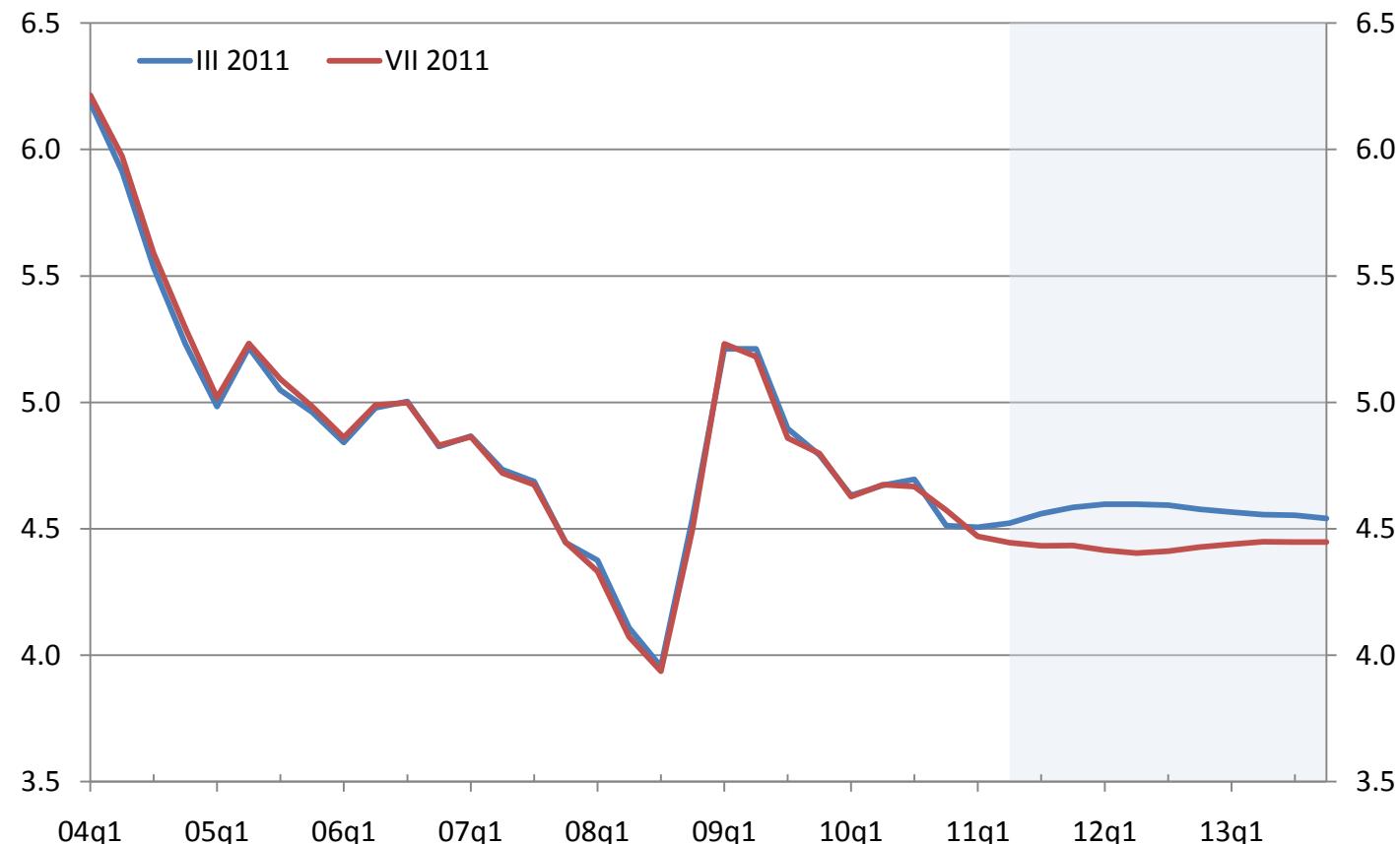
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UNCERTAINTY

Exchange rate

Real effective exchange rate (REER)



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Import prices

(excluding oil and natural gas)

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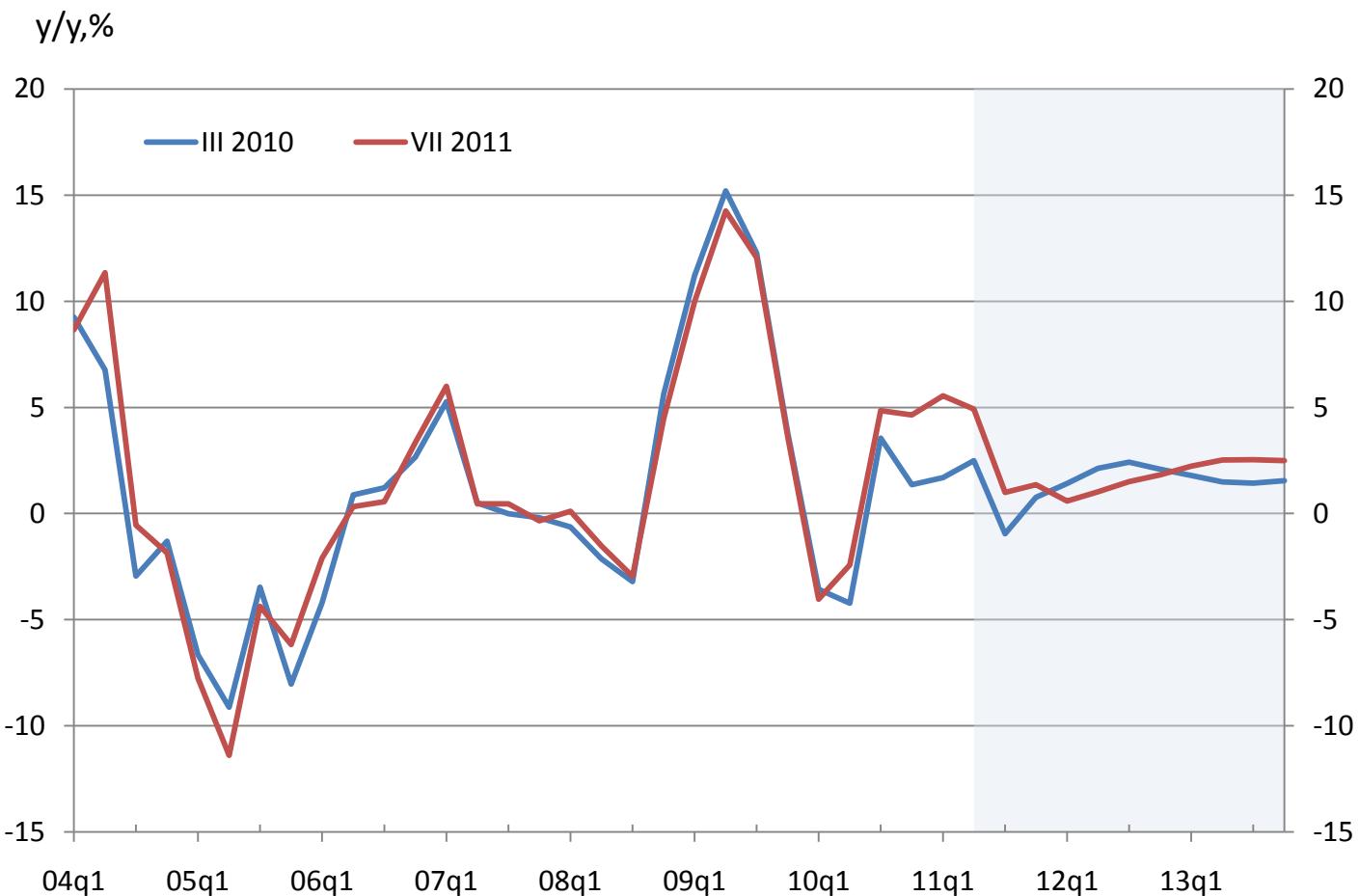
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Food and energy prices inflation

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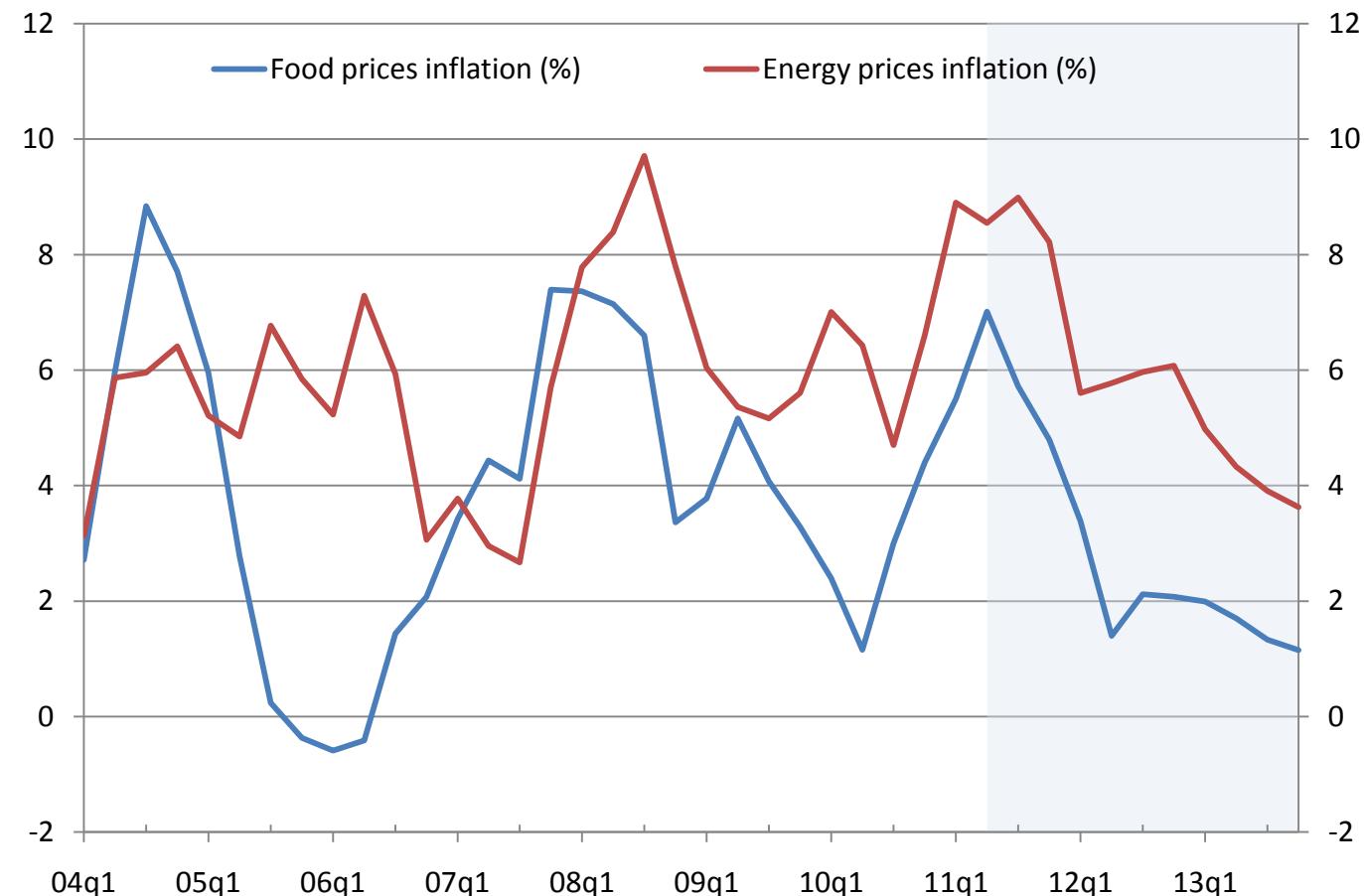
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Core inflation and CPI inflation*

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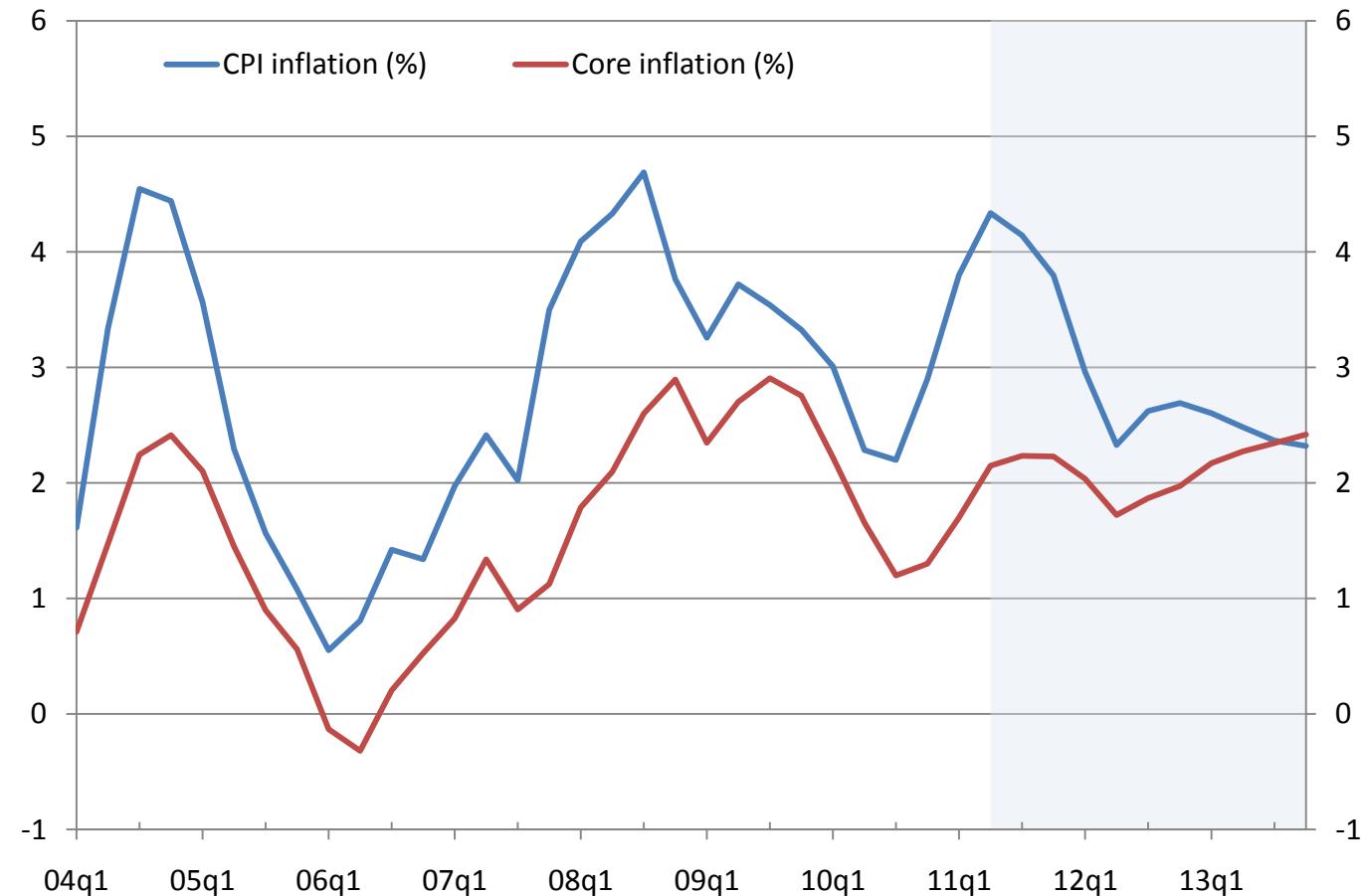
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* Core inflation does not include food, beverages and energy prices.

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UNCERTAINTY

UNCERTAINTY OF THE PROJECTION

Scale of impact: *** significant
** moderate
* slight

CHANGES IN THE SCENARIO	Risk area	Description	Impact	Scale of impact
» Changes in the projection				
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» Polish economy in 2011 Q1				
PROJECTION	External environment	<ul style="list-style-type: none"> ▪ Uncertainty as to the pace and scale of recovery of the world economy and response of developed economies to the withdrawal of governments and central banks from the policy of strong fiscal and monetary stimulation. 	inflation ↑ GDP ↓	***
» GDP and its components		<ul style="list-style-type: none"> ▪ Developments in the world financial markets – including the effect of growing indebtedness of some developed countries. 		
» Labour market				
» Exchange rate		<ul style="list-style-type: none"> ▪ Developments of agricultural and energy prices in the world markets. 		
» Inflation				
UNCERTAINTY	Exchange rate	<ul style="list-style-type: none"> ▪ High public finance deficit, euro area sovereign debt crisis – depreciation of PLN. 	inflation ↑	**
		<ul style="list-style-type: none"> ▪ Inflow of foreign direct and portfolio investment – appreciation of PLN. 	GDP ↔	

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CHANGES IN THE SCENARIO	Risk area	Description	Impact	Scale of impact
» Changes in the projection				
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PROJECTION				
» GDP and its components	Domestic demand	<ul style="list-style-type: none"> ▪ Historically stable growth of private consumption, good liquidity situation of enterprises, growing capacity utilisation – higher private investment and consumption. ▪ Recent data on close to zero growth of investment and real households income – lower private investment and consumption. ▪ wearing off of high public investment growth associated with preparations to EURO 2012. 	Inflation ↑ GDP ↑	**
» Labour market	Fiscal policy	<ul style="list-style-type: none"> ▪ Effective degree of consolidation of public finances . ▪ Scale of utilization of the EU funds by the public finance system. 	inflation ↔ GDP ↓	**
» Exchange rate				
» Inflation				
UNCERTAINTY	Food and energy prices in Poland	<ul style="list-style-type: none"> ▪ Regulatory measures in the energy market in Poland. ▪ Uncertainty about the impact of EU regulations on prices in Poland (connected, among others, with natural environment protection, including carbon dioxide emission level). 	Inflation ↑ GDP ↓	**
	Summary		inflation ↑ GDP ↔	

Inflation projection – July 2011

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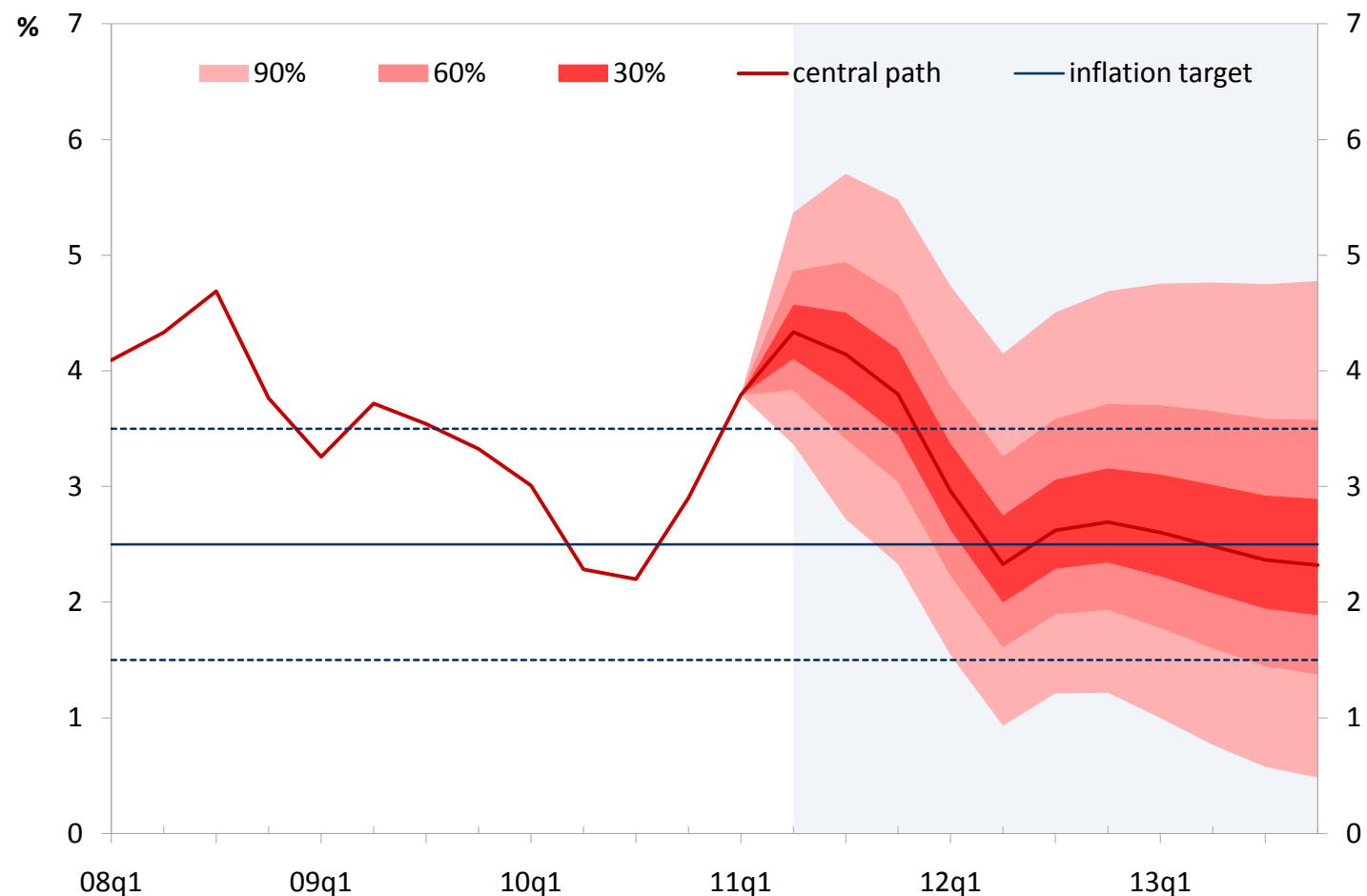
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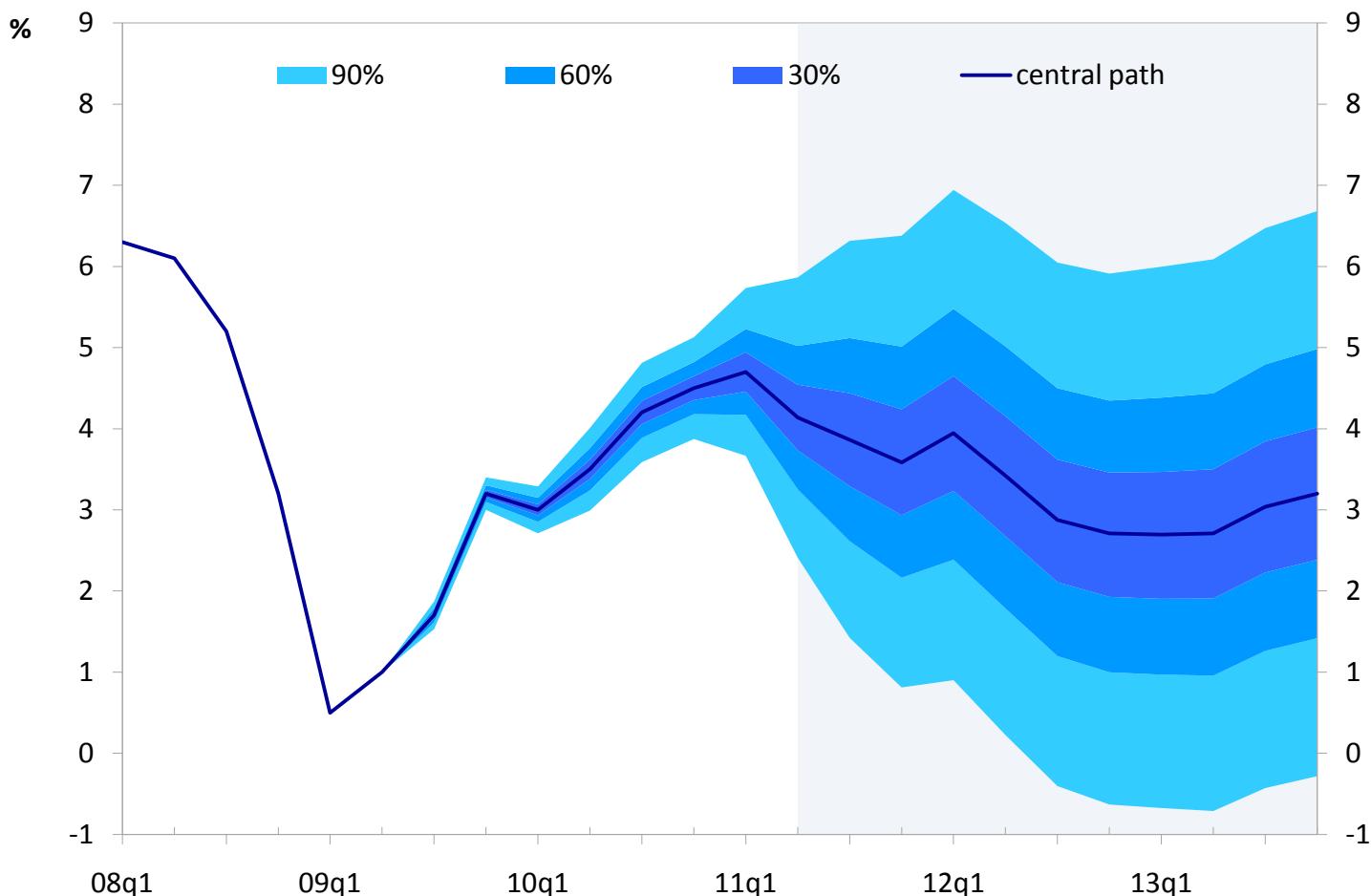
Probability distribution for inflation

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UNCERTAINTY	

	(%)	below 1,5%	below 2,5%	below 3,5%	below the central path	in the range (1,5%; 3,5%)
11q2	0,00	0,00	0,08	0,49	0,08	
11q3	0,00	0,03	0,22	0,48	0,22	
11q4	0,00	0,07	0,34	0,47	0,34	
12q1	0,04	0,26	0,66	0,45	0,62	
12q2	0,14	0,50	0,84	0,43	0,69	
12q3	0,08	0,38	0,75	0,43	0,67	
12q4	0,08	0,35	0,71	0,42	0,63	
13q1	0,11	0,39	0,72	0,43	0,61	
13q2	0,15	0,44	0,74	0,43	0,59	
13q3	0,18	0,47	0,75	0,43	0,57	
13q4	0,20	0,48	0,75	0,43	0,56	

GDP projection – July 2011

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Data after *cut-off date*

- **Possibility of agricultural and energy prices in world markets running above paths assumed in the projection and higher than expected domestic CPI inflation in May 2011** (increased probability of inflation higher than central path in short-term - risk balance for longer term left unchanged).
- **Revisions of the balance of payments data for 2004 – 2010** (does not change perception of inflation and GDP developments substantially).