

National Bank of Poland

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

Economic Institute



Overview

1. November projection compared to July projection
 - Changes in the projection
 - External environment
 - Polish economy in 2011 Q3
2. Projection
 - GDP and components
 - Labour market
 - Exchange rate
 - Inflation
3. Uncertainty

CHANGES IN
THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

NOVEMBER PROJECTION COMPARED TO JULY PROJECTION

- Changes in the projection
- External environment
- Polish economy in 2011 Q3

November projection compared to July projection: CPI inflation

CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

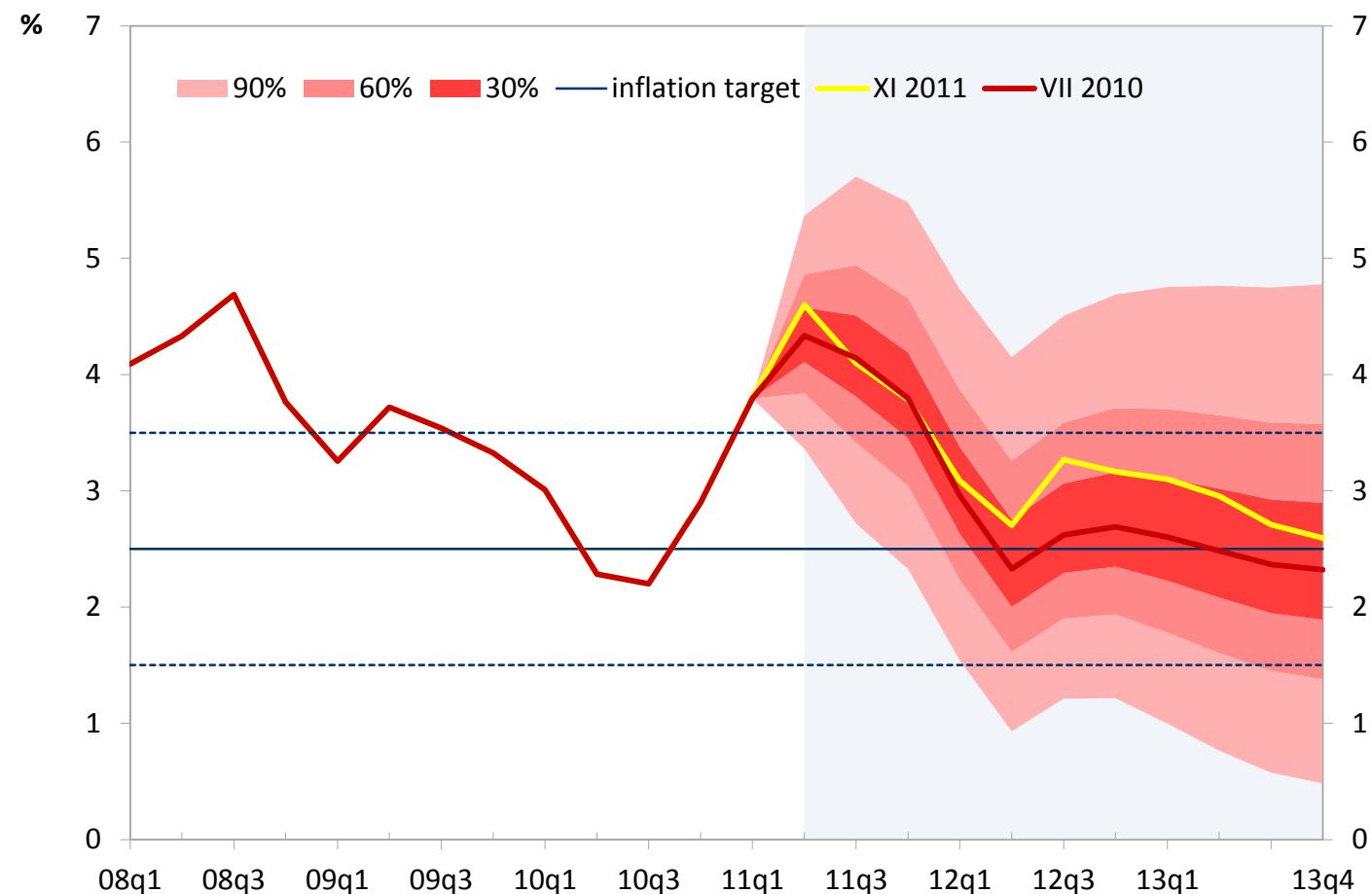
» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



Decomposition of deviations between November and July projections

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

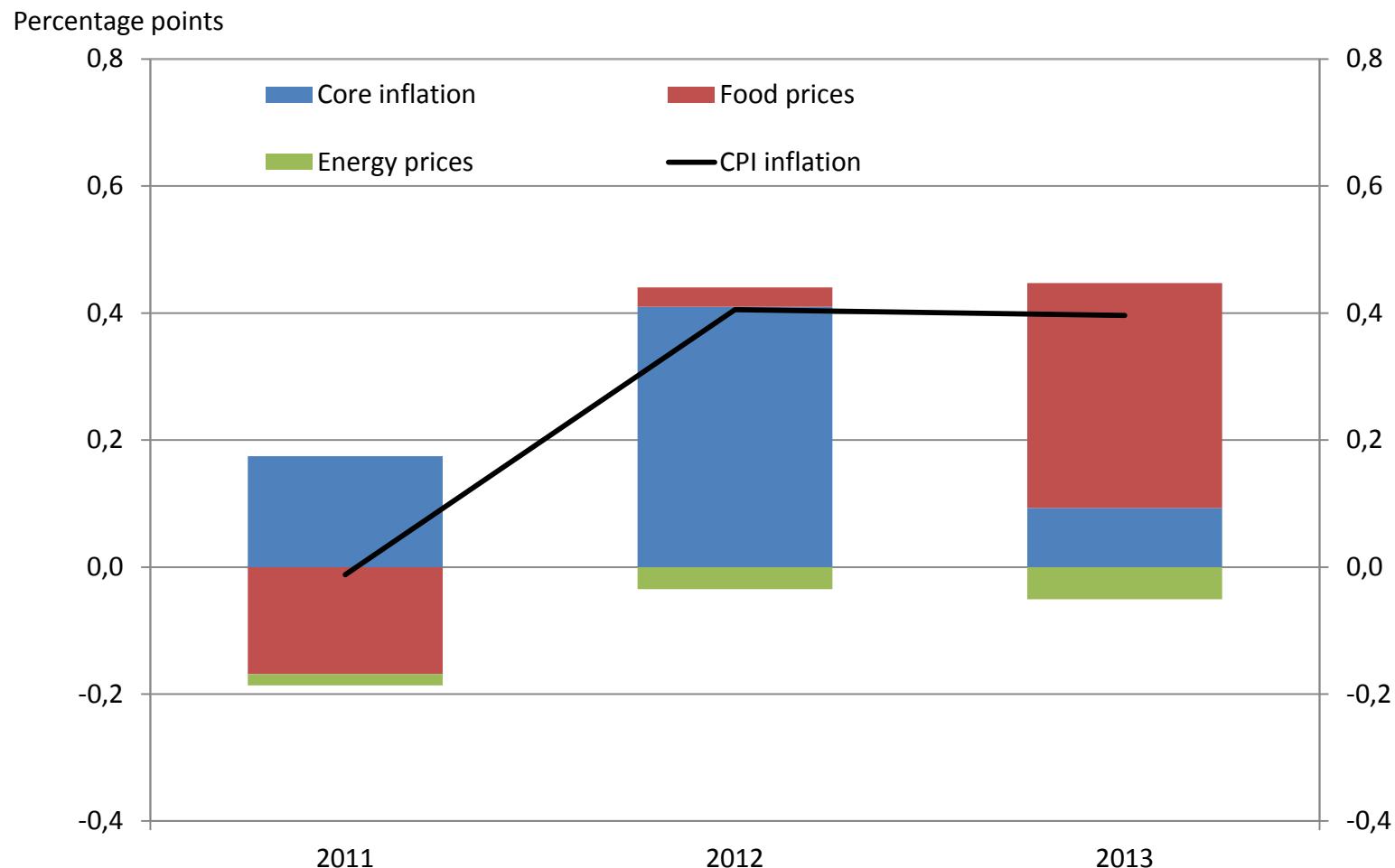
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



November projection compared to July projection: GDP

CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

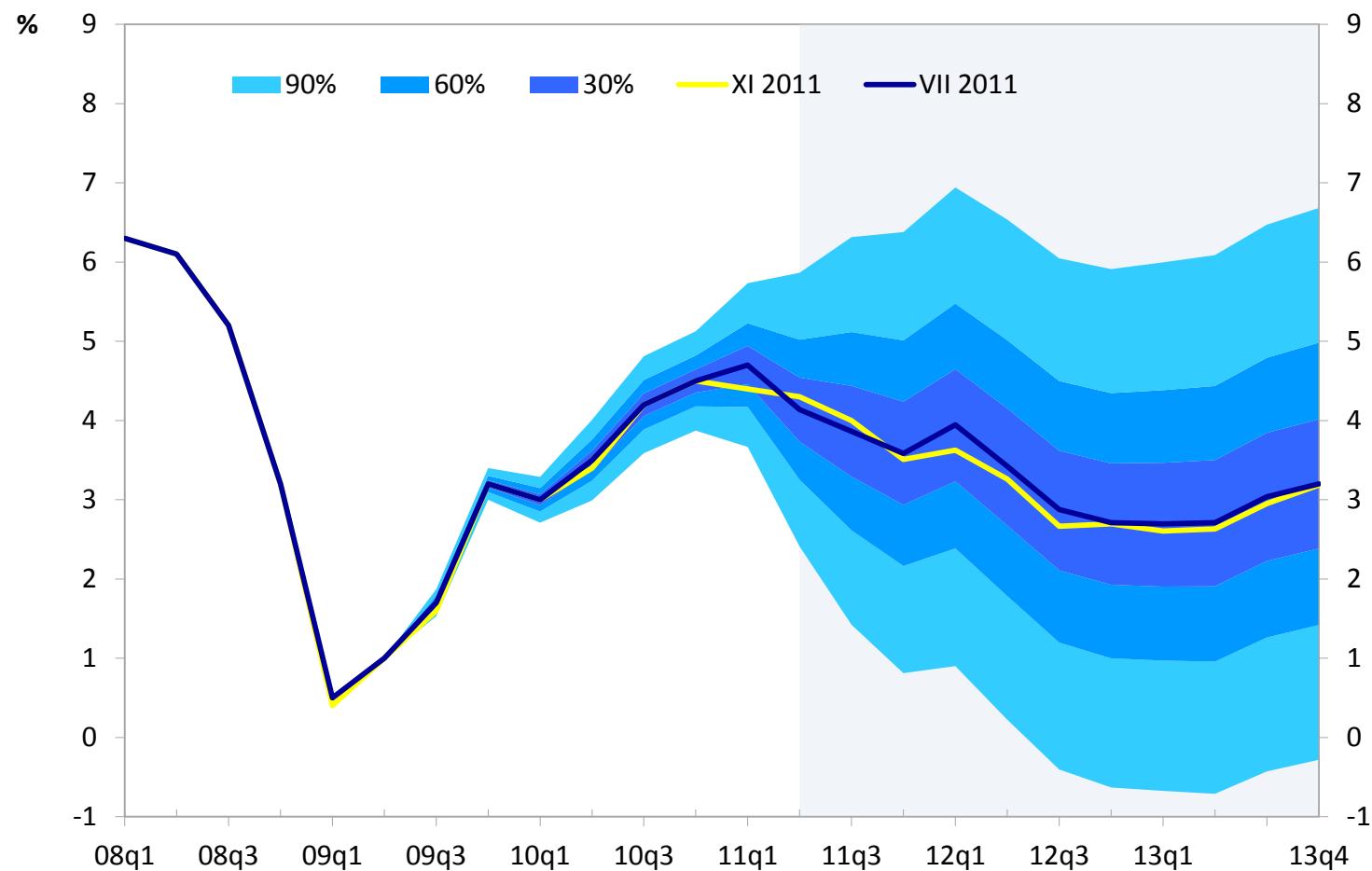
» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



Decomposition of deviations between November and July projections

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

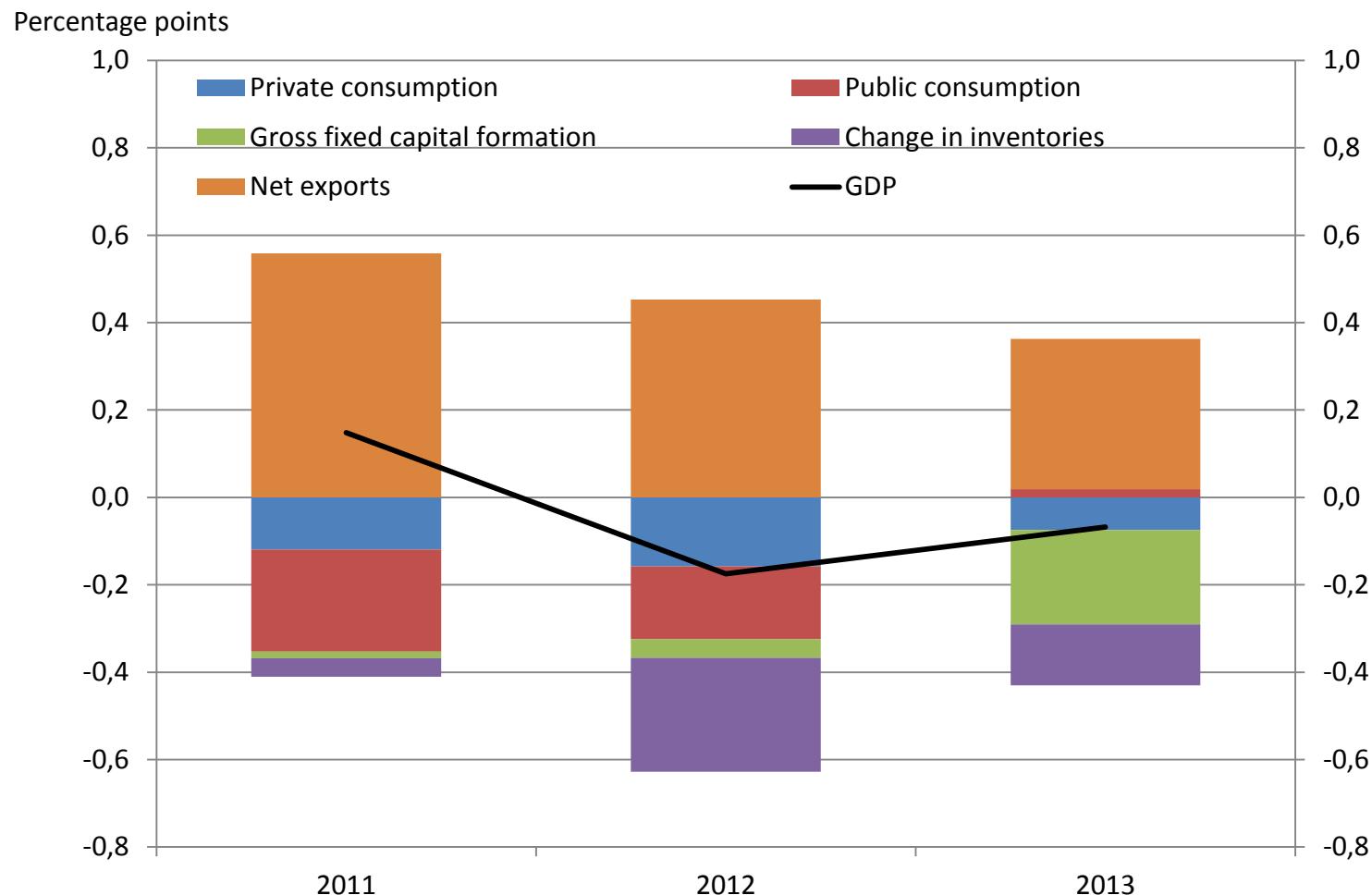
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

Projection scenario

July projection scenario:

- Slow economic recovery abroad
- Stabilization of commodities prices at high level
- Effects of the zloty depreciation will wear off
- Fiscal policy tightening
- Diminishing EU funds absorption from 2012

Changes in the projection scenario:

- Lower forecast of GDP growth for major trading partners of Poland
- Weaker exchange rate of the zloty

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

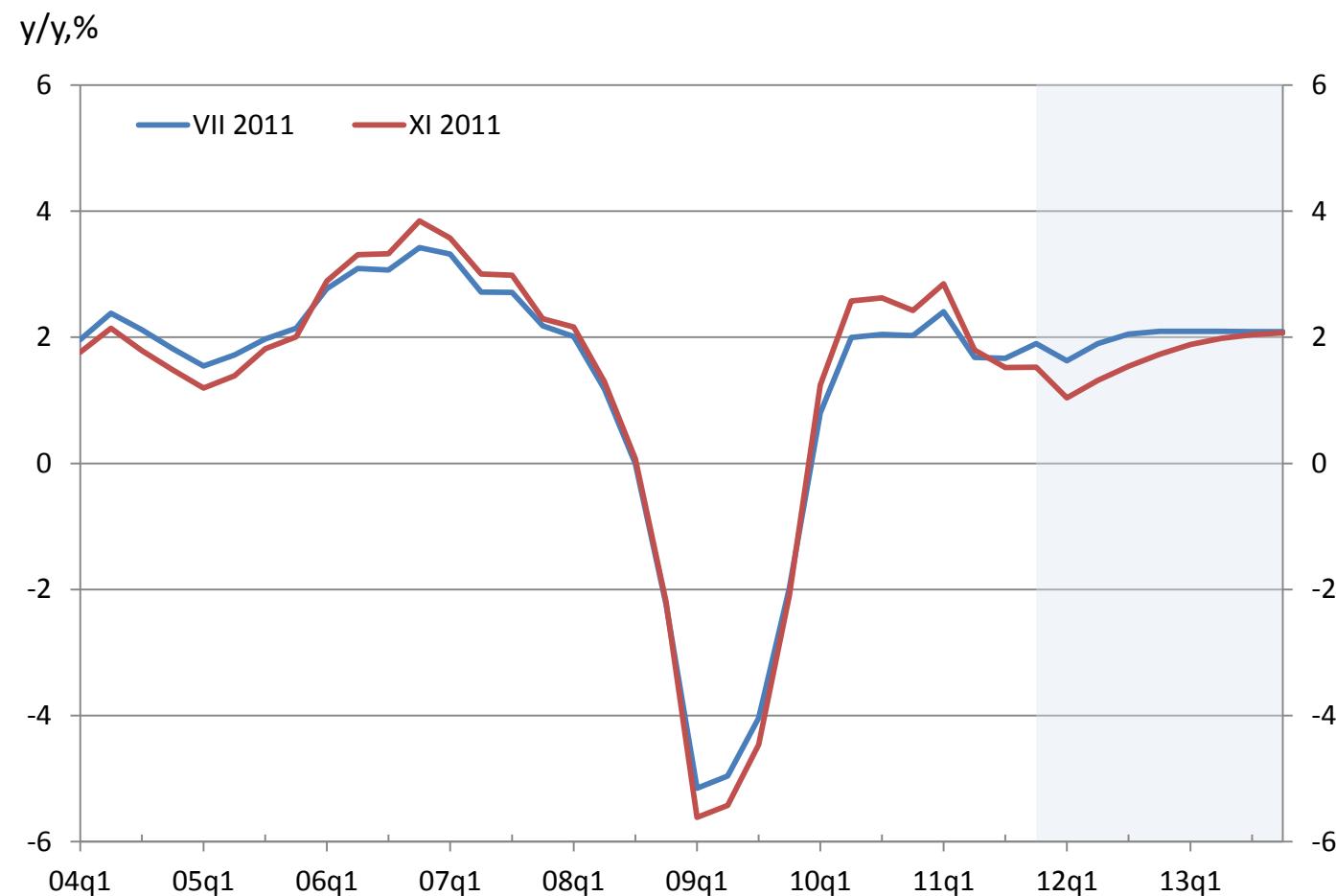
» Inflation

UNCERTAINTY

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 (lower)



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

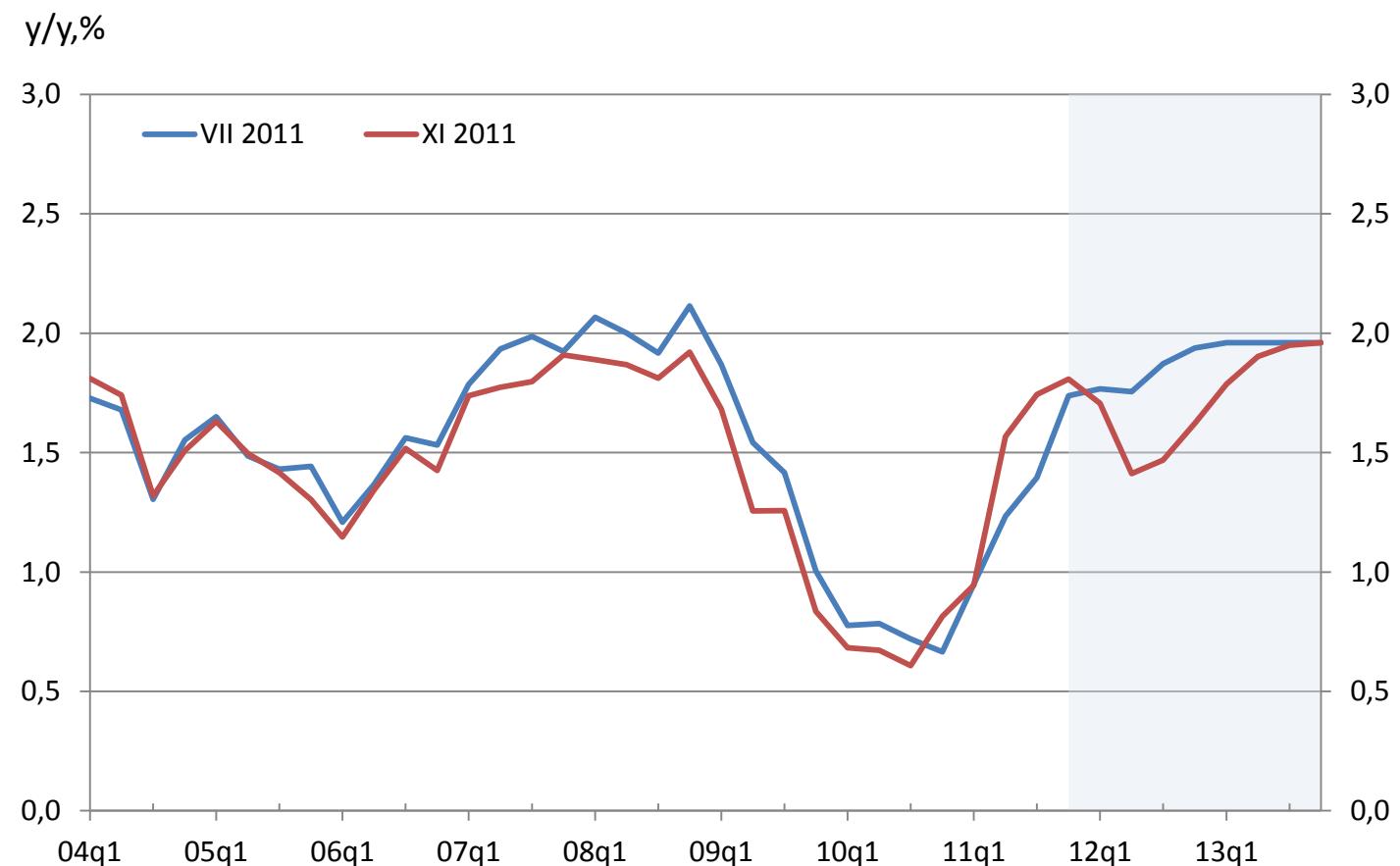
» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

Inflation abroad (lower)



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

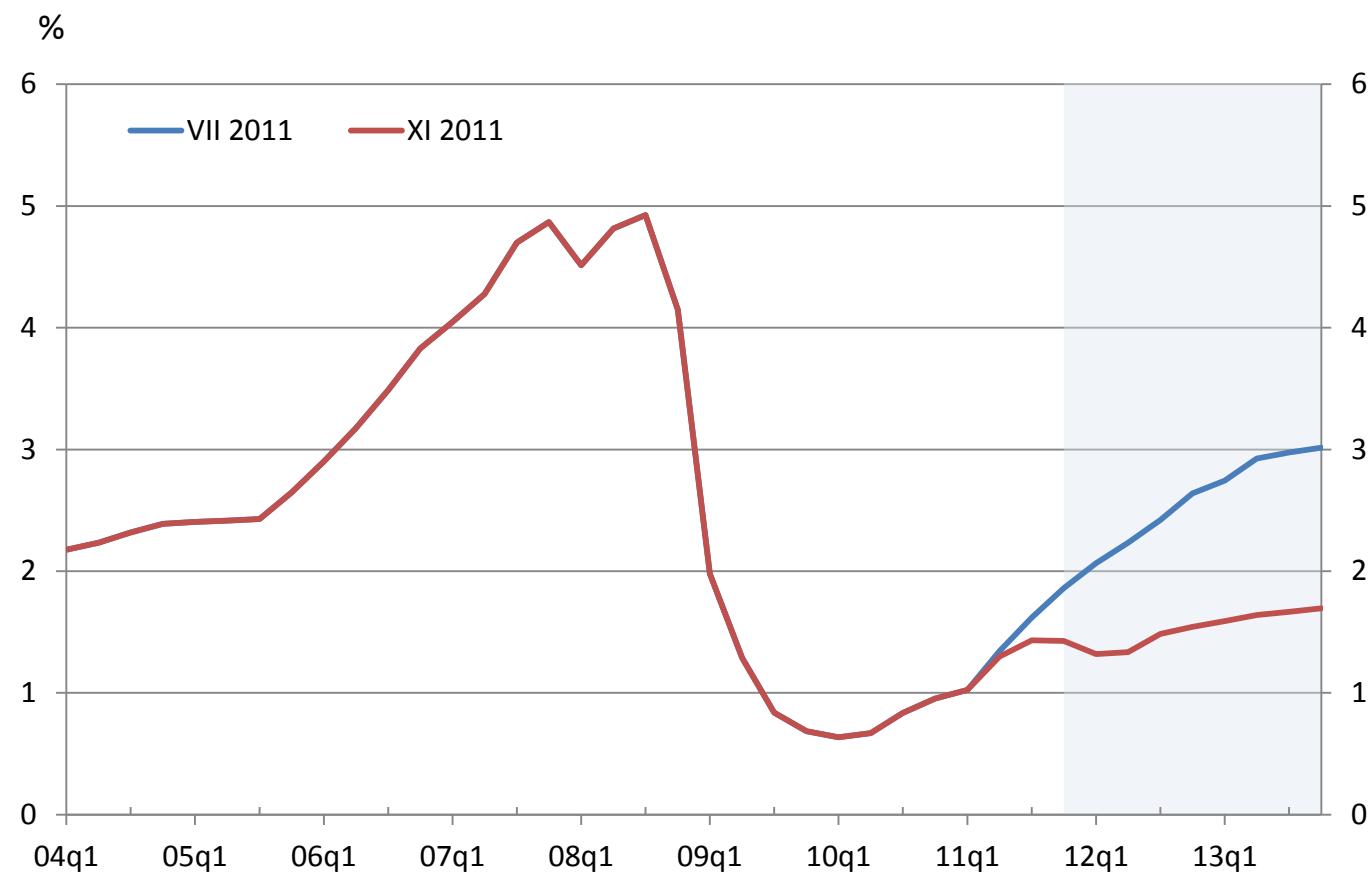
» Exchange rate

» Inflation

UNCERTAINTY

Interest rates abroad (lower)

CHANGES IN THE SCENARIO
» Changes in the projection
» External environment
» Polish economy in 2011 Q3
PROJECTION
» GDP and its components
» Labour market
» Exchange rate
» Inflation
UNCERTAINTY



Agricultural commodity price index*

(lower)

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

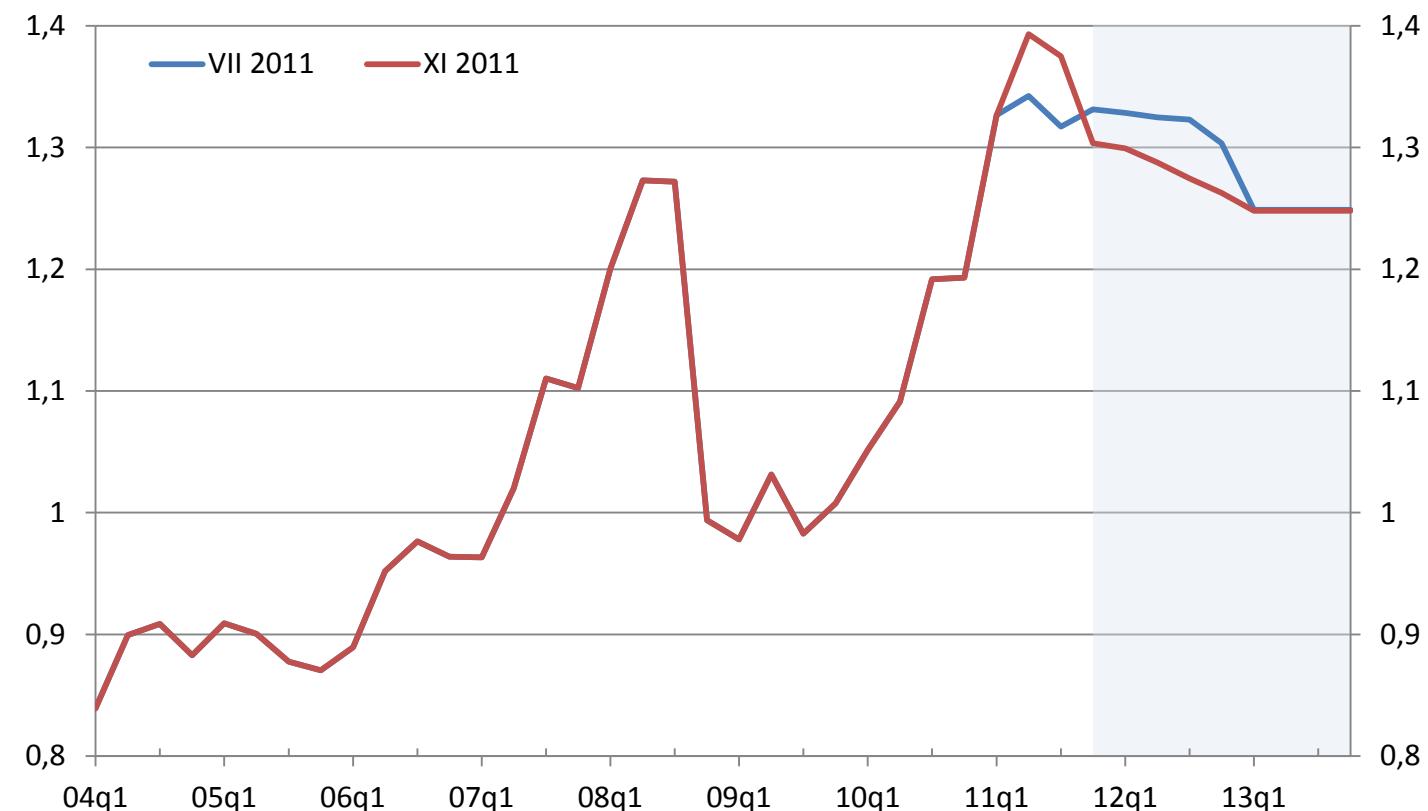
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

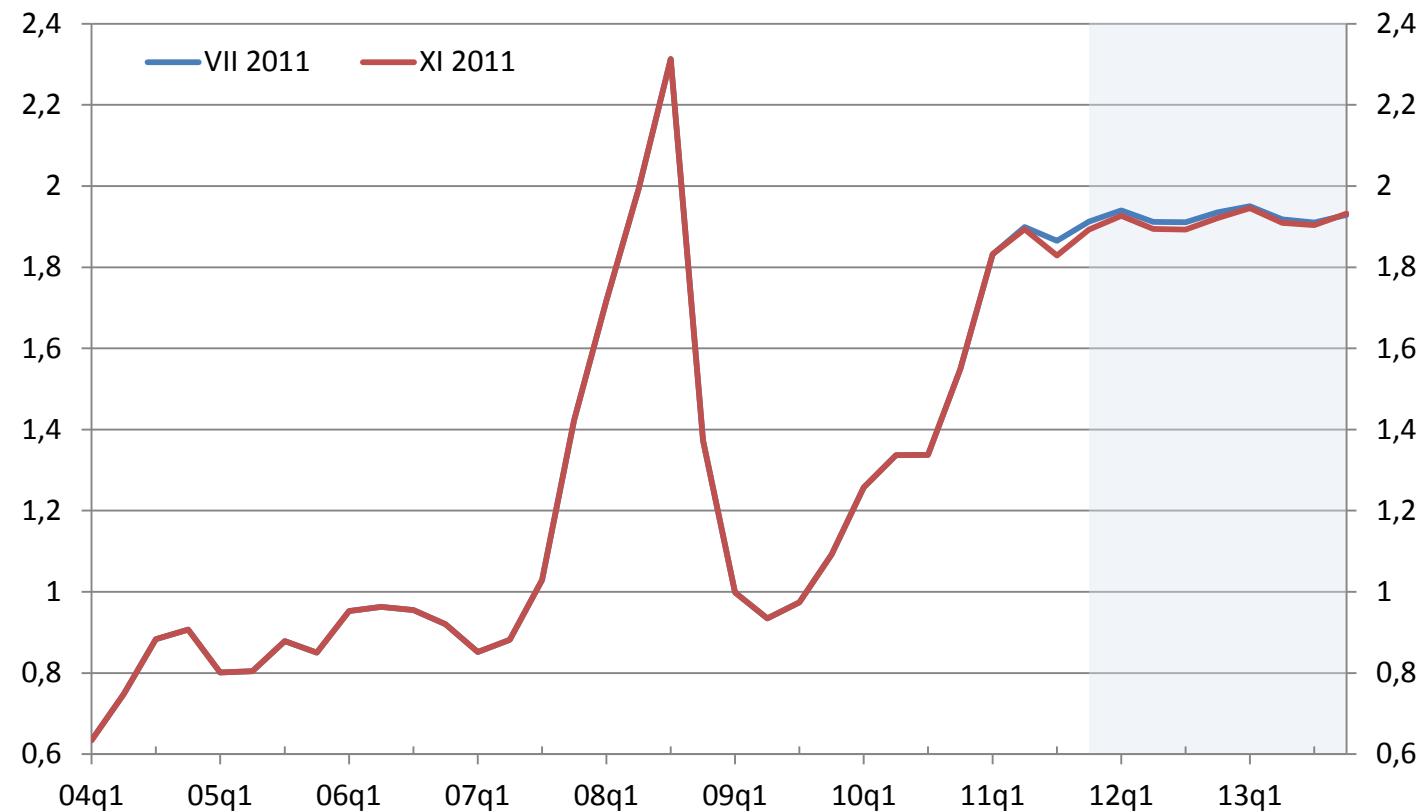


*Global index of agricultural commodity prices consists of prices of: wheat, pork, beef, poultry, fish, rape oil, sugar, oranges, bananas, and the beverages index.

Energy commodity price index*

(similar)

CHANGES IN THE SCENARIO
» Changes in the projection
» External environment
» Polish economy in 2011 Q3
PROJECTION
» GDP and its components
» Labour market
» Exchange rate
» Inflation
UNCERTAINTY



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

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

CHANGES IN
THE SCENARIO

- » Changes
in the projection

- » External
environment

- » Polish economy
in 2011 Q3

PROJECTION

- » GDP and its
components

- » Labour market

- » Exchange rate

- » Inflation

UNCERTAINTY



Utilisation of EU transfers aimed at public sector investments (mln euro)

CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

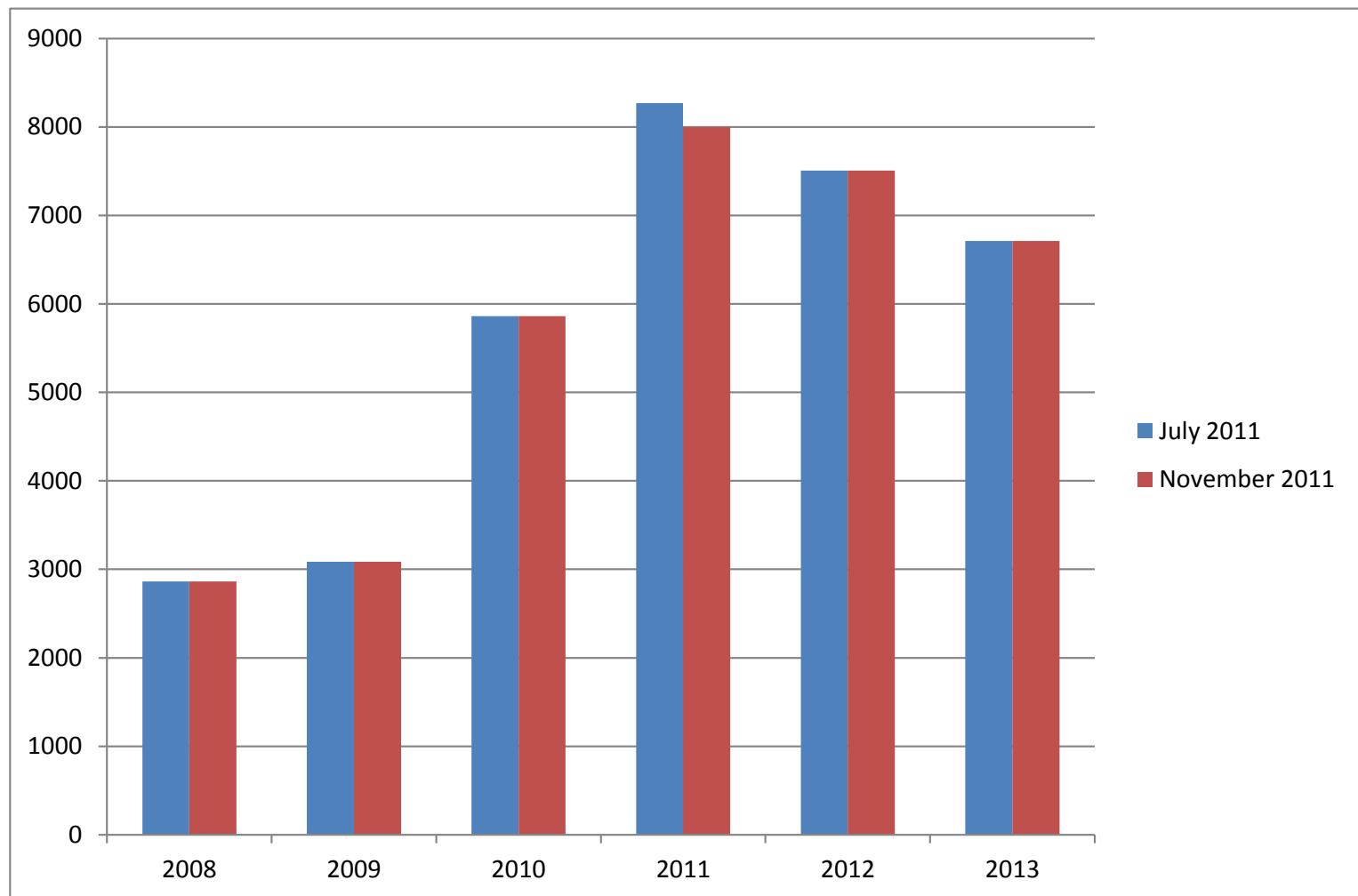
» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

Polish Economy in 2011 Q3

- GDP and components
- Labour market
- Inflation

GDP and components

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

	11Q2	11Q3
GDP (y/y, %)	4,3 (4,1)	4,0 (3,9)
Domestic demand (y/y, %)	4,3 (4,4)	4,0 (4,5)
Private consumption (y/y, %)	3,5 (3,8)	3,5 (3,6)
Public consumption (y/y, %)	-1,3 (2,0)	0,7 (1,3)
Gross fixed capital formation (y/y, %)	7,8 (6,5)	7,2 (8,0)
Exports (y/y, %)	6,7 (7,3)	2,6 (7,1)
Imports (y/y, %)	6,6 (7,9)	2,9 (8,5)
Net exports contribution (percentage points)	0,0 (-0,3)	-0,2 (-0,6)

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

Labour market

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

	11Q2	11Q3
ULC (y/y, %)	1,2 (1,8)	2,6 (2,6)
Labour productivity (y/y, %)	3,2 (2,7)	3,4 (2,6)
Gross wages (y/y, %)	5,3 (4,7)	5,8 (5,5)
Total employment LFS (y/y, %)	1,1 (1,4)	0,6 (1,2)
Unemployment LFS (%)	9,5 (8,5)	9,6 (8,3)
Participation rate (%)	56,0 (55,7)	56,0 (55,7)

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

Inflation

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

	11Q2	11Q3
CPI inflation (y/y, %)	4,6 (4,3)	4,1 (4,1)
Core inflation (y/y, %)	2,3 (2,2)	2,6 (2,2)
Food price inflation (y/y, %)	7,5 (7,0)	4,3 (5,7)
Energy price inflation (y/y, %)	8,4 (8,5)	8,9 (9,0)

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

CHANGES IN
THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

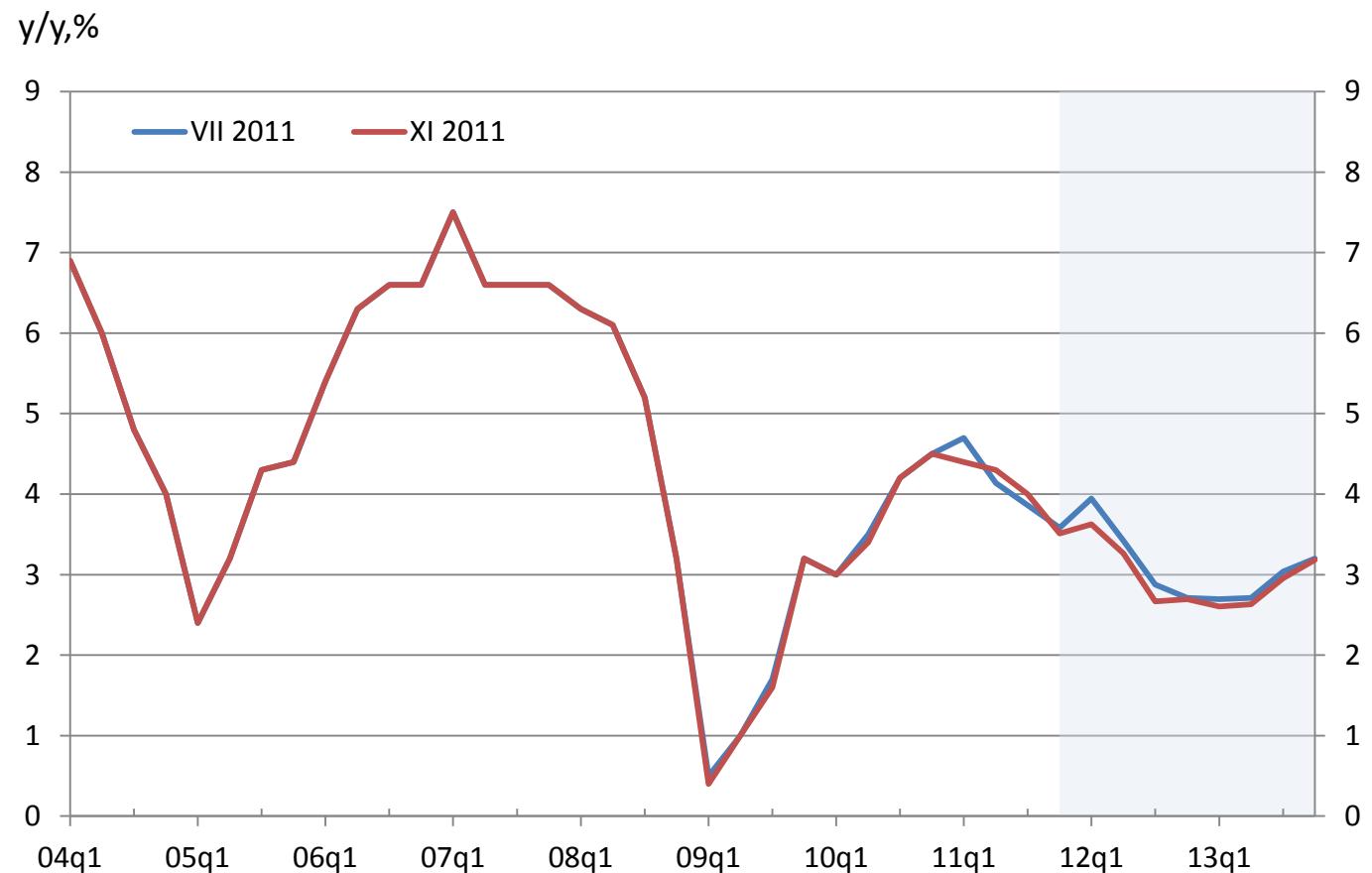
» Inflation

UNCERTAINTY

PROJECTION FOR 2011-2013

- GDP and components
- Labour market
- Exchange rate
- Inflation

GDP (lower)



CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

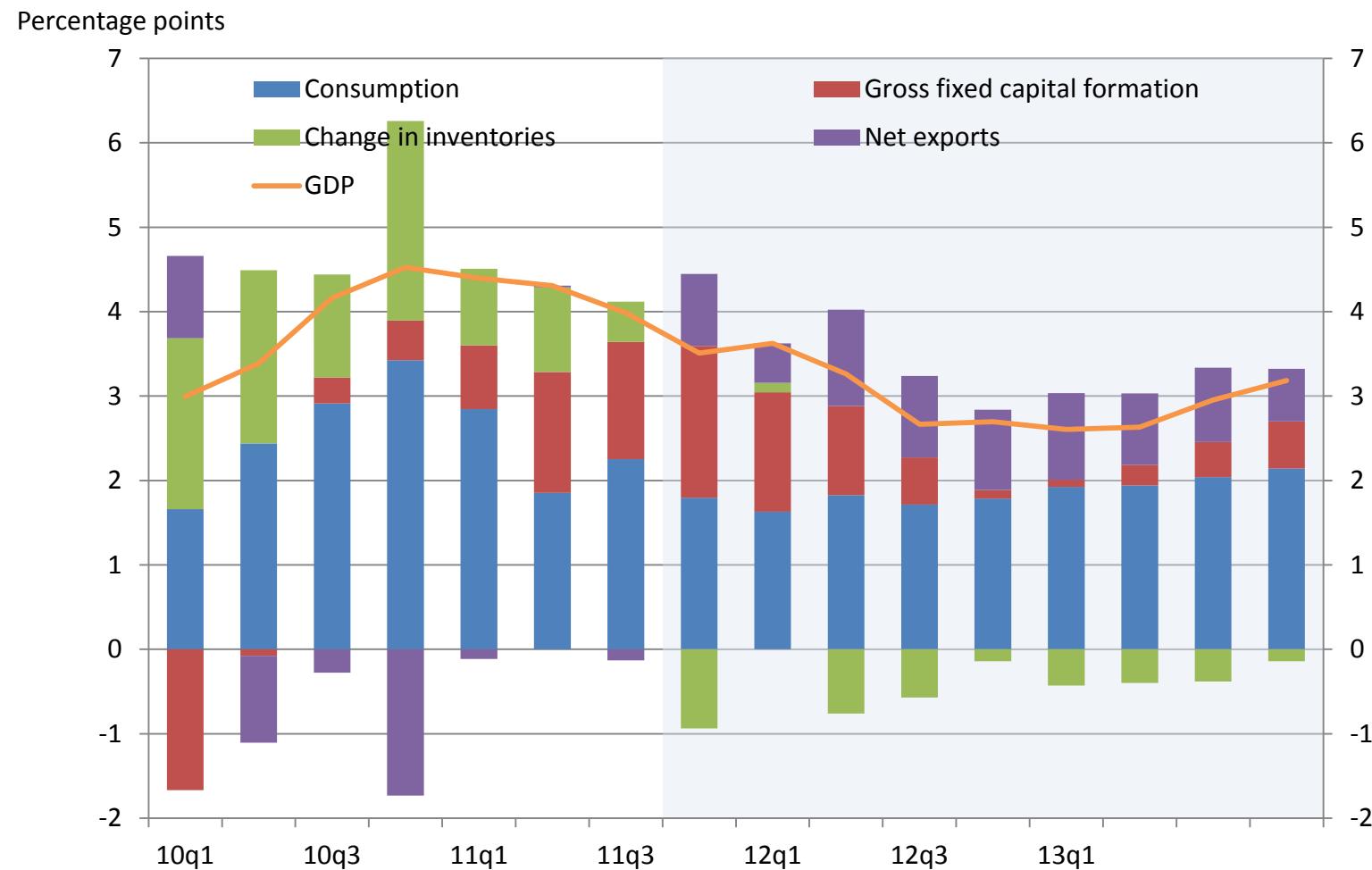
» Exchange rate

» Inflation

UNCERTAINTY

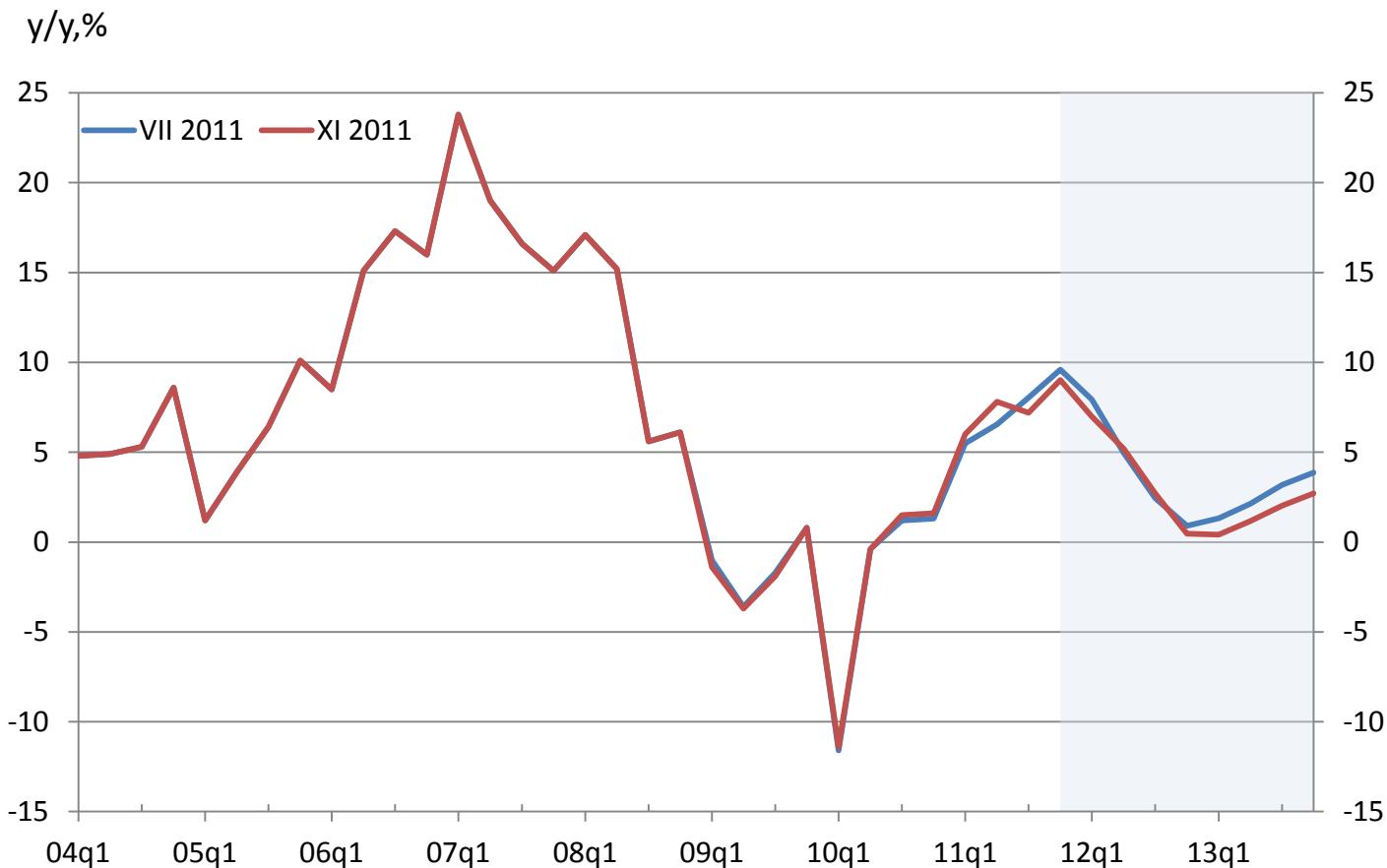
GDP: decomposition

CHANGES IN THE SCENARIO
» Changes in the projection
» External environment
» Polish economy in 2011 Q3
PROJECTION
» GDP and its components
» Labour market
» Exchange rate
» Inflation
UNCERTAINTY



Gross fixed capital formation (lower)

CHANGES IN THE SCENARIO
» Changes in the projection
» External environment
» Polish economy in 2011 Q3
PROJECTION
» GDP and its components
» Labour market
» Exchange rate
» Inflation
UNCERTAINTY



Gross fixed capital formation: decomposition

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

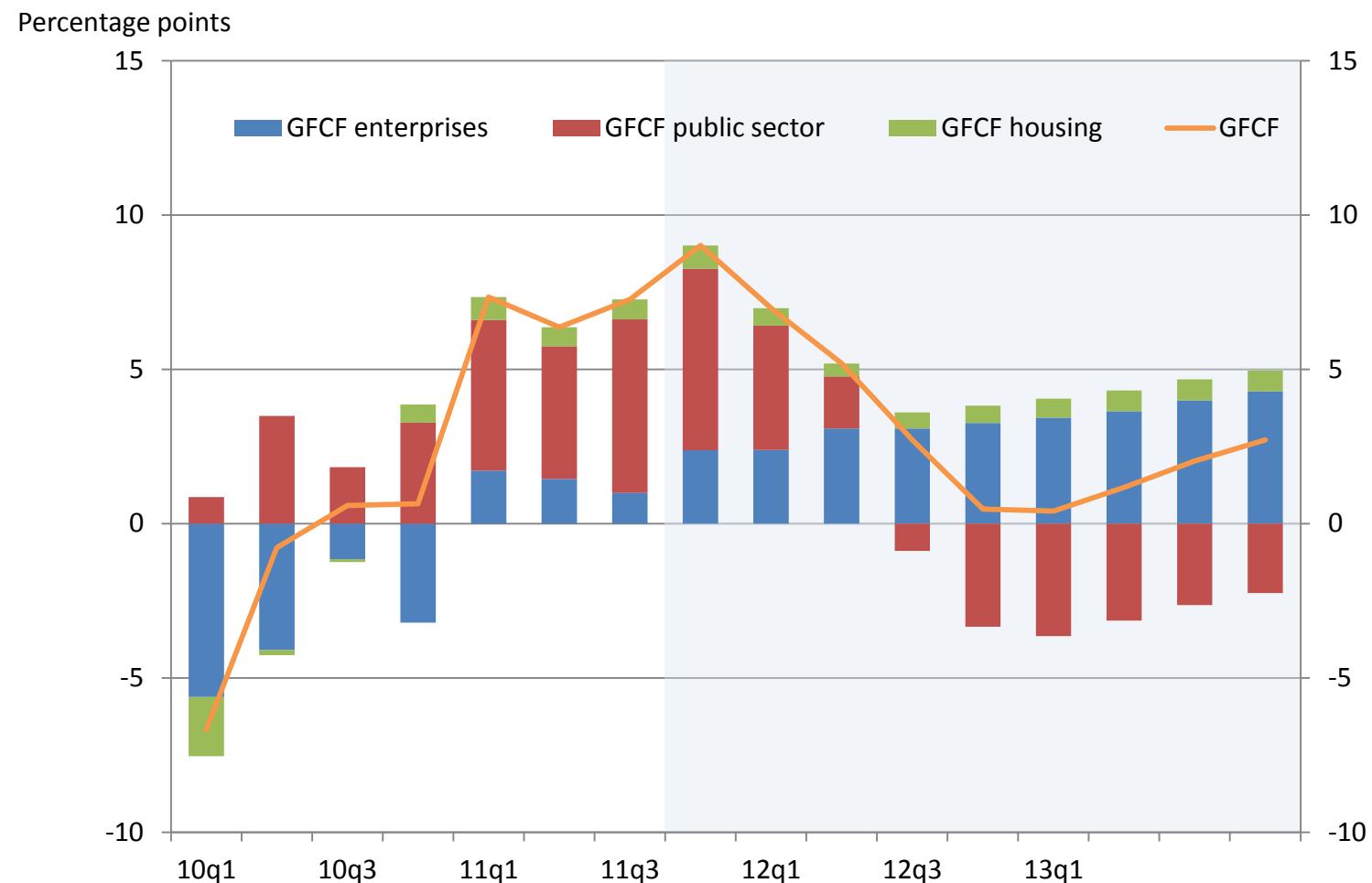
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



Private consumption (lower)

CHANGES IN THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

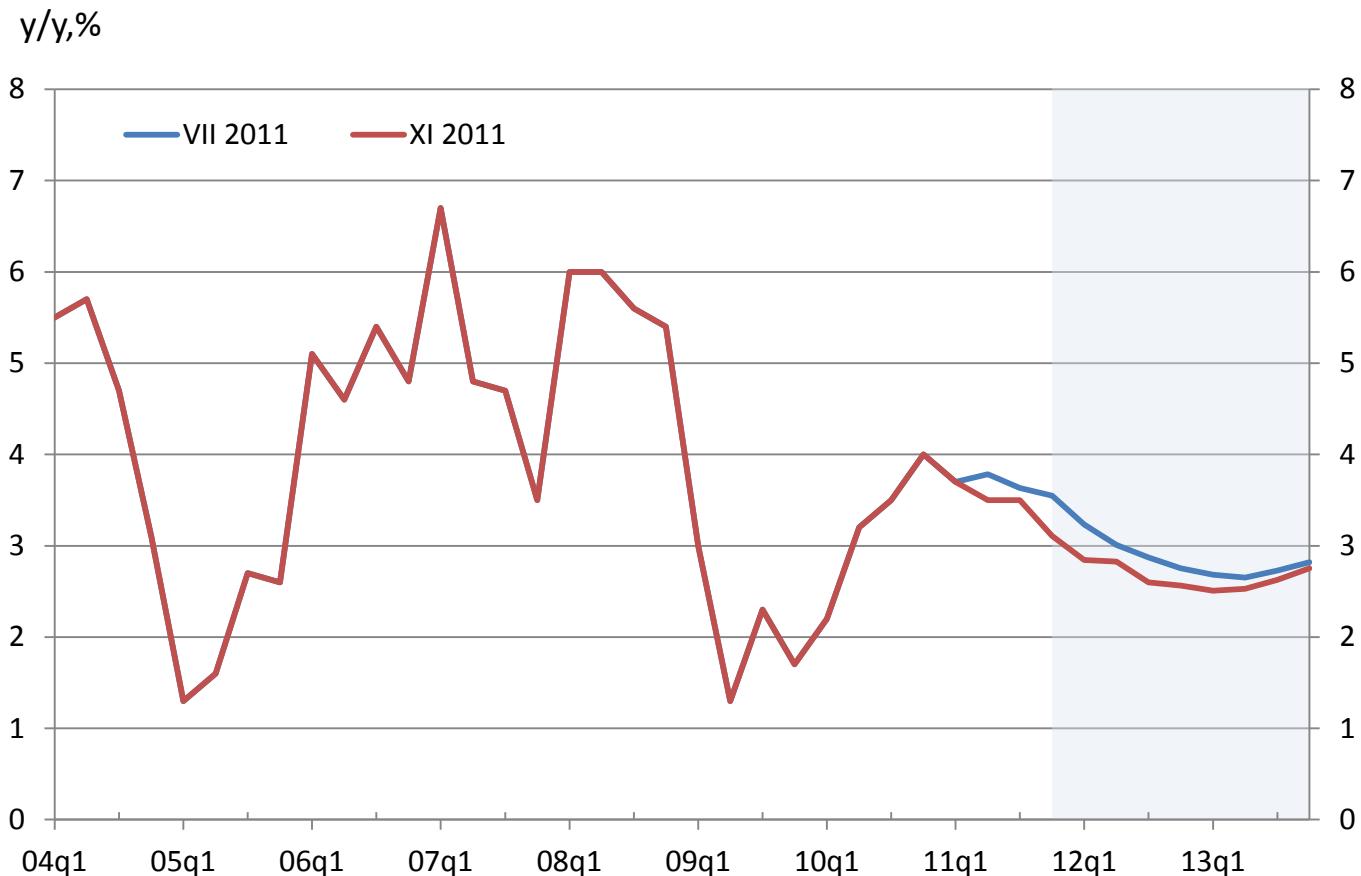
» GDP and its
components

» Labour market

» Exchange rate

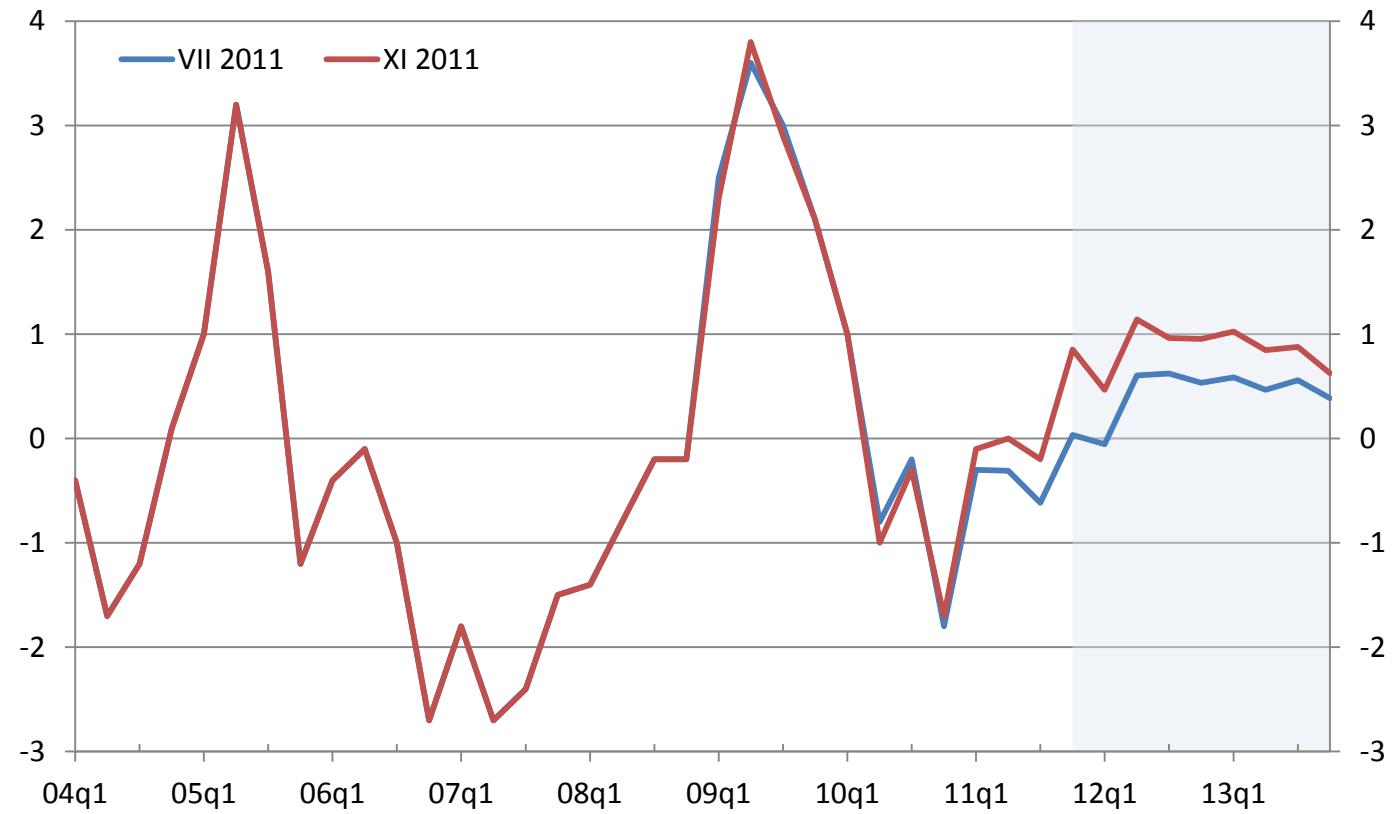
» Inflation

UNCERTAINTY



Net exports contribution (higher)

percentage points



Trade with other countries

CHANGES IN
THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

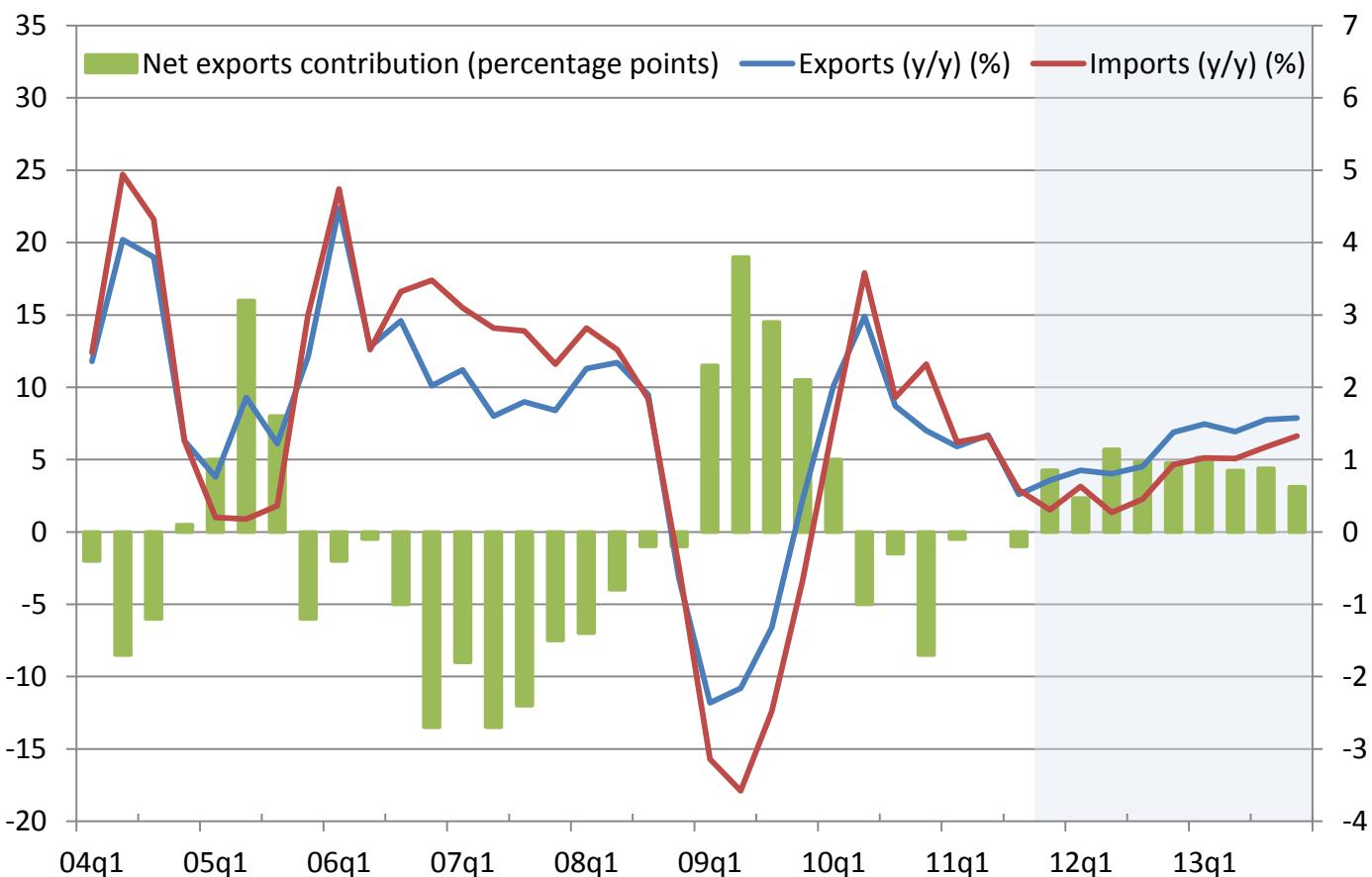
» GDP and its
components

» Labour market

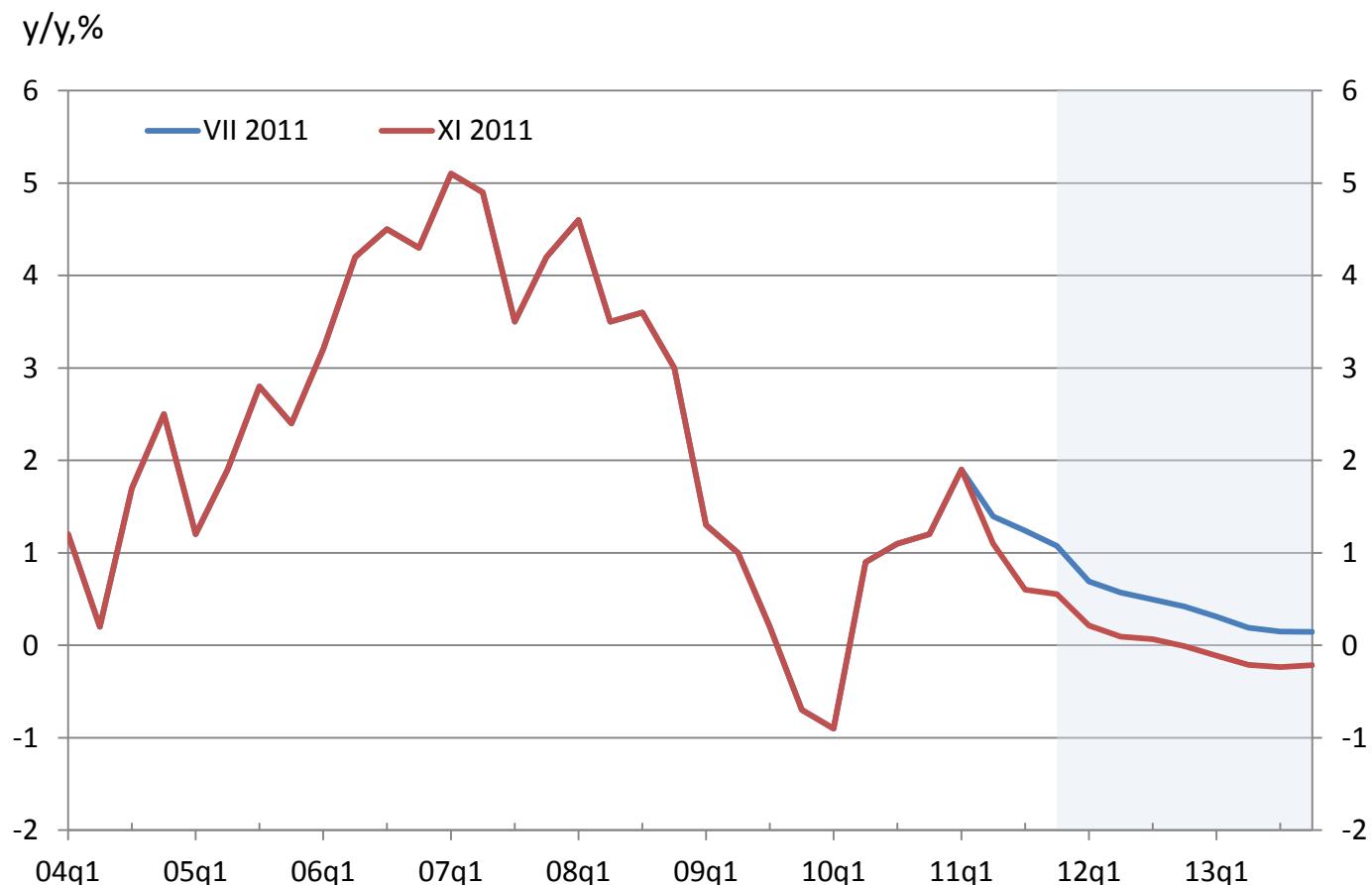
» Exchange rate

» Inflation

UNCERTAINTY



Employment (lower)



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

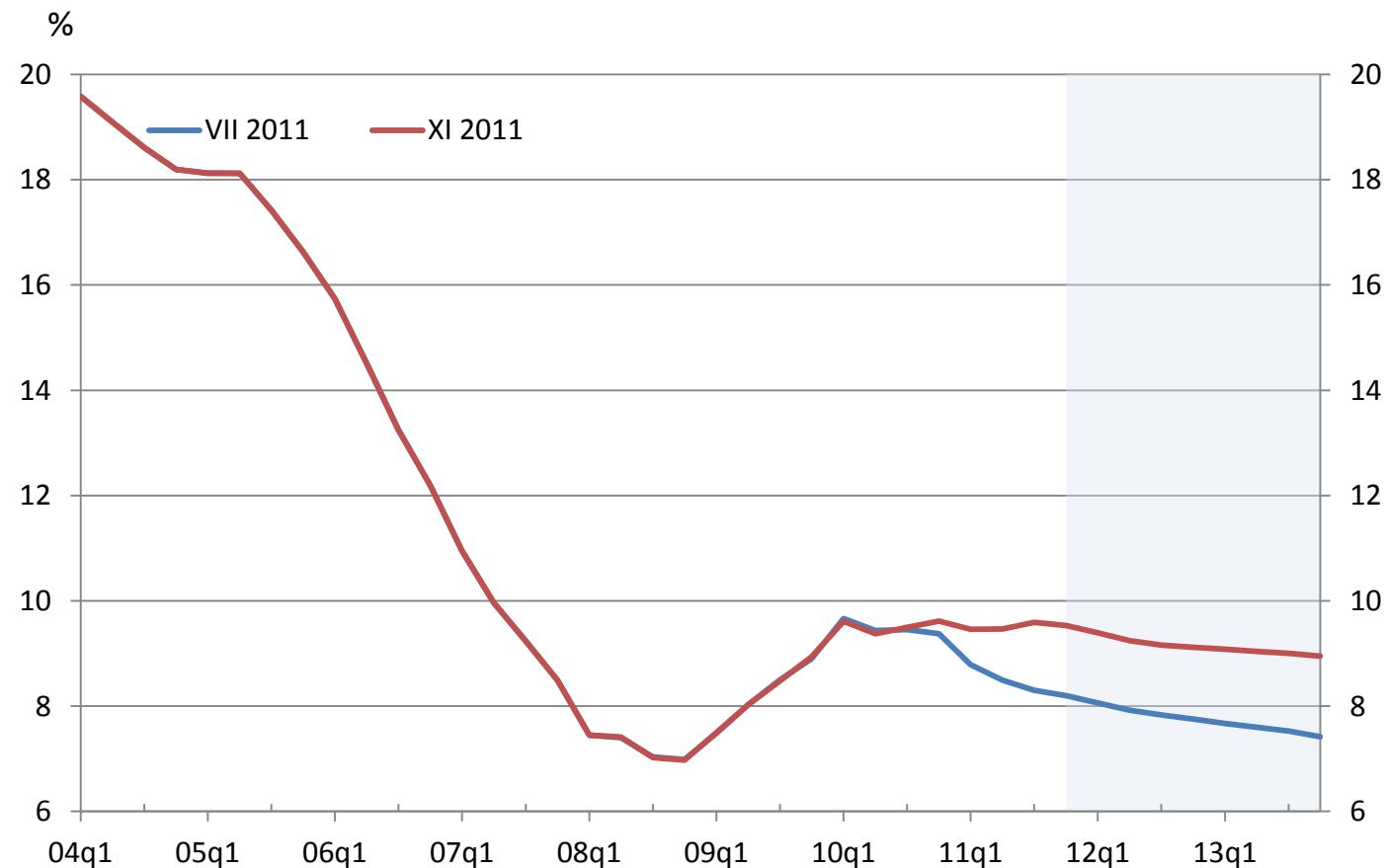
» Exchange rate

» Inflation

UNCERTAINTY

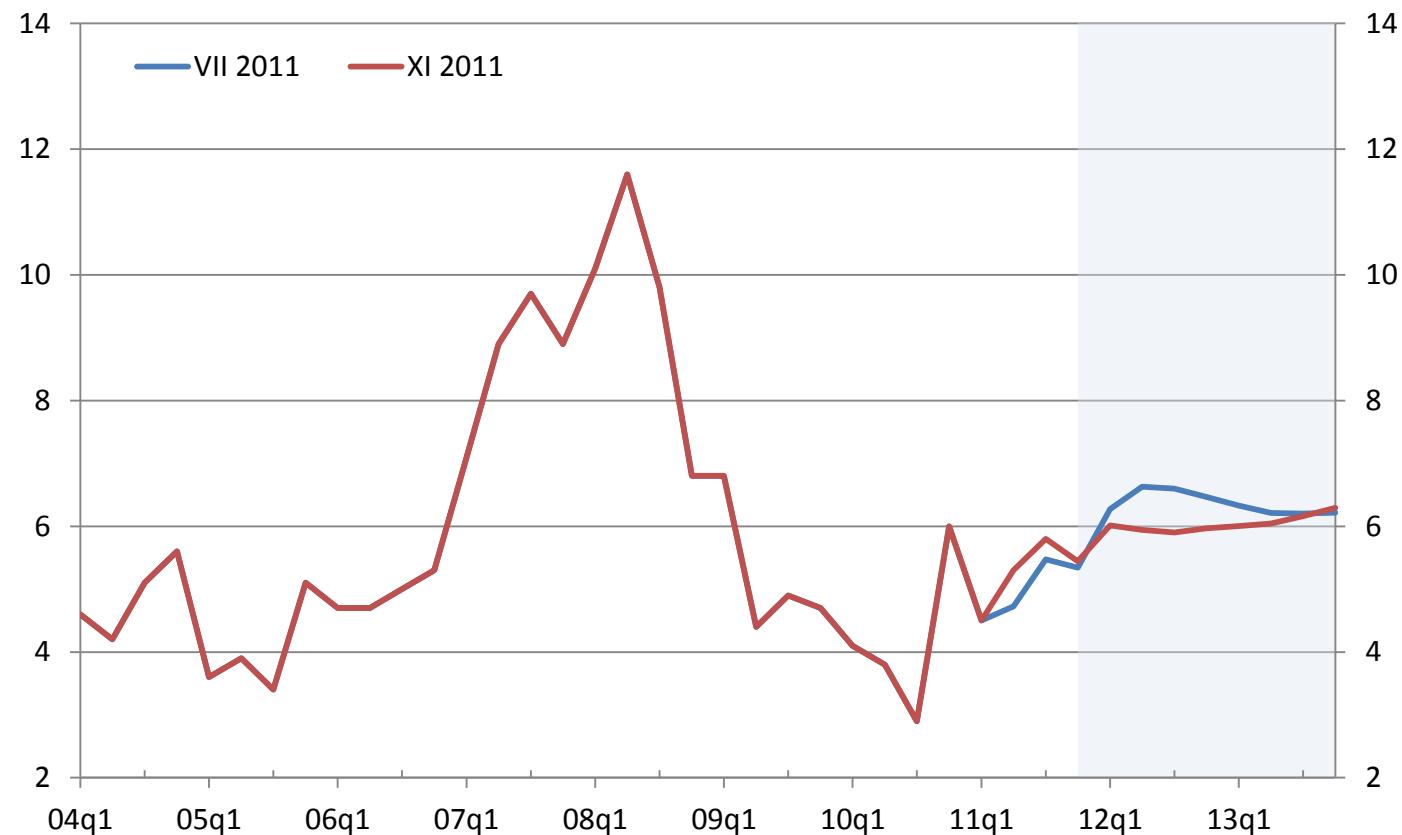
Unemployment (higher)

CHANGES IN THE SCENARIO
» Changes in the projection
» External environment
» Polish economy in 2011 Q3
PROJECTION
» GDP and its components
» Labour market
» Exchange rate
» Inflation
UNCERTAINTY



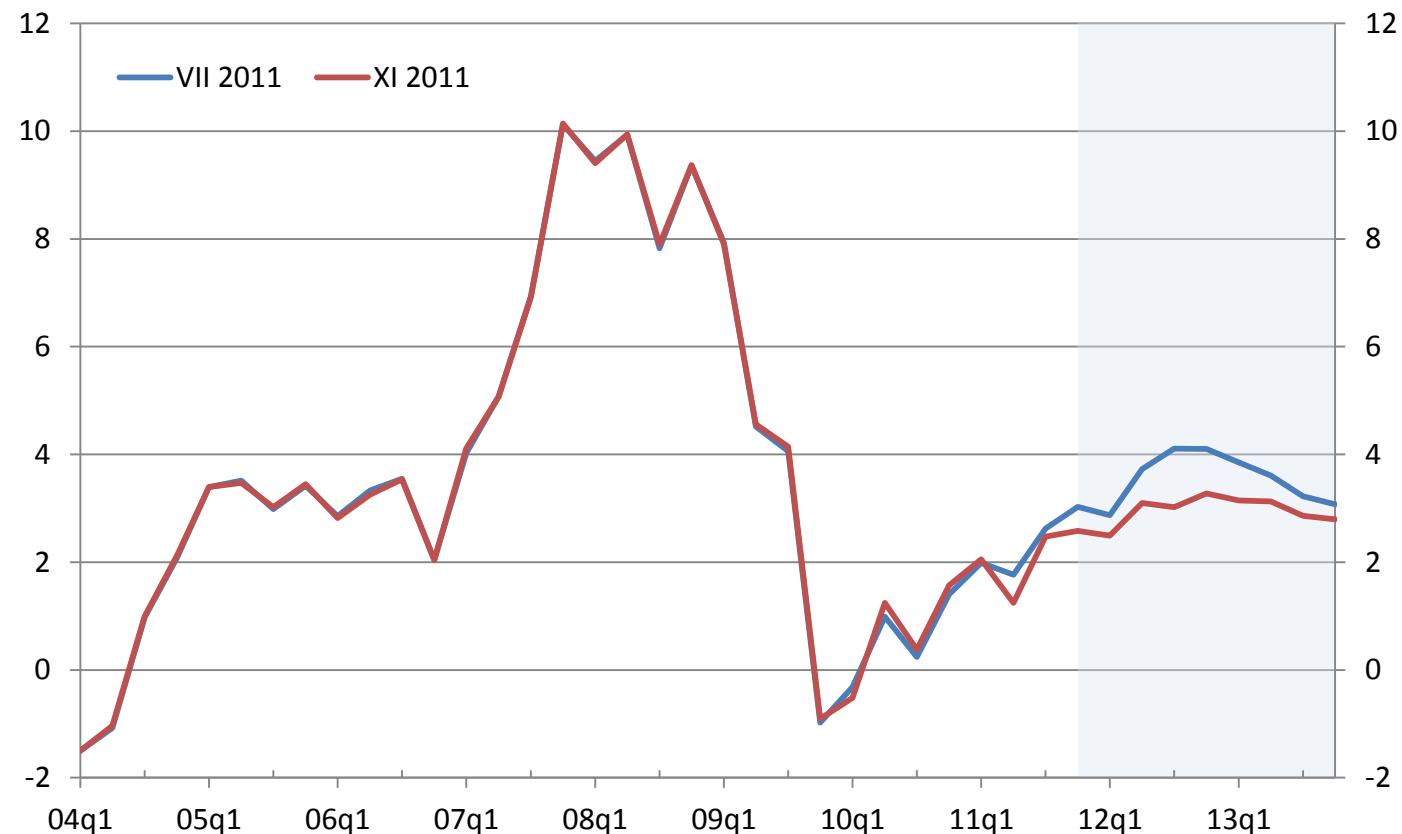
Gross wages (lower)

y/y,%



Unit labour costs (lower)

y/y, %



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

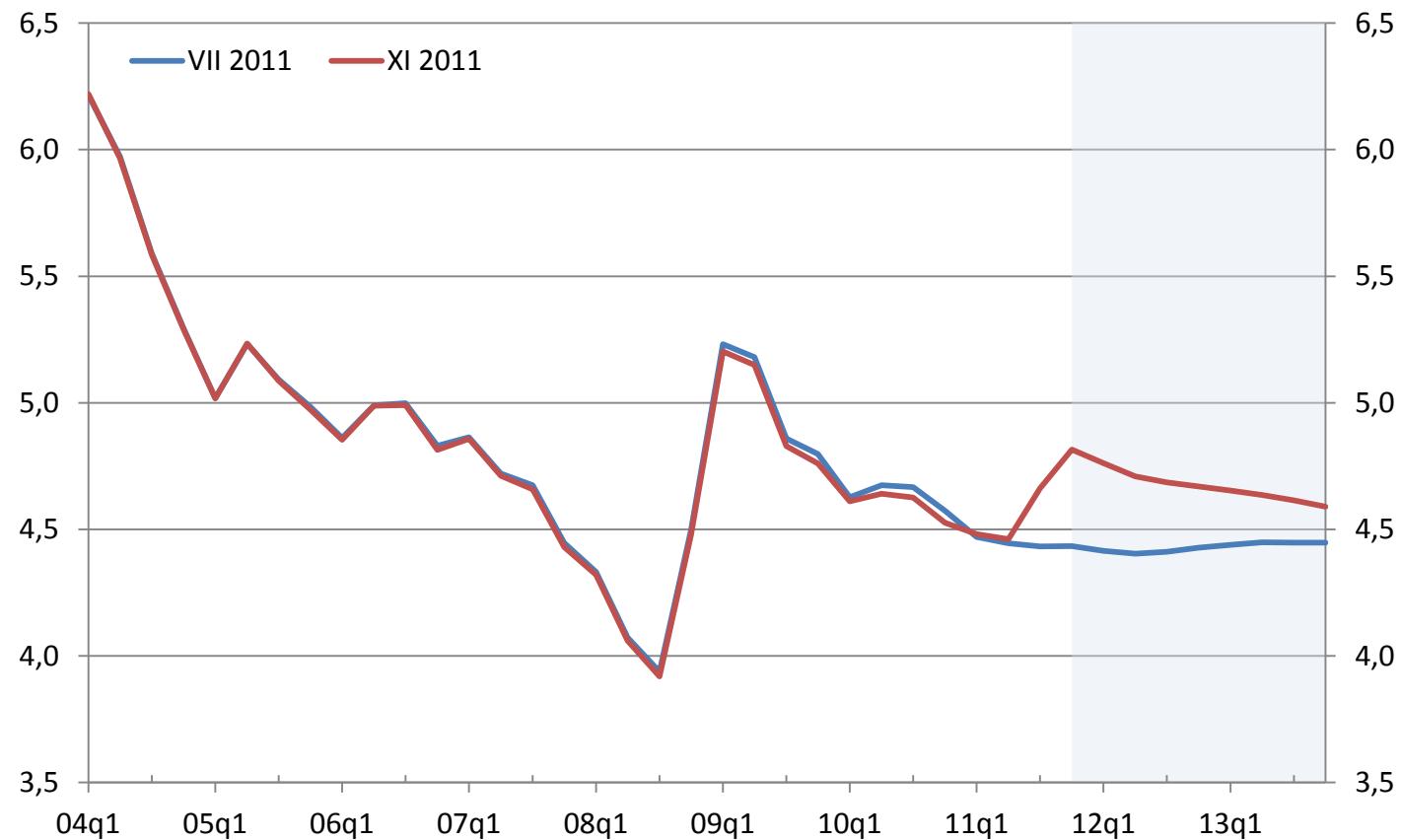
» Exchange rate

» Inflation

UNCERTAINTY

Exchange rate (weaker)

Real effective exchange rate (REER)

CHANGES IN
THE SCENARIO» Changes
in the projection» External
environment» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

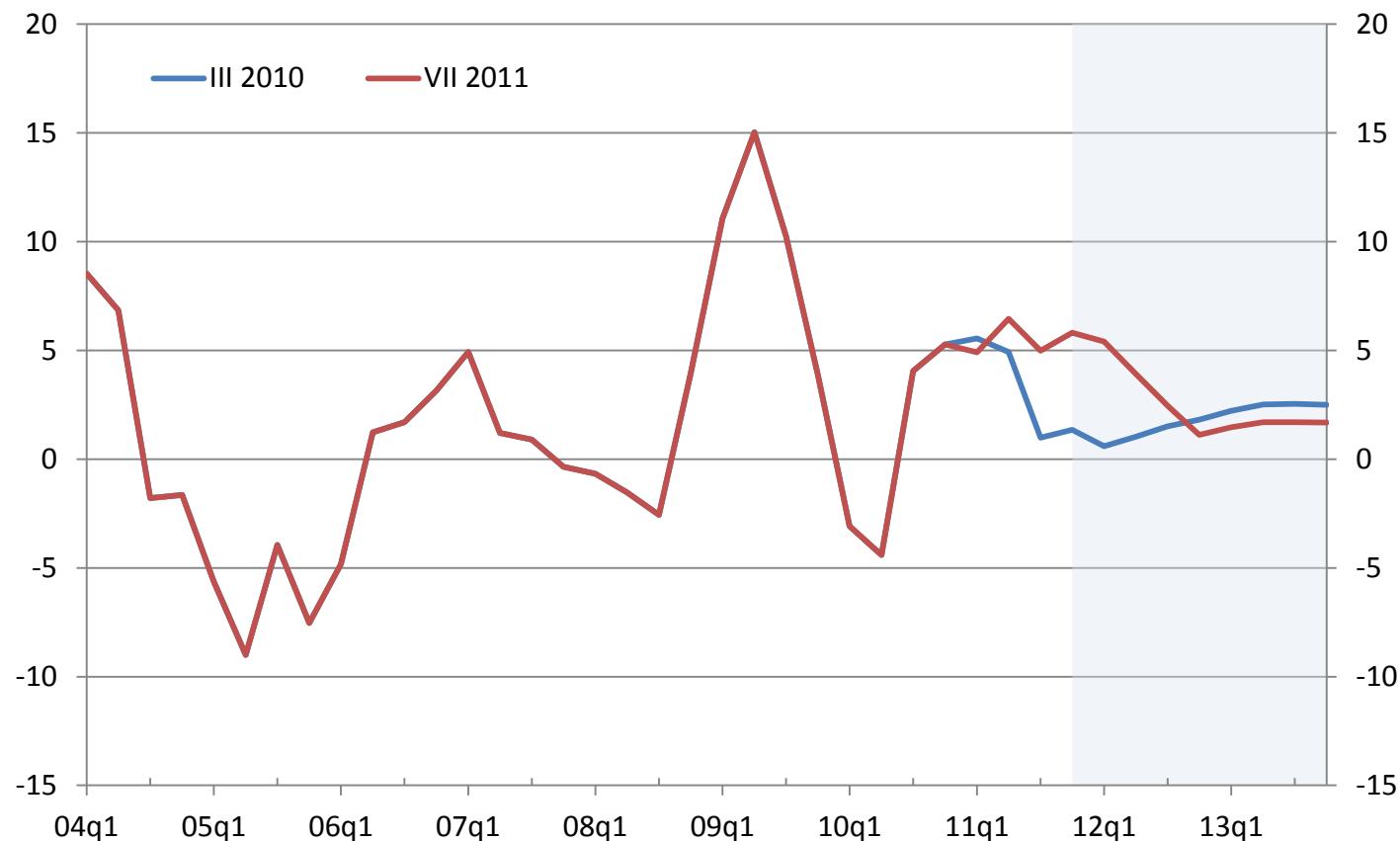
» Exchange rate

» Inflation

UNCERTAINTY

Import prices (excluding oil and natural gas)

y/y, %



CHANGES IN
THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

Food and energy prices inflation

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

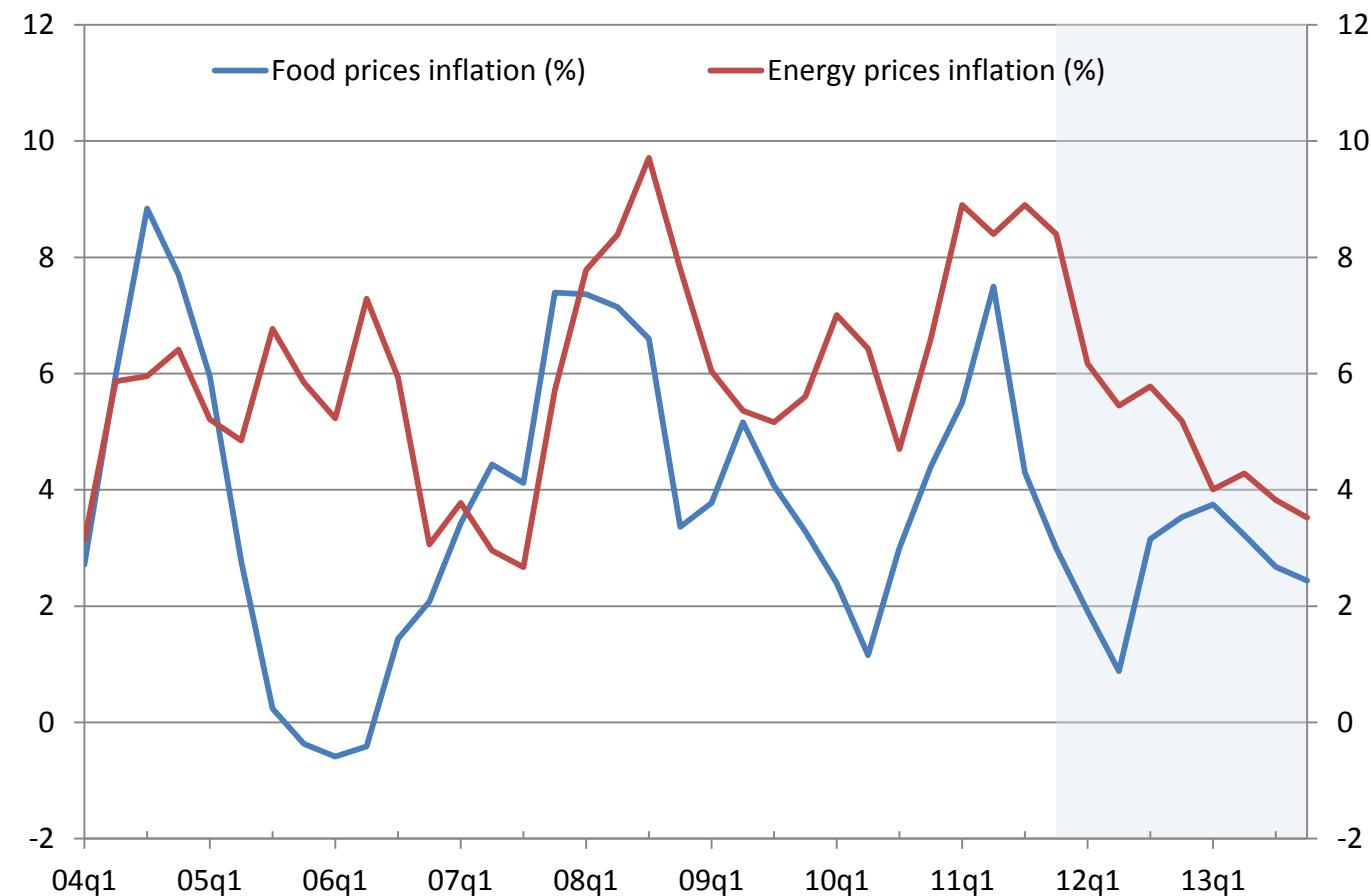
» GDP and its components

» Labour market

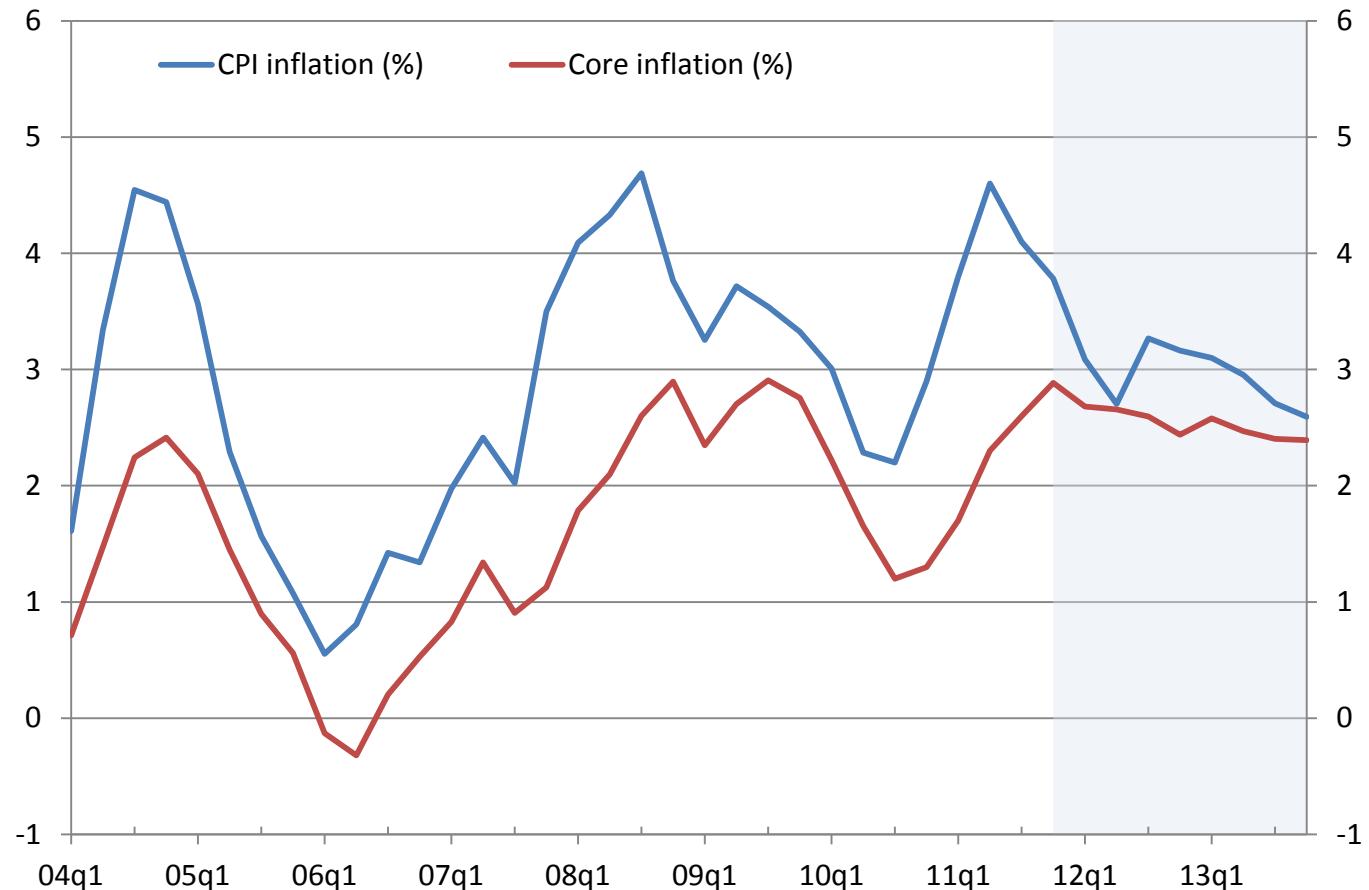
» Exchange rate

» Inflation

UNCERTAINTY



Core inflation and CPI inflation*



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

CHANGES IN
THE SCENARIO

» Changes
in the projection

» External
environment

» Polish economy
in 2011 Q3

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

UNCERTAINTY OF THE PROJECTION

National Bank of Poland

CHANGES IN THE SCENARIO	Risk area	Description	Impact	Scale of impact
» Changes in the projection				
» External environment				
» Polish economy in 2011 Q3				
PROJECTION	External environment and exchange rate	<ul style="list-style-type: none"> ▪ The increase in the uncertainty due to deteriorating outlook for economic growth in the developed countries, in particular, the EU member states. ▪ Developments in the world financial markets – including the effect of growing indebtedness of some euro area countries and liquidity problems faced by some European banks. ▪ The response of governments and central banks of developed countries, i.e. the scale of possible return to fiscal and monetary stimulation. ▪ Developments of agricultural and energy prices in the world markets. 	Inflation ↑ GDP ↓	***
» GDP and its components				
» Labour market				
» Exchange rate				
» Inflation				
UNCERTAINTY	<p>Scale of impact: *** significant ** moderate * slight</p>			

CHANGES IN THE SCENARIO	Risk area	Description	Impact	Scale of impact
» Changes in the projection				
» External environment				
» Polish economy in 2011 Q3				
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. ▪ Better perception of Poland abroad and higher inflows of capital. 	Inflation ↑ GDP ↑	**
» Labour market	Fiscal policy	<ul style="list-style-type: none"> ▪ An effective degree of consolidation of public finances. ▪ Scale of utilization of the EU funds by the public finance system. 	Inflation ↔ GDP ↓	**
» Exchange rate	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 ↔	**
» Inflation				
UNCERTAINTY		Summary	Inflation ↑ GDP ↓	** *

Inflation projection – November 2011

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

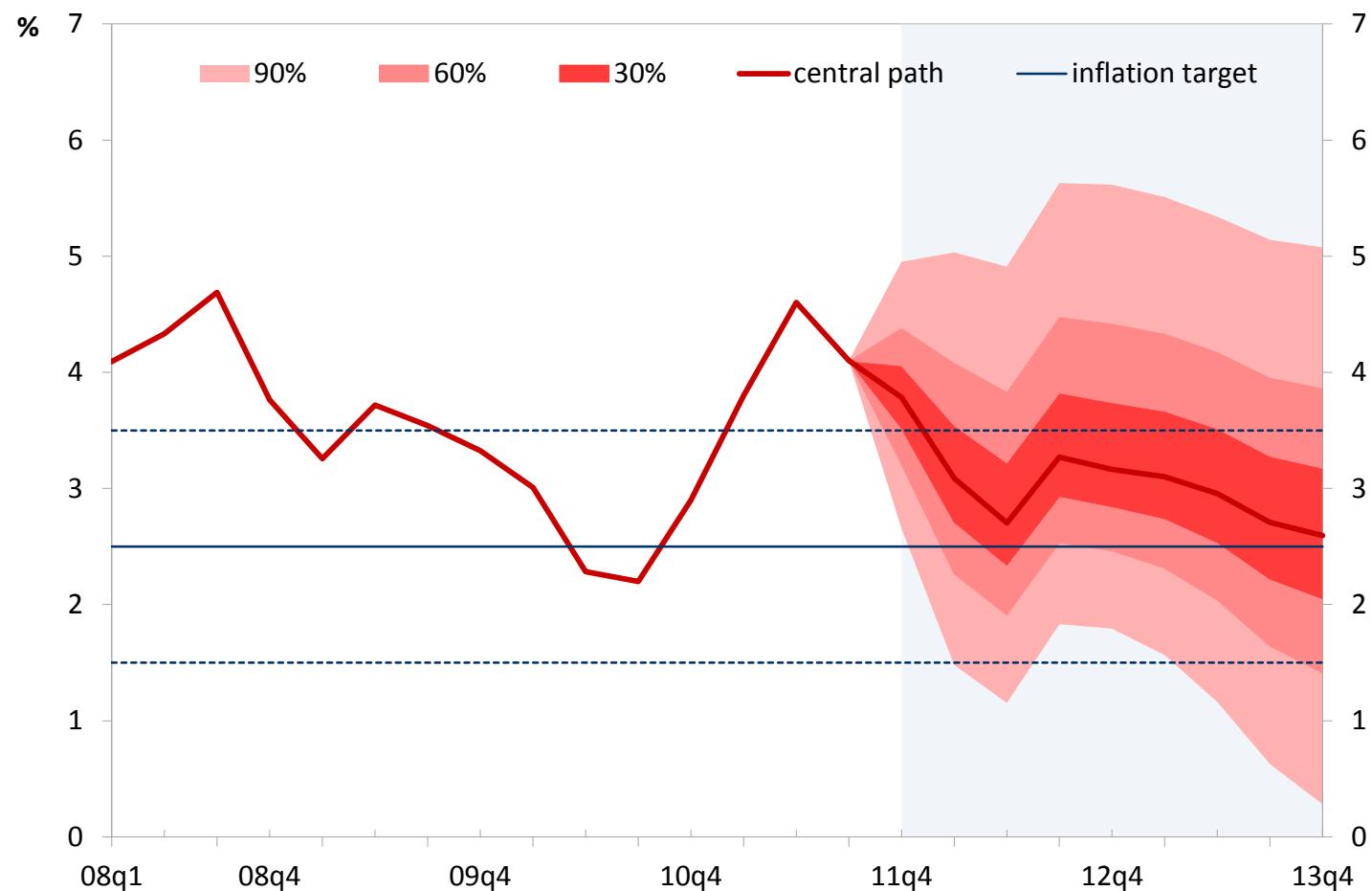
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



Probability distribution for inflation

CHANGES IN THE SCENARIO	
» Changes in the projection	
» External environment	
» Polish economy in 2011 Q3	
PROJECTION	
» GDP and its components	
» Labour market	
» Exchange rate	
» Inflation	
UNCERTAINTY	

	(%)	below 1,5%	below 2,5%	below 3,5%	below the central path	in the range (1,5%; 3,5%)
11q4	0,00	0,03	0,33	0,49	0,33	
12q1	0,05	0,25	0,60	0,45	0,55	
12q2	0,08	0,34	0,68	0,41	0,59	
12q3	0,02	0,14	0,46	0,38	0,44	
12q4	0,02	0,15	0,47	0,36	0,46	
13q1	0,03	0,20	0,52	0,39	0,49	
13q2	0,08	0,29	0,60	0,43	0,52	
13q3	0,16	0,40	0,68	0,46	0,52	
13q4	0,21	0,46	0,72	0,48	0,51	

GDP projection – November 2011

CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

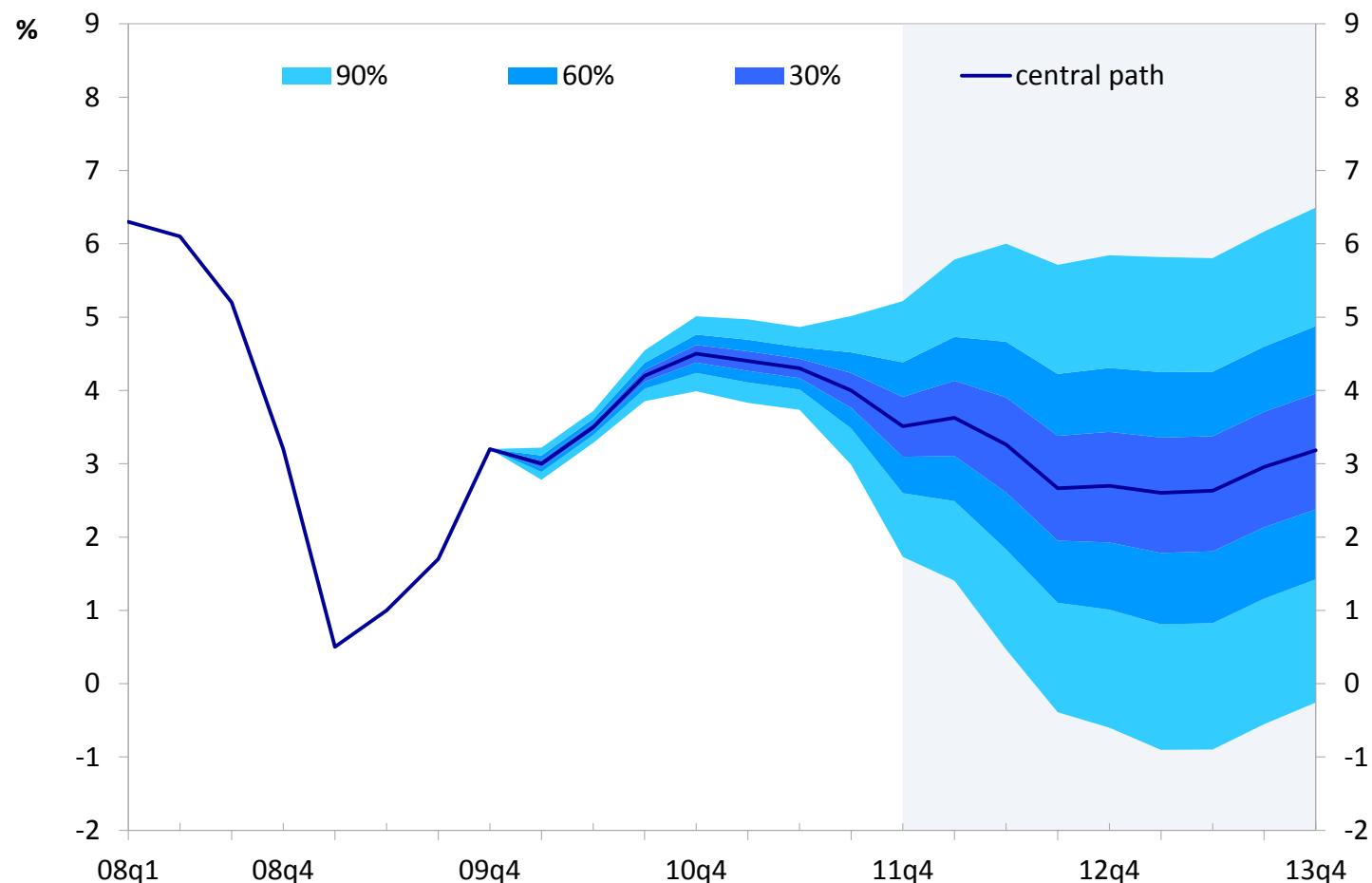
» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY



CHANGES IN THE SCENARIO

» Changes in the projection

» External environment

» Polish economy in 2011 Q3

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

UNCERTAINTY

Data after cut-off date (28 September)

- Lowered expectations on GDP growth in euro area in 2012
- Lower energy commodities' prices forecast (based on future contracts) for 2012-2013
- **The above information increases probability of inflation and GDP running below central path of projection.**