

Warsaw, 29 October 2010

NBP

National Bank of Poland

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

Economic Institute



CHANGES IN
THE SCENARIO

» Review of changes

» Exogenous
assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

OCTOBER PROJECTION COMPARED TO JUNE PROJECTION

- Changes in the projection
- Change of exogenous assumptions
- Starting point

October projection compared to June projection: CPI inflation

CHANGES IN THE SCENARIO

» Review of changes

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PROJECTION

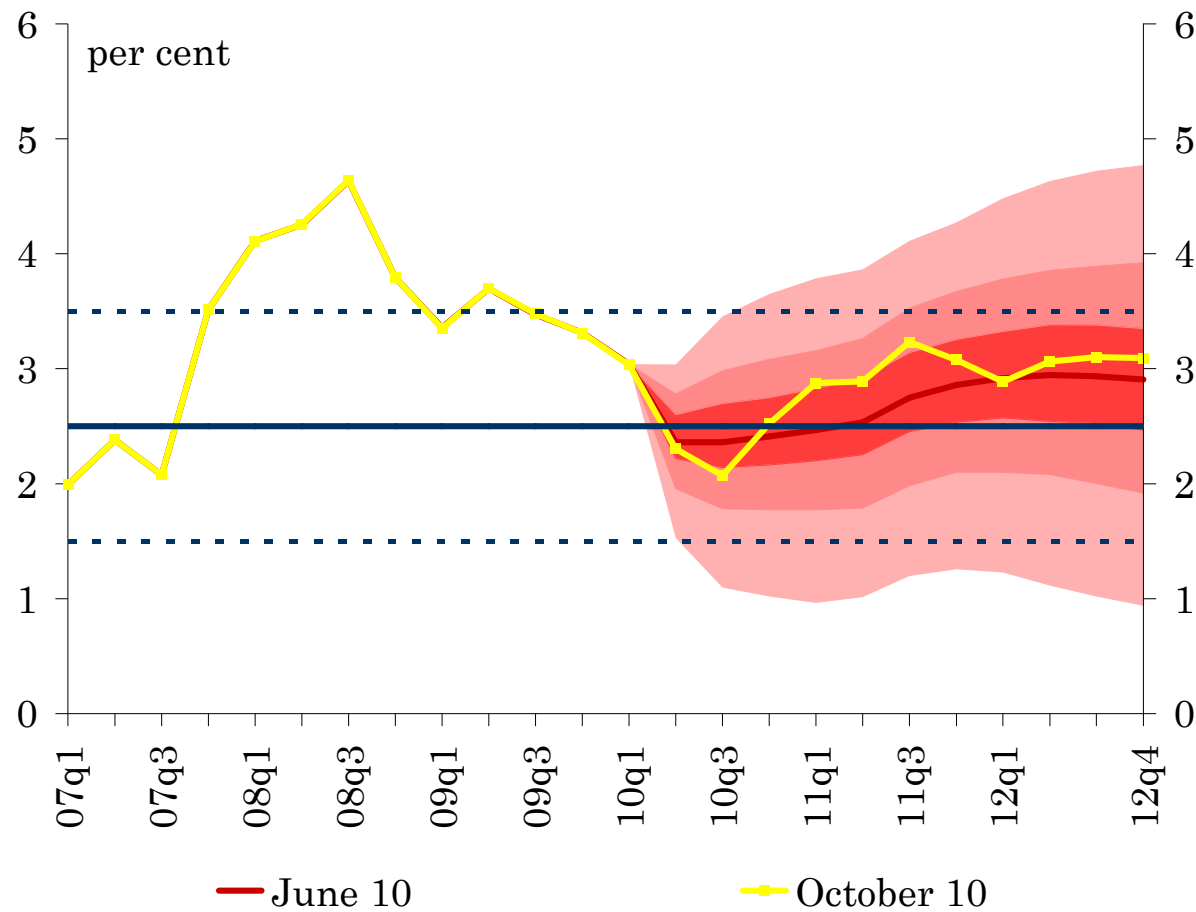
» GDP and its components

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» Exchange rate

» Inflation

RISK FACTORS



October projection compared to June projection: GDP

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

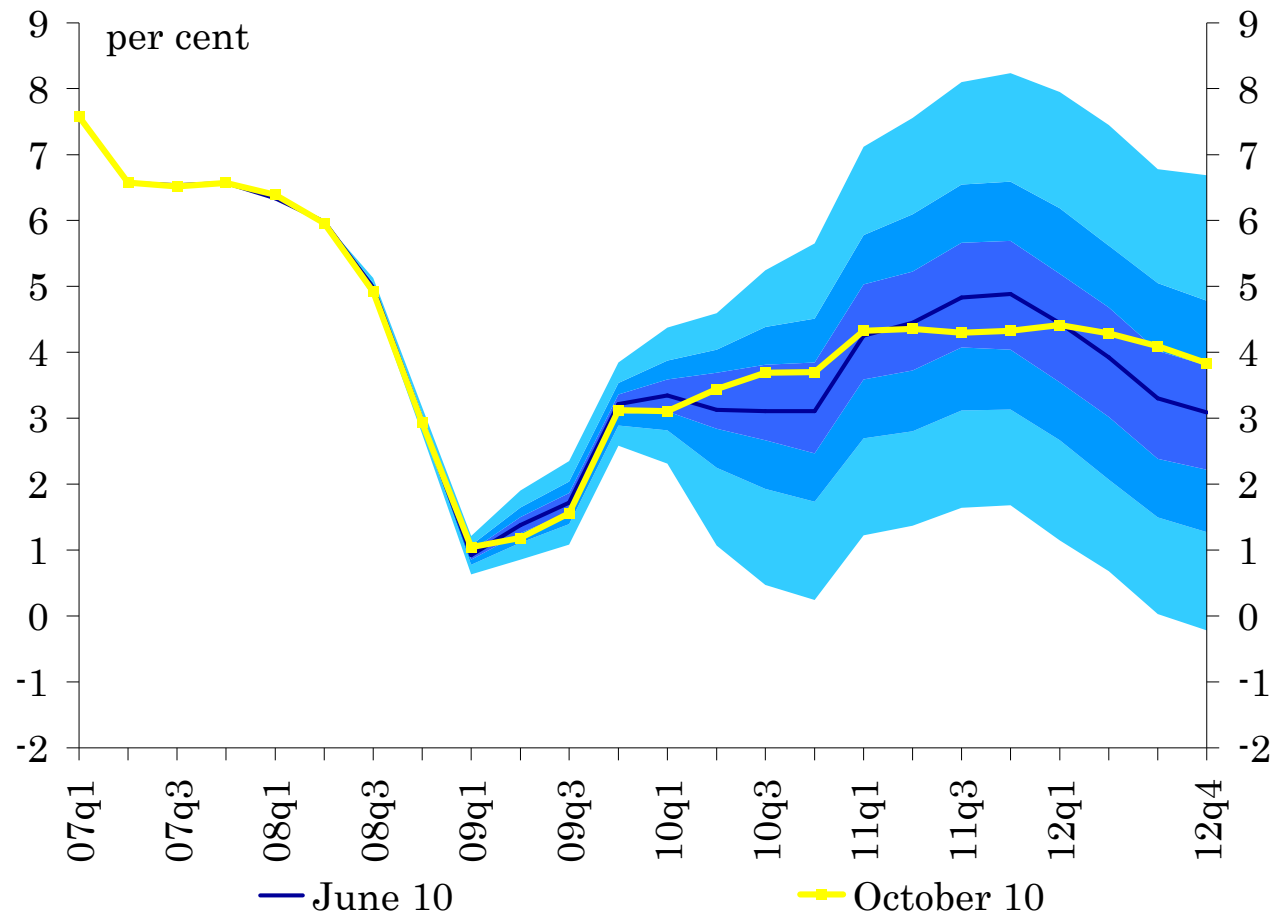
» GDP and its components

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» Inflation

RISK FACTORS



Decomposition of deviations between June and October projections

CHANGES IN THE SCENARIO

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» Starting point

PROJECTION

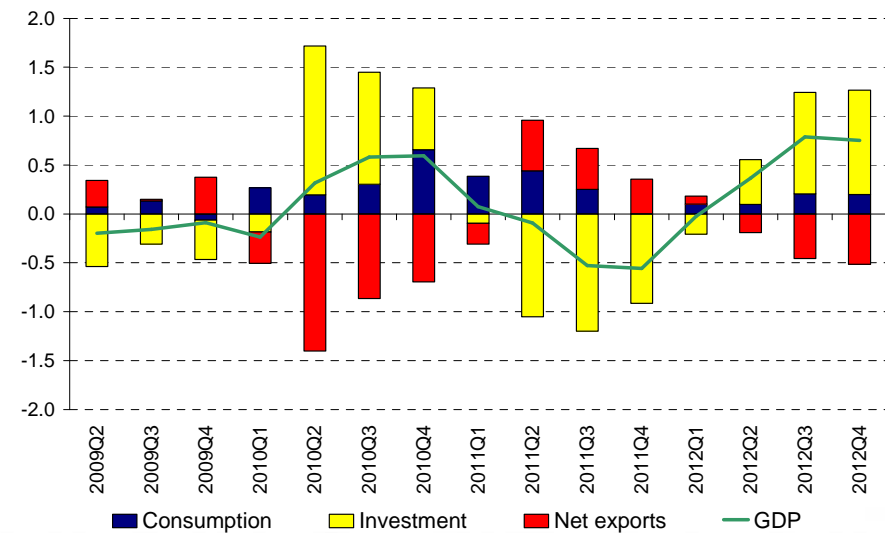
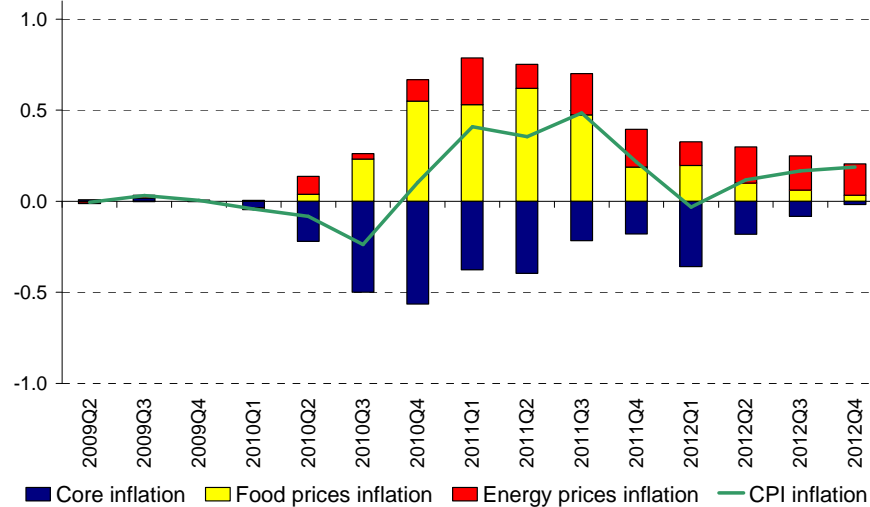
» GDP and its components

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RISK FACTORS



Changes in the projection scenario

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RISK FACTORS

- Change of exogenous assumptions**
 - Higher index of agricultural commodity prices in the world markets
 - Change in tax rates (VAT increase)
 - Delayed inflow of EU funds (in relation to June projection)

- Starting point**
 - CPI: 0.3 pp below June projection
 - Significantly lower core inflation
 - Slightly higher food price inflation and similar growth rate of energy prices
 - GDP: 0.7 pp above June projection
 - Higher domestic demand
 - Lower contribution of net exports

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

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Change of exogenous assumptions

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

Economic growth abroad (higher starting point)

CHANGES IN THE SCENARIO

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» Starting point

PROJECTION

» GDP and its components

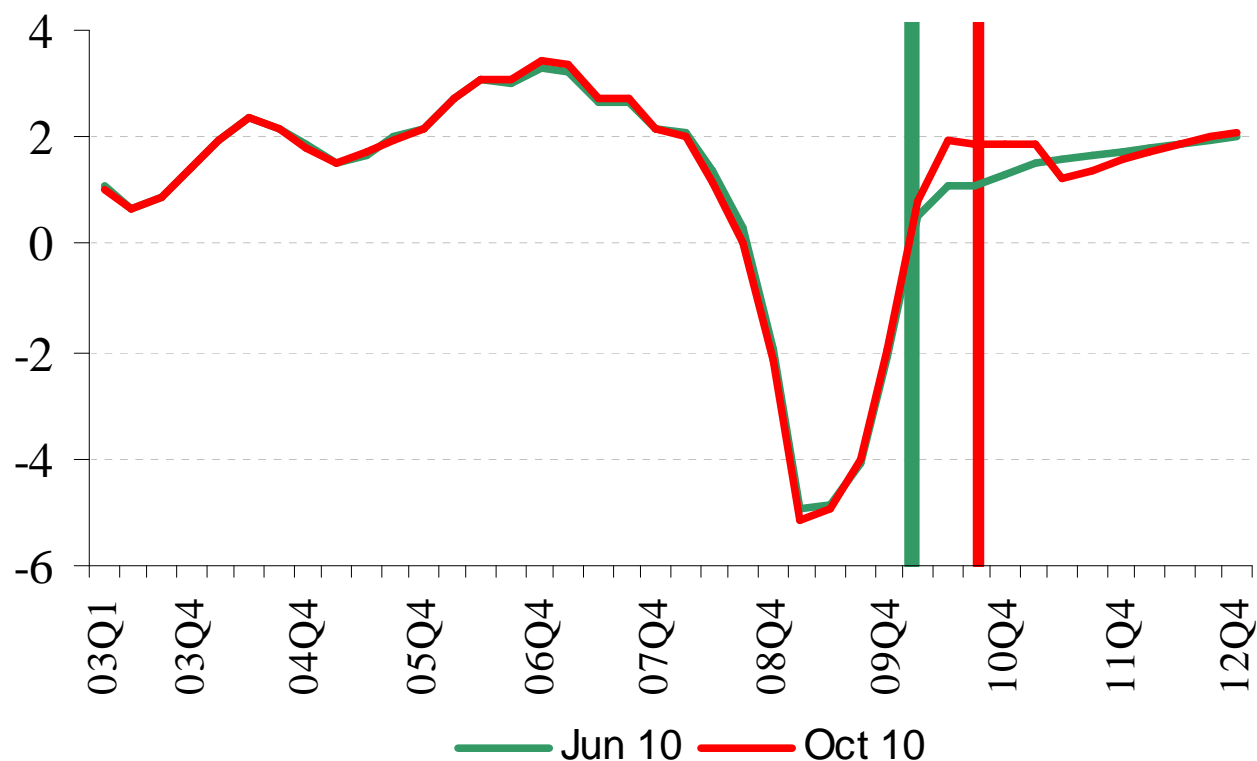
» Labour market

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RISK FACTORS

External GDP (y-o-y) (%)



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

- Euro area (87.8%)
- United Kingdom (7.2%)
- United States (5.0%)

Price growth abroad (lower)

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PROJECTION

» GDP and its components

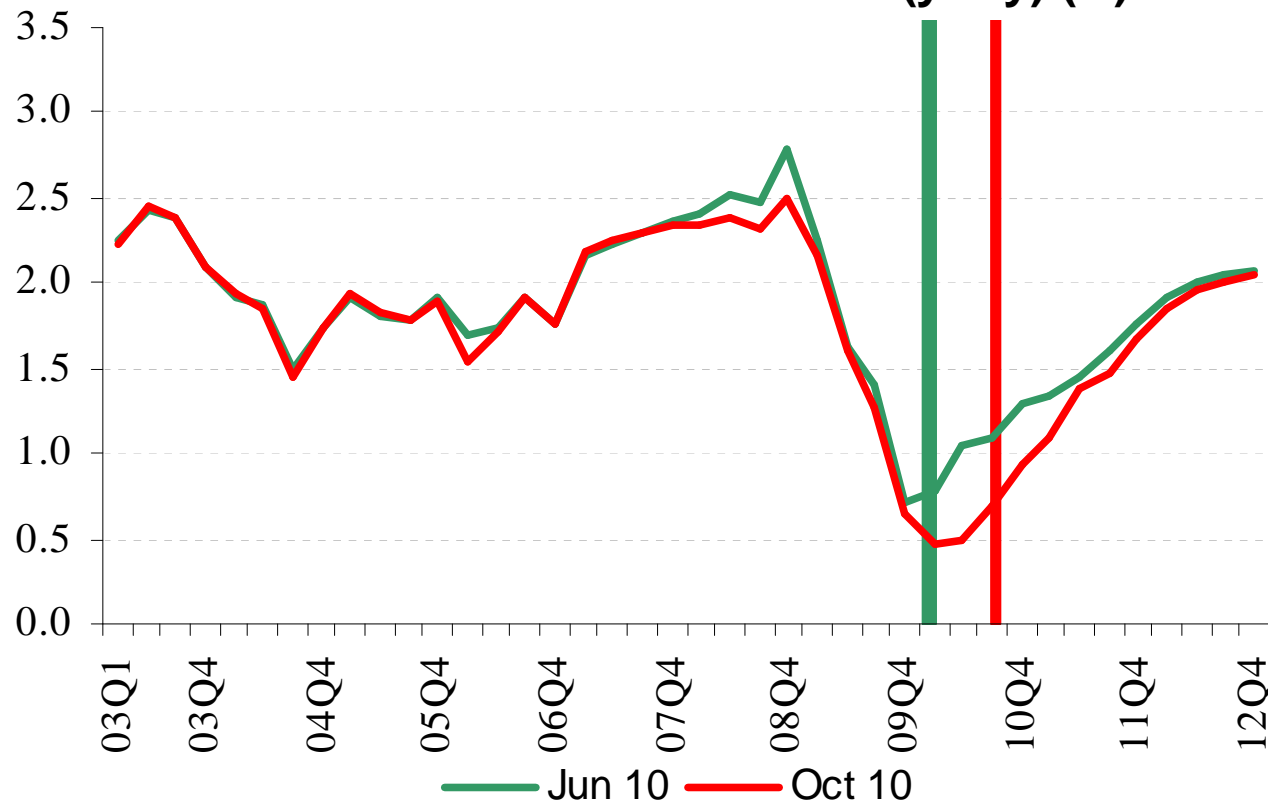
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

External value added deflator (y-o-y) (%)



Interest rates abroad (lower)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

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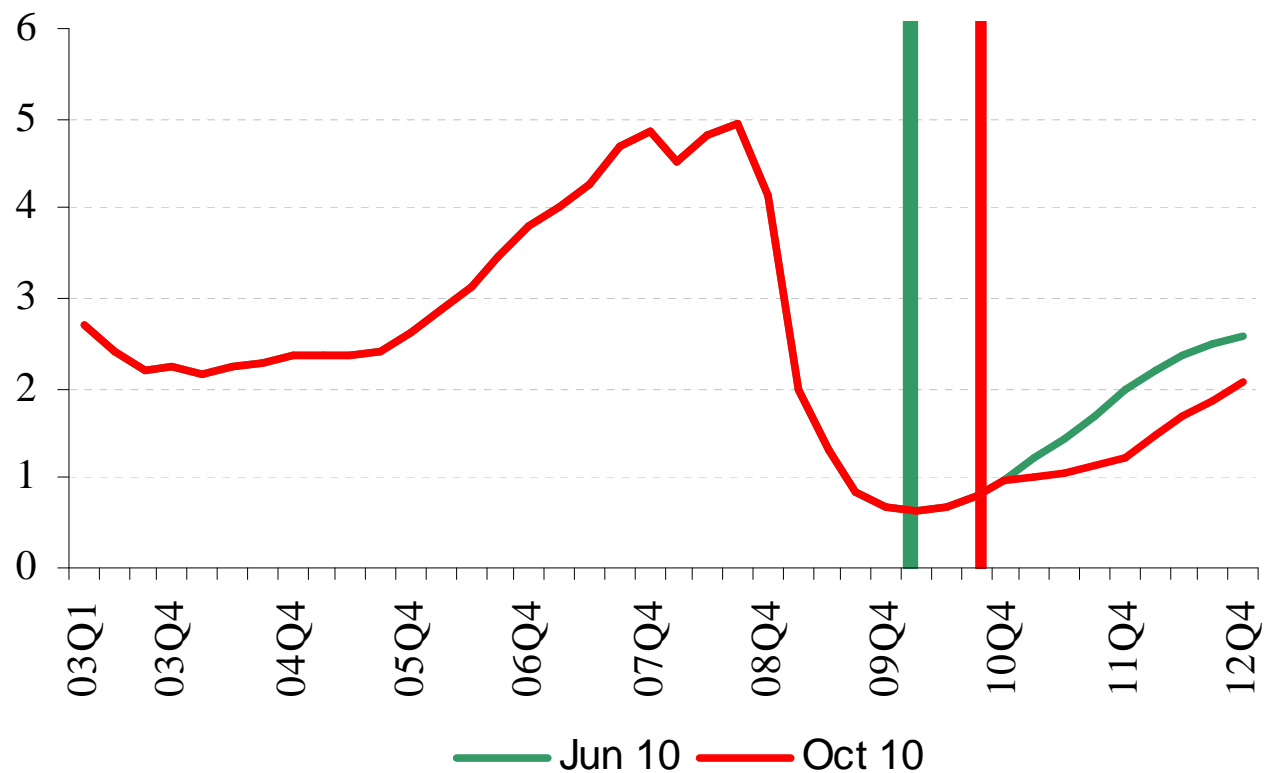
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

External interest rates



Energy commodity price index* (slightly lower)

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» Starting point

PROJECTION

» GDP and its components

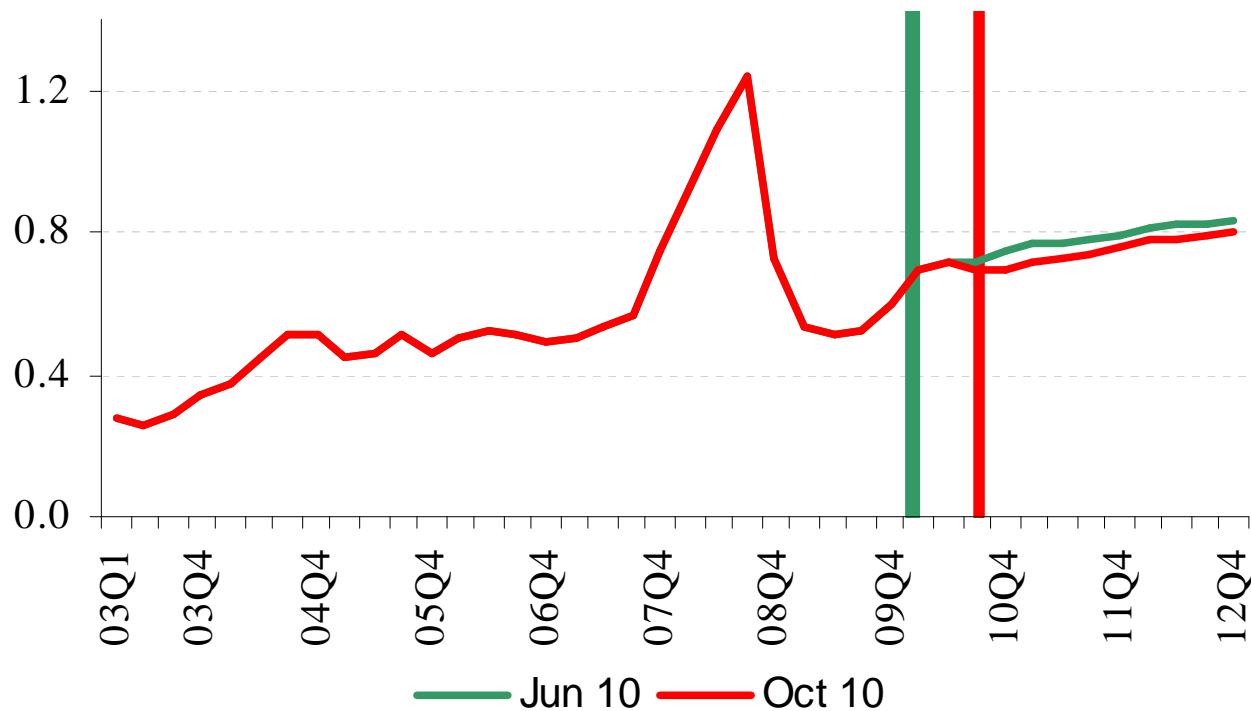
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» Inflation

RISK FACTORS

Energy commodity price index



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



Agricultural commodity price index*

(higher)

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» Exogenous
» assumptions

» Starting point

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» GDP and its
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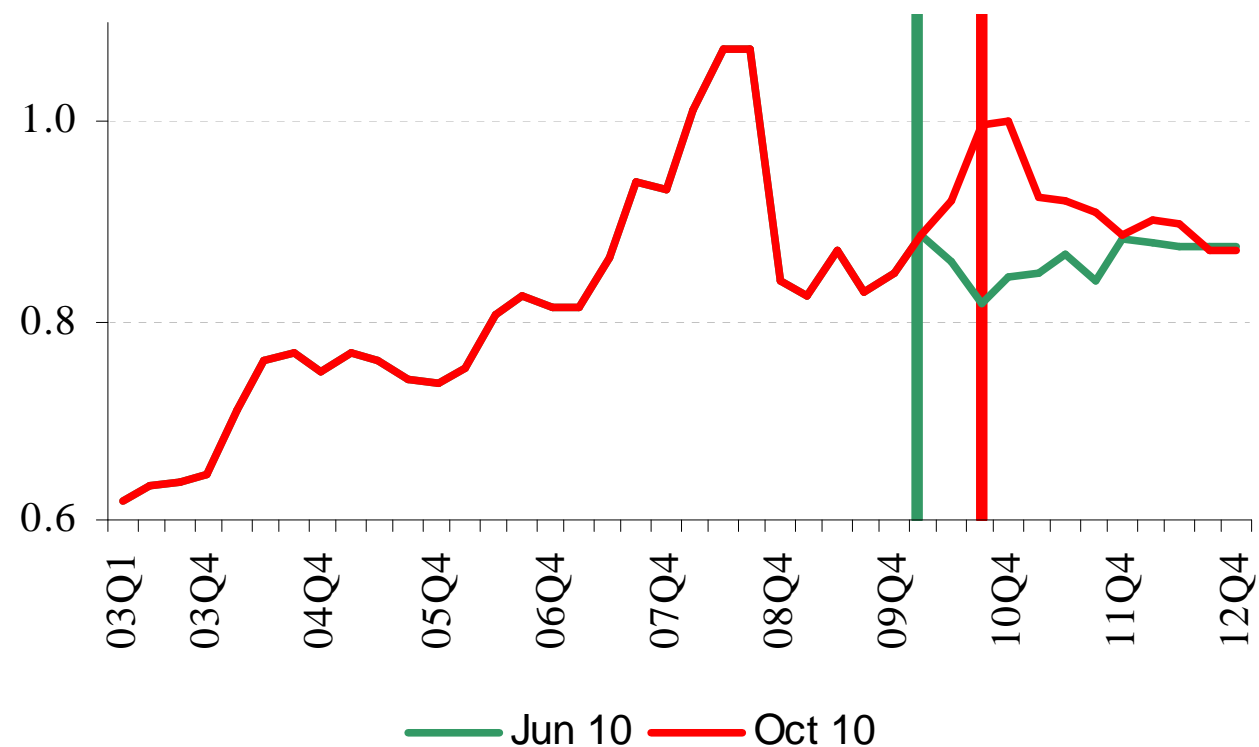
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» Inflation

RISK FACTORS

Global prices of agricultural commodities



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

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

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» Review of changes

» Exogenous assumptions

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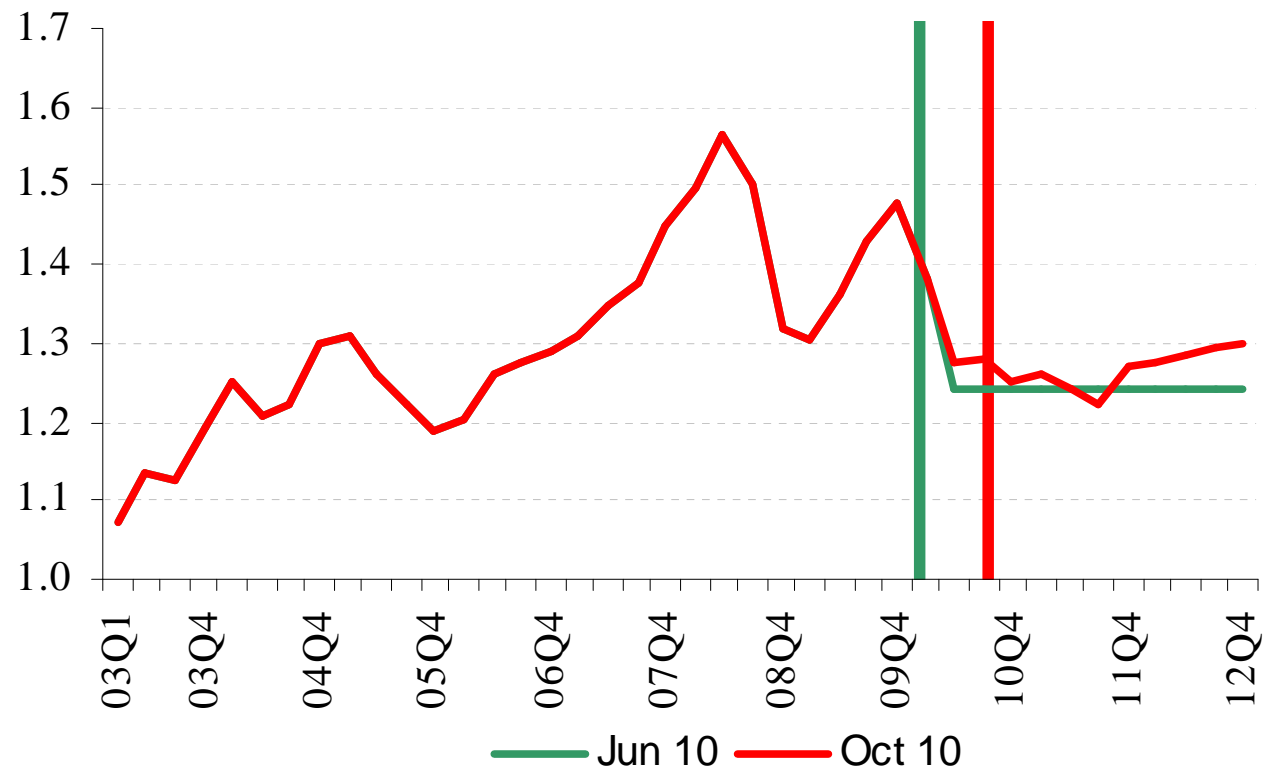
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

USD/EUR exchange rate



Transfers from the EU (delayed inflow)

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» Review of changes

» Exogenous assumptions

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PROJECTION

» GDP and its components

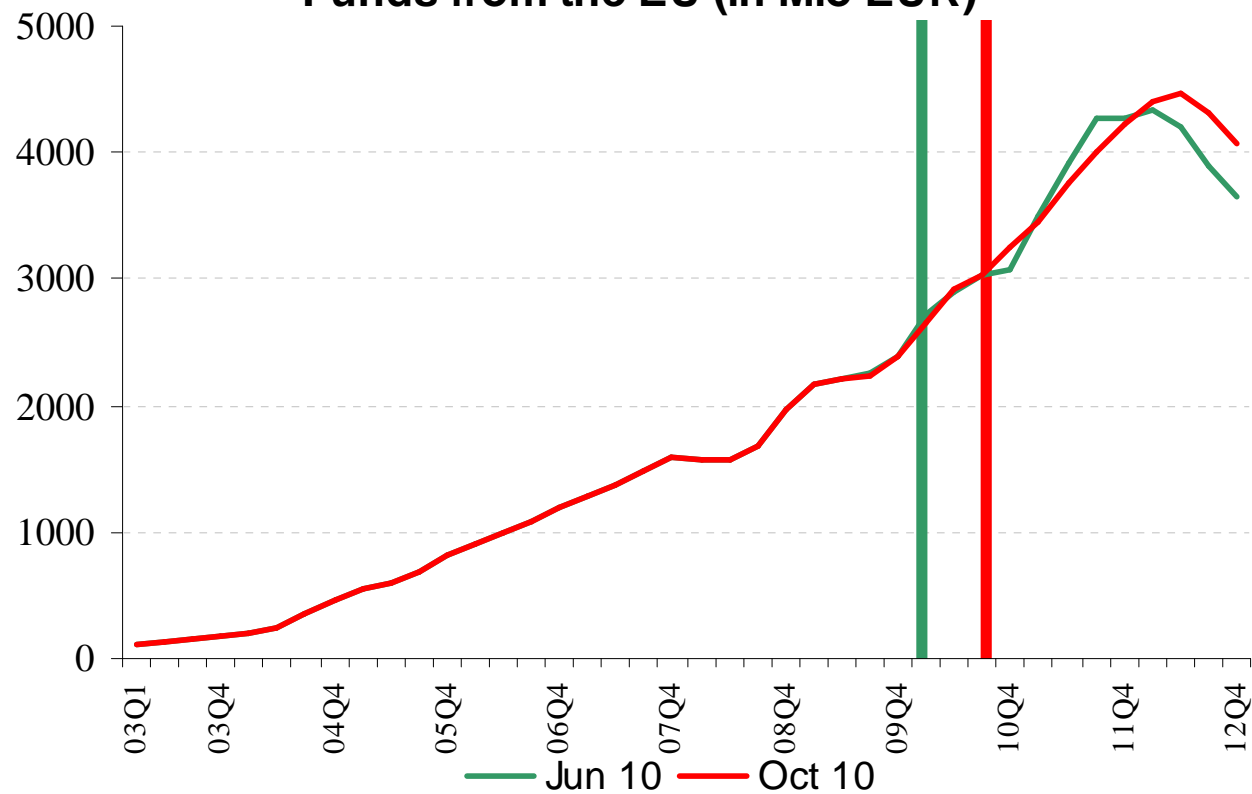
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» Exchange rate

» Inflation

RISK FACTORS

Funds from the EU (in Mio EUR)



CHANGES IN
THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Starting point

- GDP and its components
- Labour market
- Inflation

GDP and its components – starting point

CHANGES IN
THE SCENARIO

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» assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

	2010 Q2	2010 Q3 (Economic Institute estimate)
GDP (per cent y/y)	3.5 (3.1)	3.8 (3.1)
Domestic demand (per cent y/y)	3.9 (2.3)	4.2 (2.4)
Individual consumption (per cent y/y)	3.0 (2.6)	2.9 (2.6)
Collective consumption (per cent y/y)	2.2 (3.0)	2.3 (2.3)
Gross fixed capital formation (per cent y/y)	-1.7 (-1.2)	2.1 (-0.3)
Exports (per cent y/y)	17.0 (12.0)	11.9 (9.9)
Imports (per cent y/y)	18.2 (9.5)	12.8 (7.9)
Contribution of net exports(pp)	-0.3 (0.8)	-0.4 (0.7)

* Values from June 2010 projection are given in brackets (seasonally adjusted data)

Indicators with values higher than in June projection are marked in green, whereas indicators with lower values are marked in red.

Labour market – starting point

CHANGES IN
THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

	2010 Q2	2010 Q3
ULC (per cent y/y)	0.8 (-0.7)	0.9 (-1.1)
Labour productivity (per cent y/y)	2.5 (4.4)	2.6 (4.6)
Gross wages (per cent y/y)	3.8 (3.9)	4.0 (3.4)
Total employment according to LFS (per cent y/y)	0.9 (-1.3)	1.2 (-1.5)
Unemployment according to LFS (per cent)	9.4 (10.1)	9.7 (10.5)
Participation rate (per cent)	55.7 (55.3)	55.9 (55.4)

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Indicators with values higher than in June projection are marked in green, whereas indicators with lower values are marked in red.

Inflation – starting point

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THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

	2010 Q2	2010 Q3
CPI inflation (per cent y/y)	2.3 (2.4)	2.1 (2.4)
Core inflation (per cent y/y)	1.7 (2.1)	1.2 (2.0)
Food prices inflation (per cent y/y)	1.2 (1.0)	2.5 (1.5)
Energy prices inflation (per cent y/y)	6.4 (5.7)	4.8 (5.0)

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CHANGES IN
THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

October projection for 2010-2012

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

Gross fixed capital formation (alternately)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

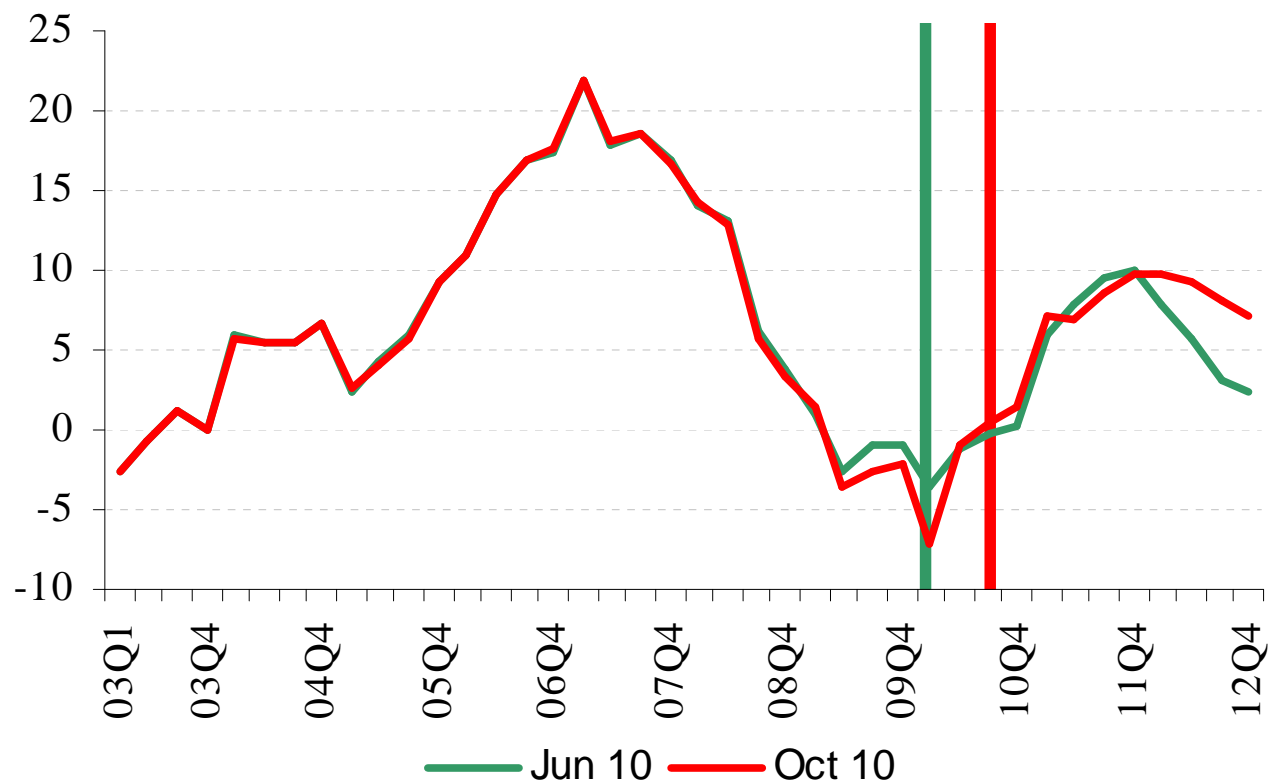
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Gross fixed capital formation (y-o-y) (%)



Gross fixed capital formation: decomposition

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

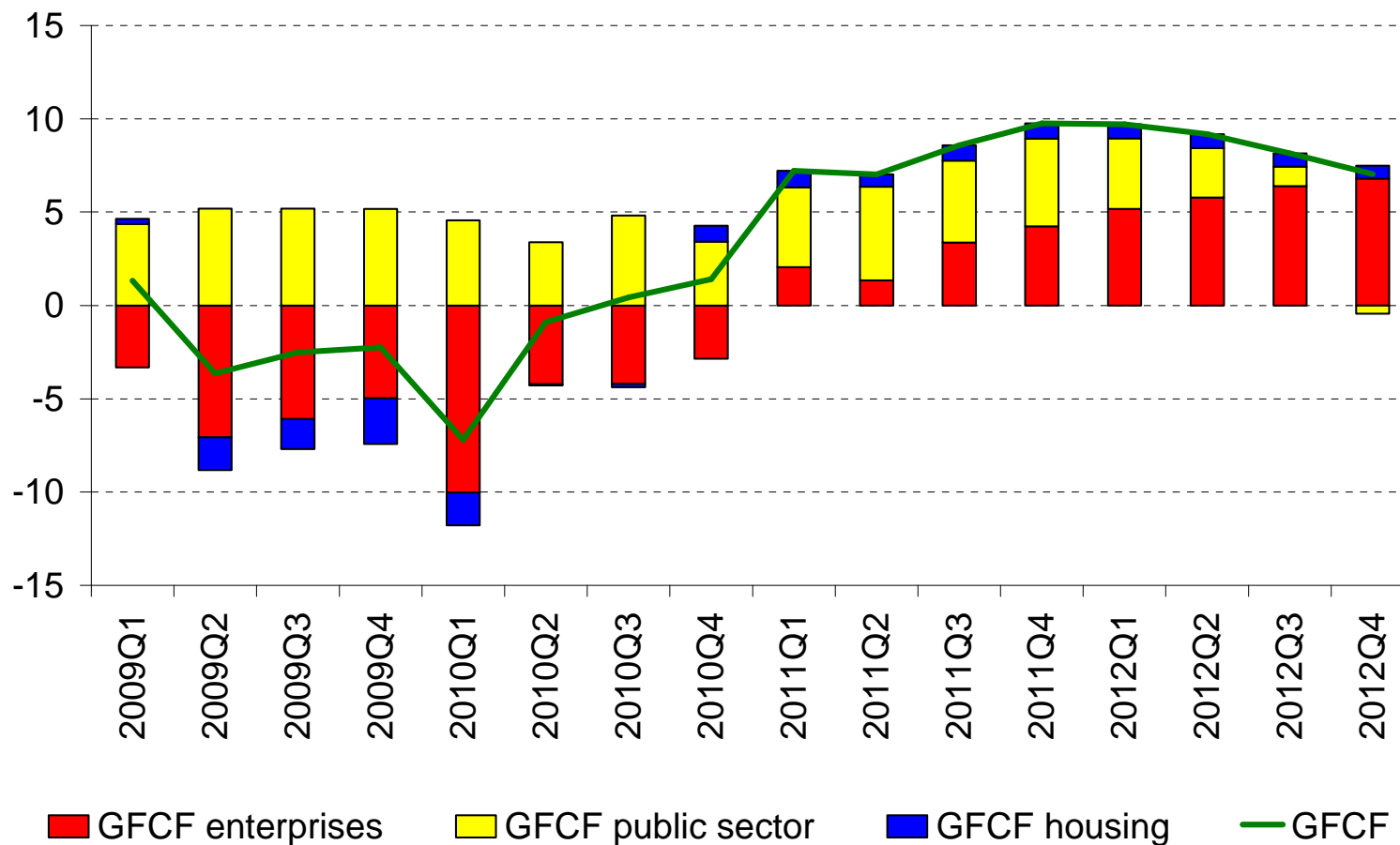
» GDP and its components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS



Individual consumption (higher)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

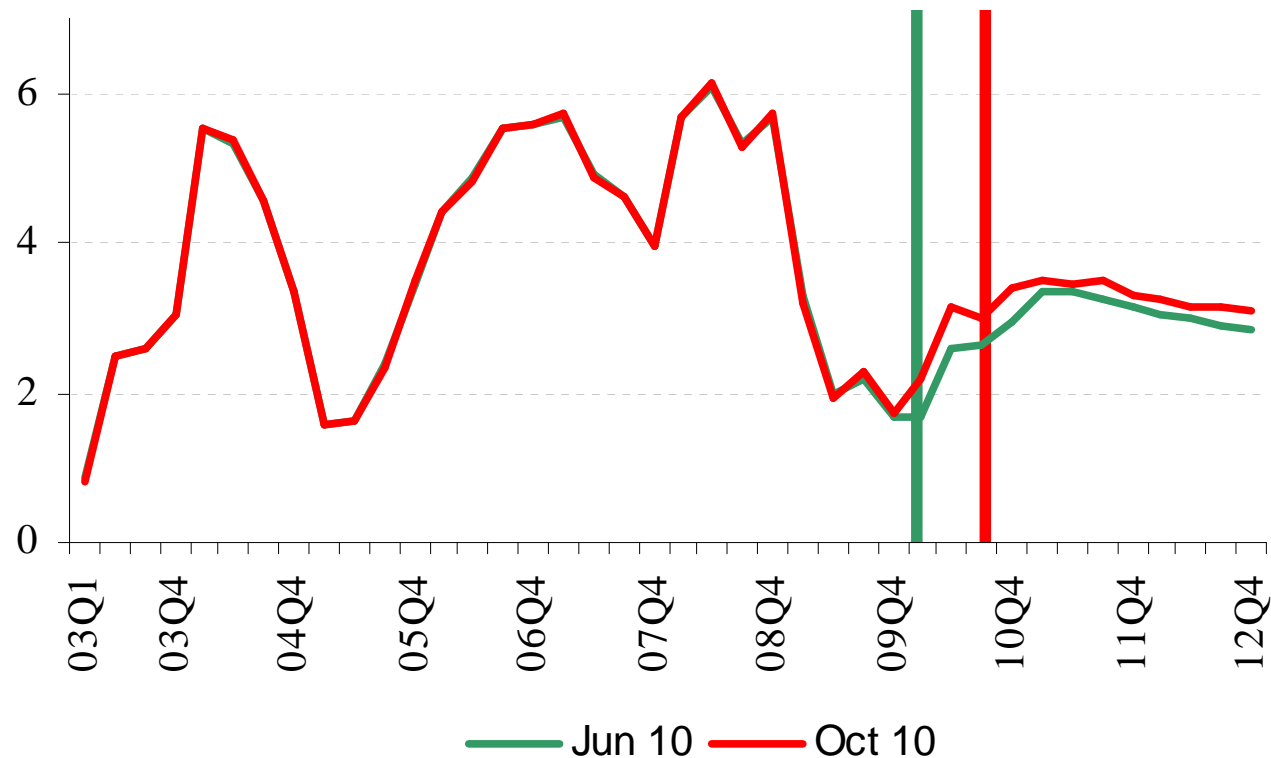
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Individual consumption (y-o-y) (%)



Contribution of net exports (alternately)

CHANGES IN
THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
» components

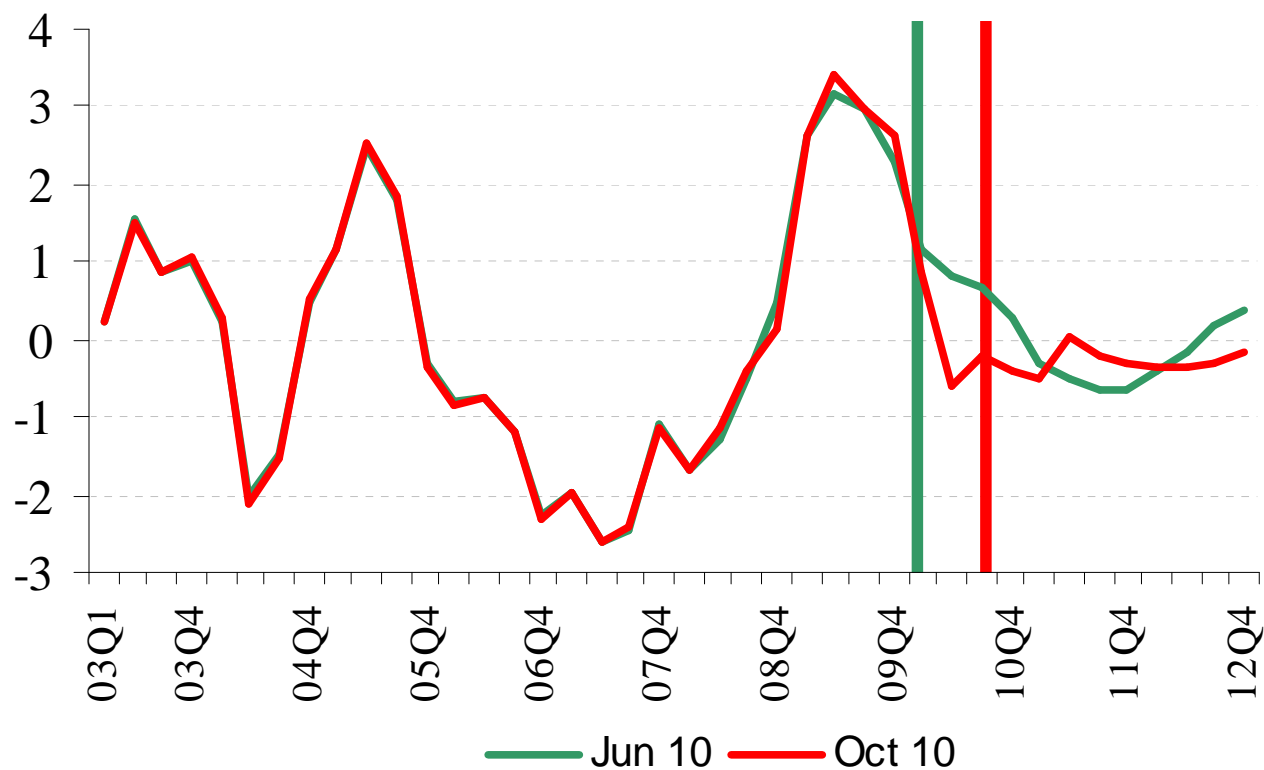
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Contribution of net exports (p.p.)



GDP (alternately)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

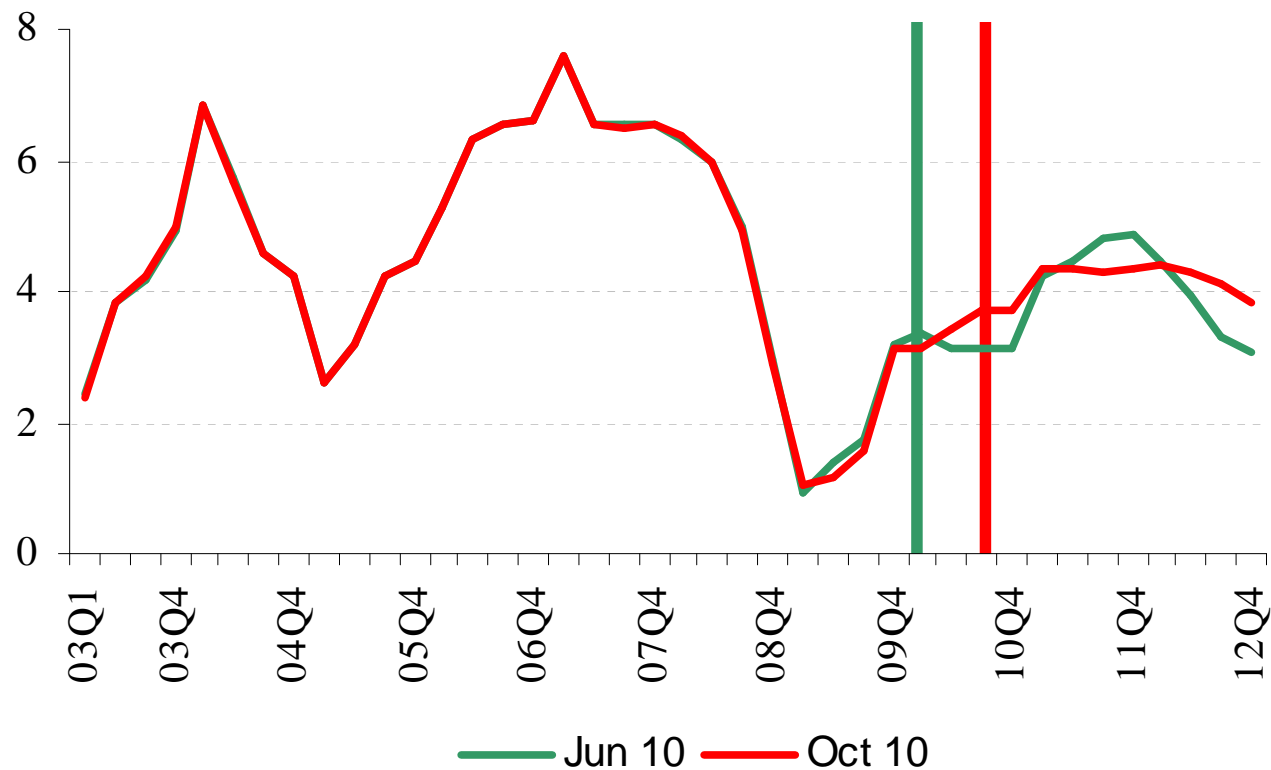
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

GDP (y-o-y) (%)



Labour market (definite improvement)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

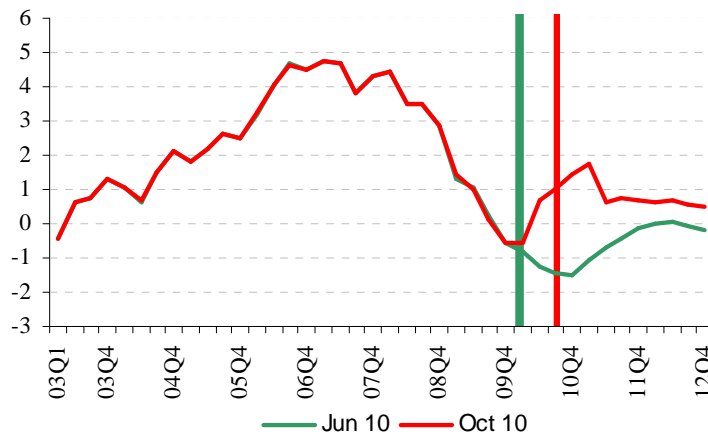
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» Exchange rate

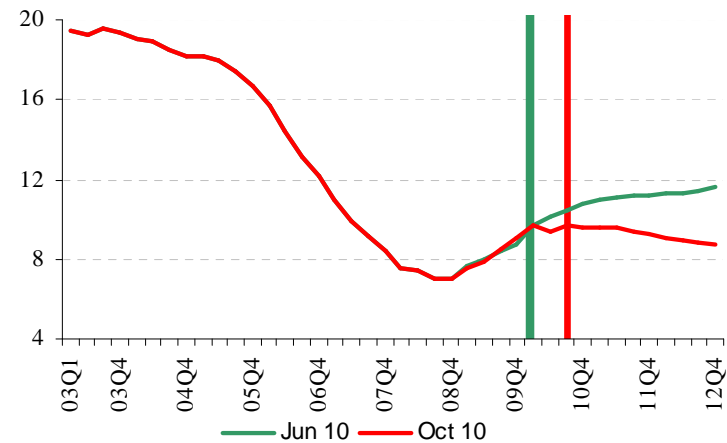
» Inflation

RISK FACTORS

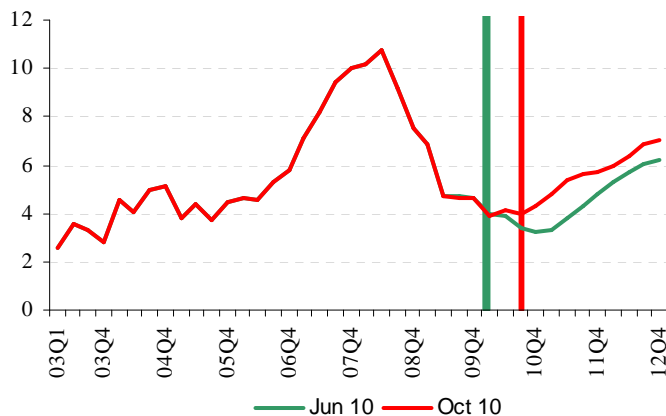
Employment (y-o-y) (%)



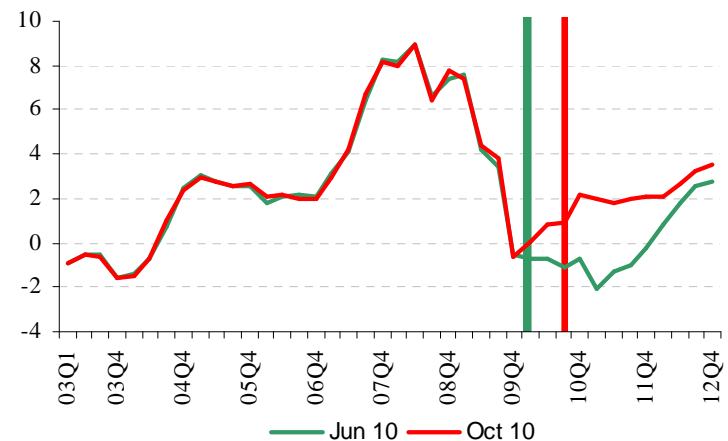
Unemployment (p.p.)



Gross wages (y-o-y) (%)



ULC (y-o-y) (%)



Exchange rate (similar)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

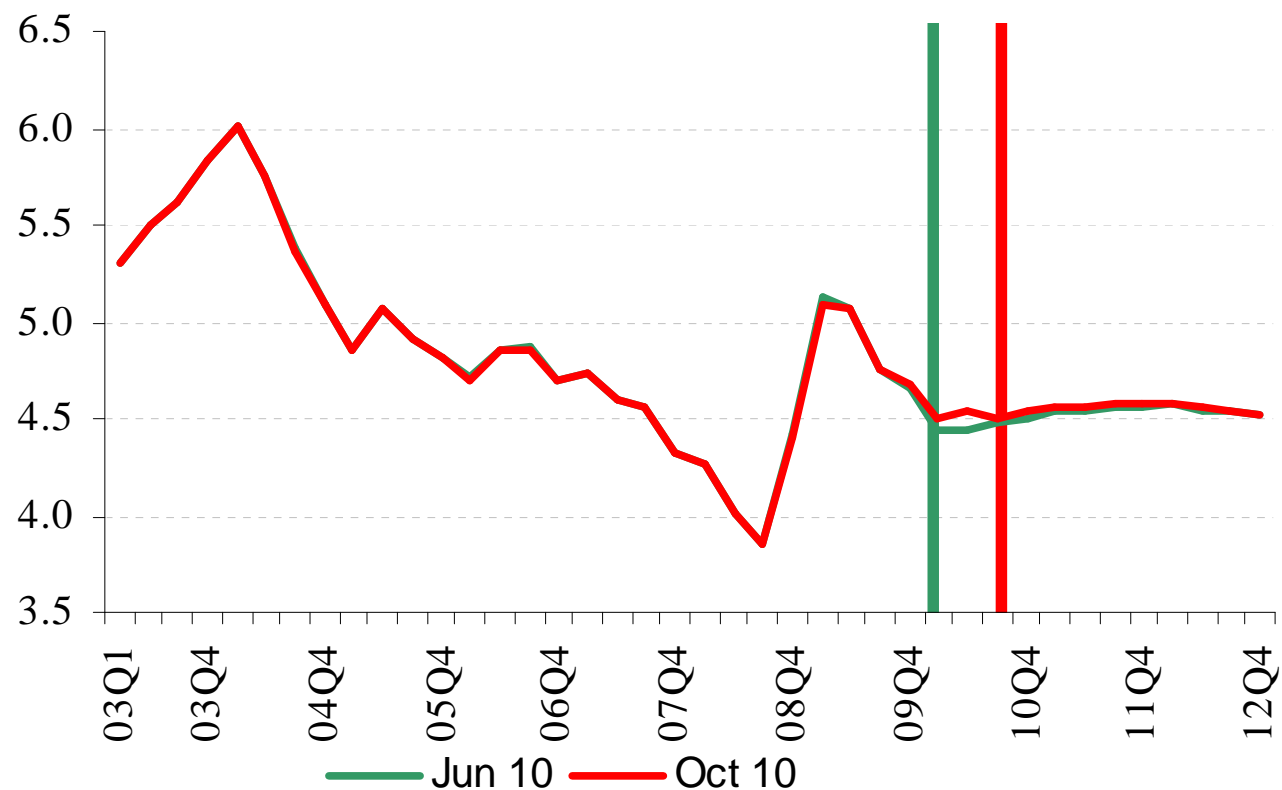
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Real effective exchange rate (REER)



Core inflation*

(lower)

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

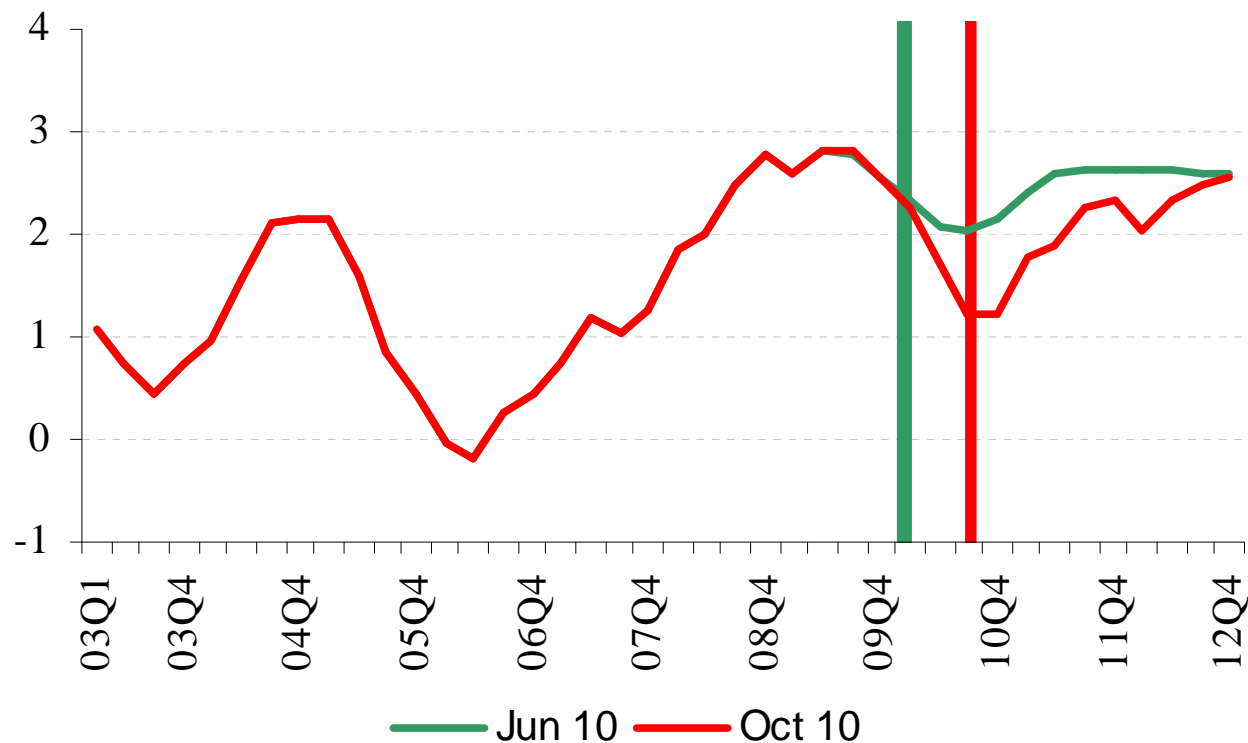
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Core inflation (%)



* Core inflation does not include prices of food and non-alcoholic beverages or energy prices

Cost determinants of core inflation

CHANGES IN THE SCENARIO

» Review of changes

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PROJECTION

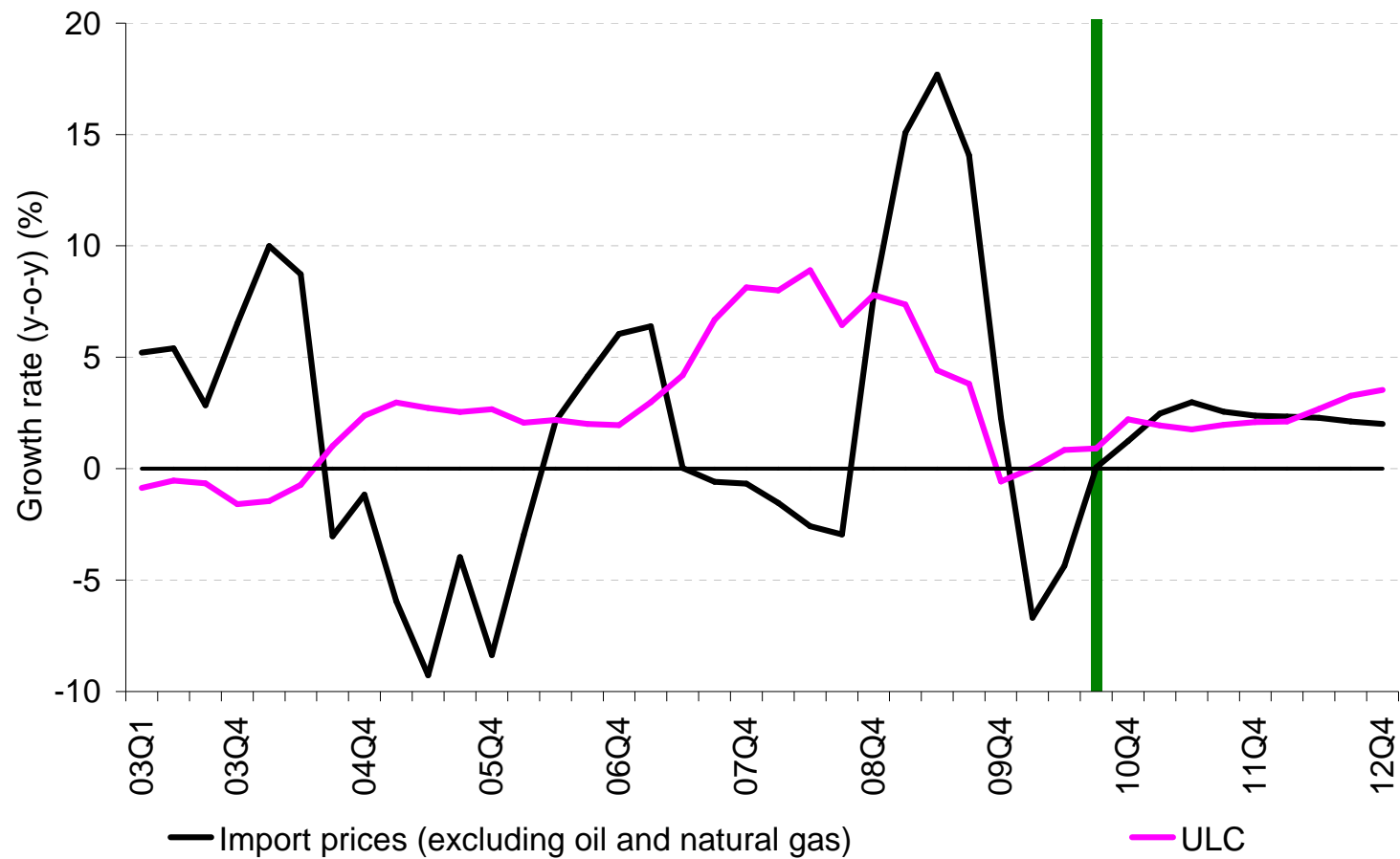
» GDP and its components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS



Food and energy prices inflation (higher)

CHANGES IN THE SCENARIO

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» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

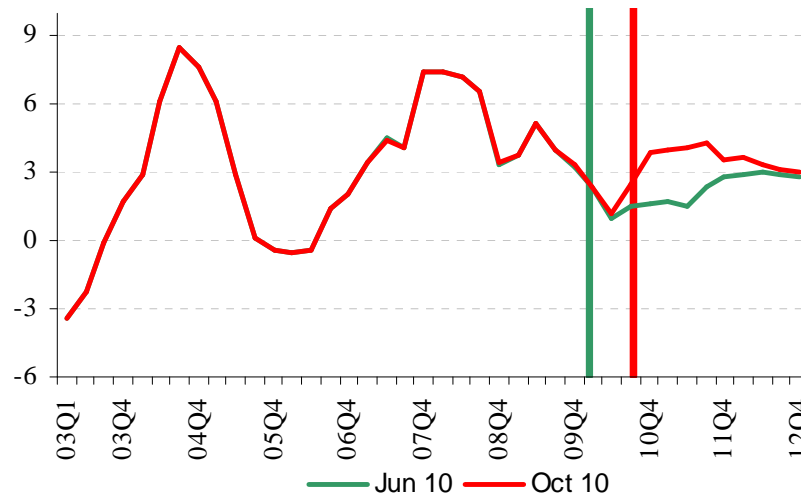
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» Exchange rate

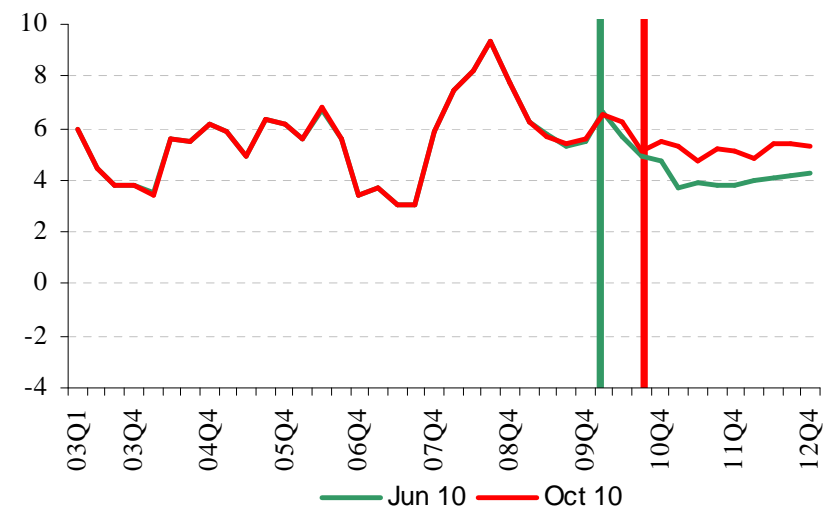
» Inflation

RISK FACTORS

Food prices inflation (%)



Energy prices inflation (%)



CPI inflation (higher)

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» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

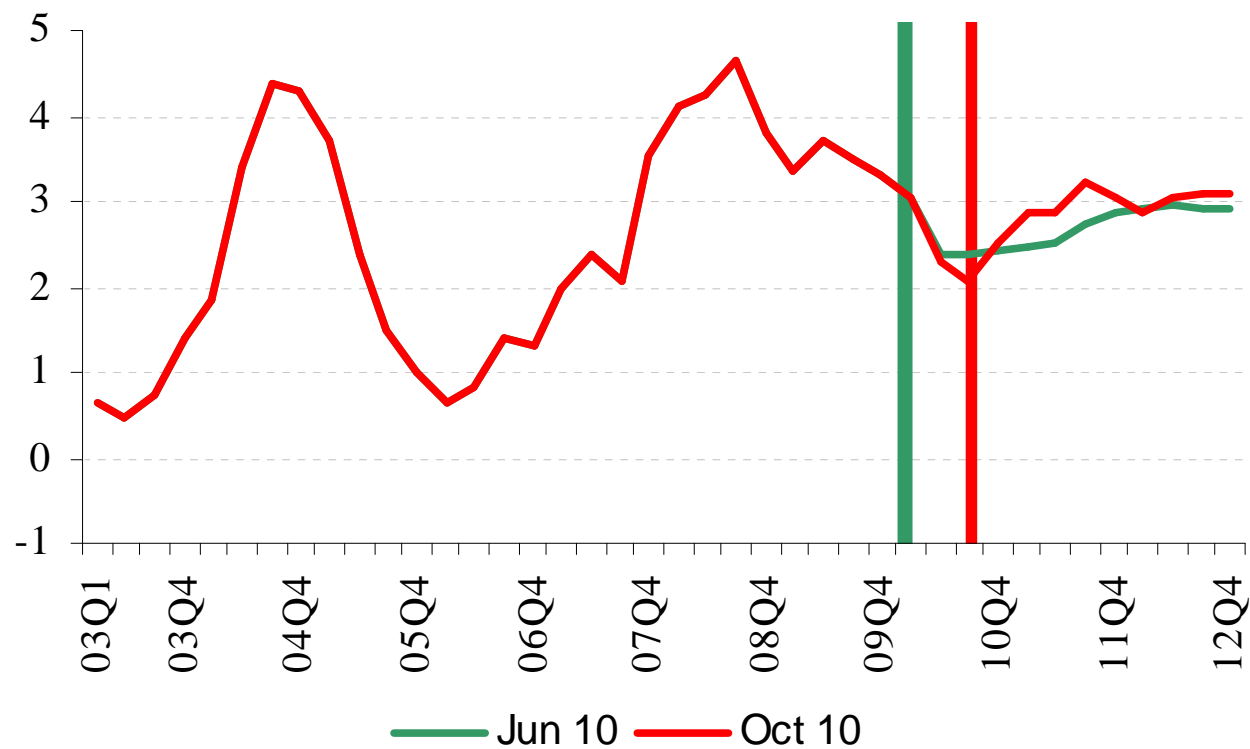
» Labour market

» Exchange rate

» Inflation

RISK FACTORS

CPI inflation (%)



Inflation projection – October 2010

CHANGES IN THE SCENARIO

» Review of changes

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» Starting point

PROJECTION

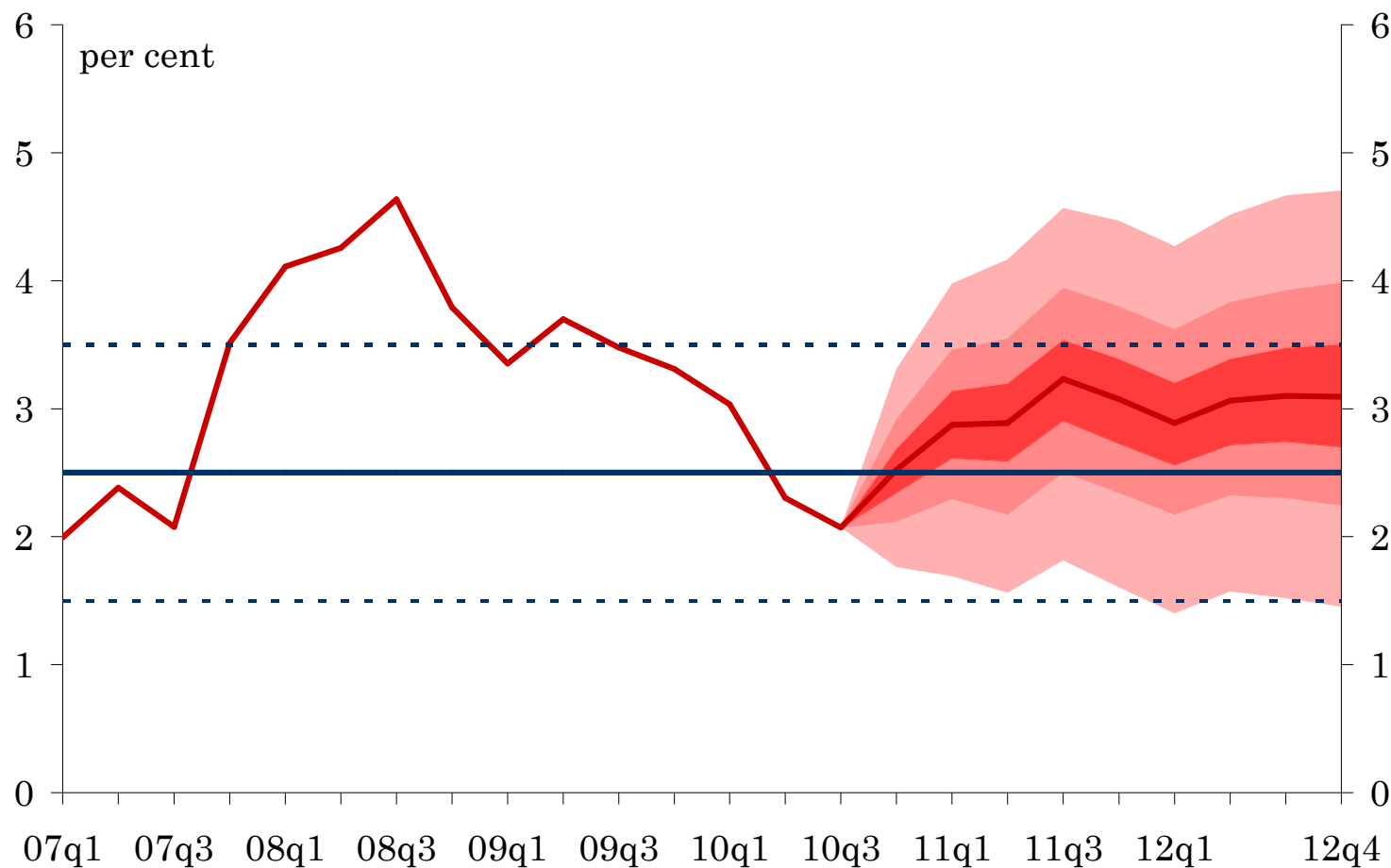
» GDP and its components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS



Probability distribution for inflation

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous
» assumptions

» Starting point

PROJECTION

» GDP and its
» components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Probability of inflation running					
	below 1.5%	below 2.5%	below 3.5%	below the central path	in the range (1.5%; 3.5%)
2010 Q4	0.02	0.48	0.98	0.50	0.97
2011 Q1	0.03	0.30	0.81	0.49	0.79
2011 Q2	0.04	0.31	0.78	0.49	0.74
2011 Q3	0.02	0.20	0.63	0.50	0.61
2011 Q4	0.04	0.25	0.69	0.50	0.66
2012 Q1	0.06	0.32	0.76	0.51	0.70
2012 Q2	0.04	0.26	0.68	0.51	0.64
2012 Q3	0.05	0.27	0.66	0.50	0.61
2012 Q4	0.06	0.28	0.65	0.50	0.59

GDP projection – October 2010

CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

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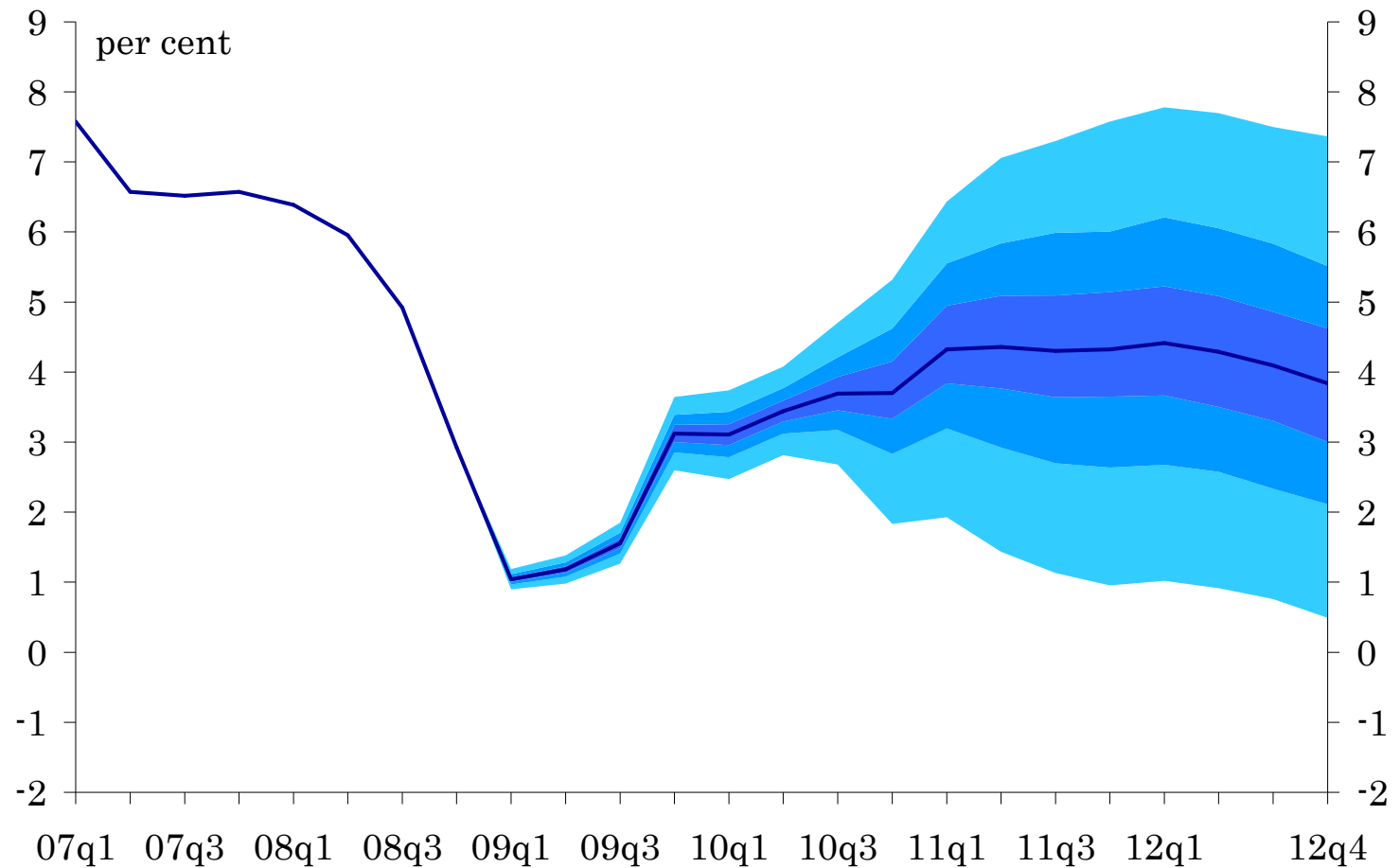
» GDP and its components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS



CHANGES IN THE SCENARIO

» Review of changes

» Exogenous assumptions

» Starting point

PROJECTION

» GDP and its components

» Labour market

» Exchange rate

» Inflation

RISK FACTORS

Risk factors

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

	Risk area	Description	Impact	Scale of impact
CHANGES IN THE SCENARIO				
» Review of changes	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. ▪ Possibility of accommodating monetary policy being pursued by the Fed and the ensuing increase in excess liquidity in world financial markets (QE 2.0 program). ▪ Developments in world financial markets – including the effect of growing indebtedness of some developed countries. ▪ Developments of agricultural and energy commodities prices in world markets. 	inflation ↔ GDP ↓	***
» Exogenous assumptions				
» Starting point				
PROJECTION				
» GDP and its components				
» Labour market				
» Exchange rate				
» Inflation				
RISK FACTORS	Recovery in domestic demand	<ul style="list-style-type: none"> ▪ Scale and nature of fiscal policy adjustments in 2012 ▪ Lower level of EU fund utilisation. ▪ Changes in credit policy of banks in response to economic recovery and in regulatory policy of Polish Financial Supervision Authority (KNF). ▪ Scale of the effect of economic slowdown on potential output growth. 	inflation ↓ GDP ↓	**

CHANGES IN THE SCENARIO	Risk area	Description	Impact	Scale of impact
» Review of changes	Food and energy prices in Poland	<ul style="list-style-type: none"> ▪ Uncertainty of the future path of the zloty exchange rate, connected, among others, with real and nominal economic developments around the world and in Poland, the accretion rate of general government sector debt and international financial flows. ▪ Unknown scale of regulatory measures in the energy market in Poland. ▪ Uncertainty as to the impact of EU regulations on prices in Poland (connected, among others, with natural environment protection, including carbon dioxide emission level). 	inflation ↔ GDP ↔	**
» Exogenous assumptions				
» Starting point				
PROJECTION				
» GDP and its components				
» Labour market				
» Exchange rate	Summary		inflation ↔ GDP ↓	
» Inflation				
RISK FACTORS				