NBP Narodowy Bank Polski

Economic Analysis Department

Inflation and economic growth projection of Narodowy Bank Polski based on the NECMOD model

Warsaw / 13 November 2017

Outline

Outline:

Changes between rounds

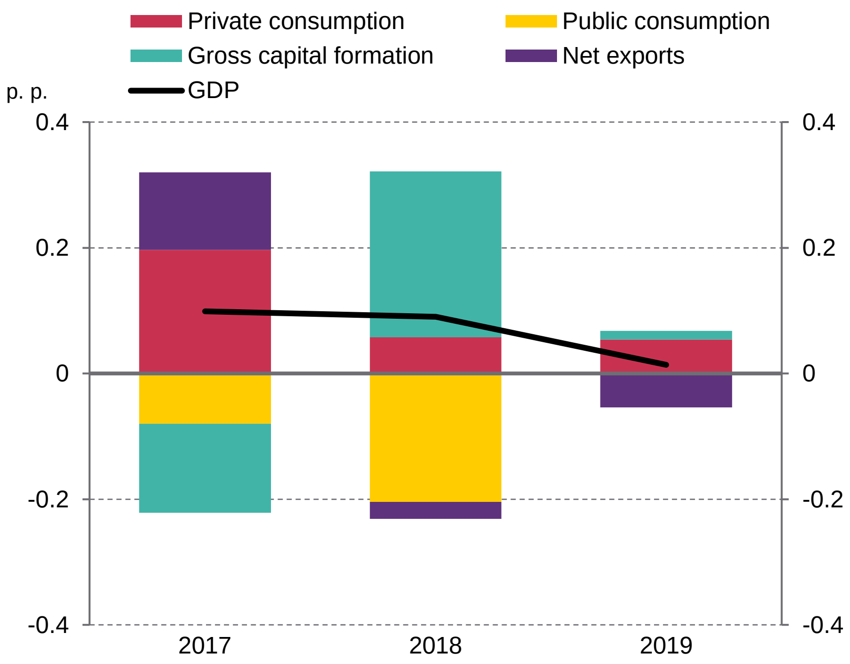
Projection 2017 – 2019

- External environment
- Consumption demand
- Investment demand
- Foreign trade
- Inflation

Uncertainty

Changes between projection rounds

November GDP projection compared to July projection

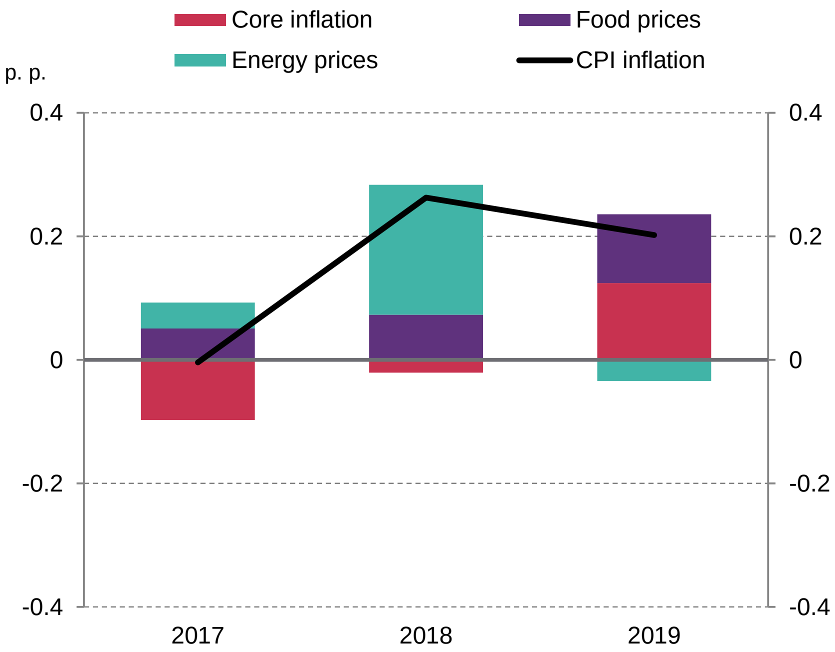


- ⇧ Higher private consumption growth (better-than-expected data for 2017Q2 and more favourable readings and the prospects of wages and employment growth).
- ⇧ Higher contribution of net exports to GDP growth in 2017 (the positive balance of payments for July-August 2017).
- ⇧ Higher growth in investment in 2018 as a result of the postponement of some public sector's expenditures.
- ⇩ Downward revision of the inventory forecast in 2017H2.
- ⇩ Lower growth in current expenditures in the public finance sector (wage freeze in some sectors of public administration in 2018 – *Draft Budget*).

GDP y/y, %	**2017**	**2018**	**2019**
July 2017	4.0	3.5	3.3
November 2017	4.2	3.6	3.3

Source: GUS data, NBP calculations.

November CPI projection compared to July projection



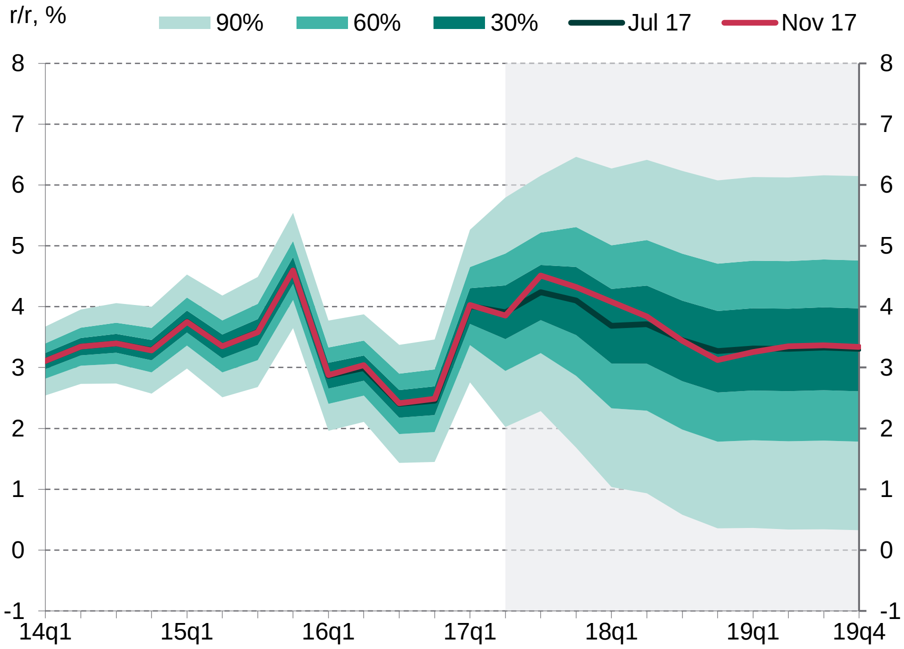
- ⇧ Higher prices of energy commodities in the global markets.
- ⇧ Lower availability of some agricultural products in the domestic market.
- ⇧ Increase in demand and cost pressure in the long term.
- ⇧ Higher growth in the prices of agricultural commodities in the global markets in 2019.
- ⇩ Lower core inflation in 2017 (lower-than-expected growth in prices of services related to dwellings and transport services).

CPI y/y, %	2017	2018	2019
July 2017	1.9	2.0	2.5
November 2017	1.9	2.3	2.7

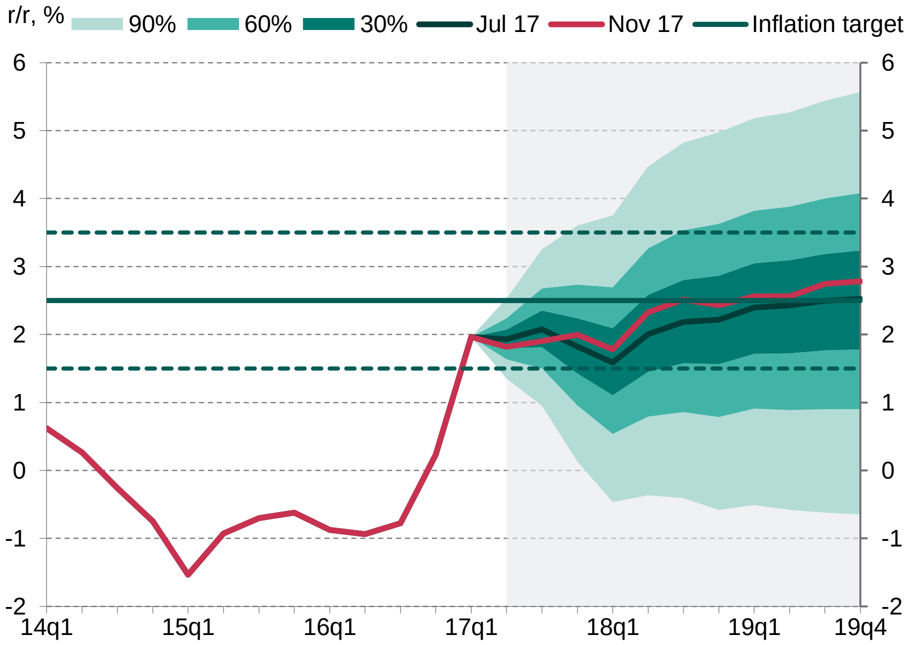
Source: GUS data, NBP calculations.

Changes between projections

GDP y/y, %



CPI inflation y/y, %



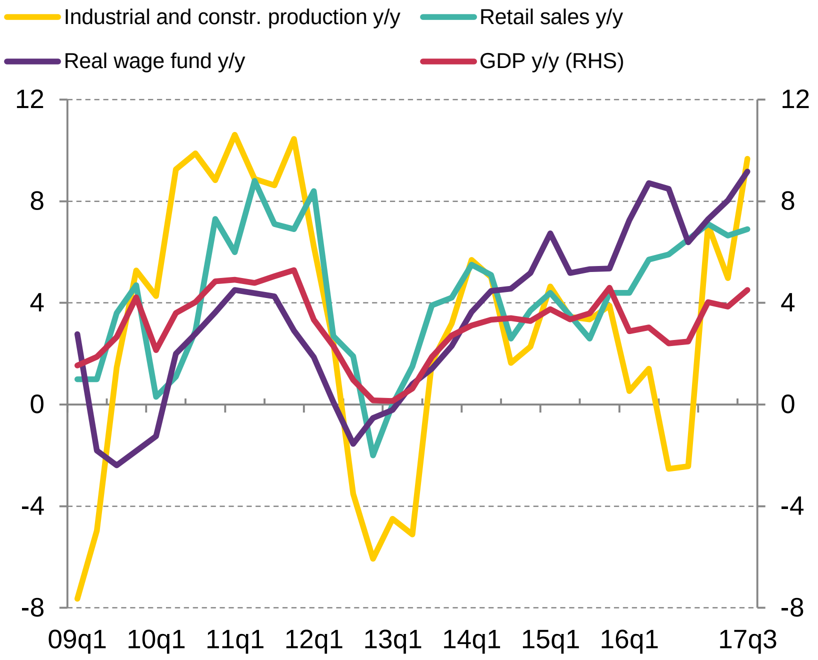
Source: GUS data, NBP calculations.

Projection 2017-2019

- Economic conditions abroad
- Consumption demand
- Investment
- Foreign trade
- Inflation

GDP growth is likely to accelerate in the second half of 2017

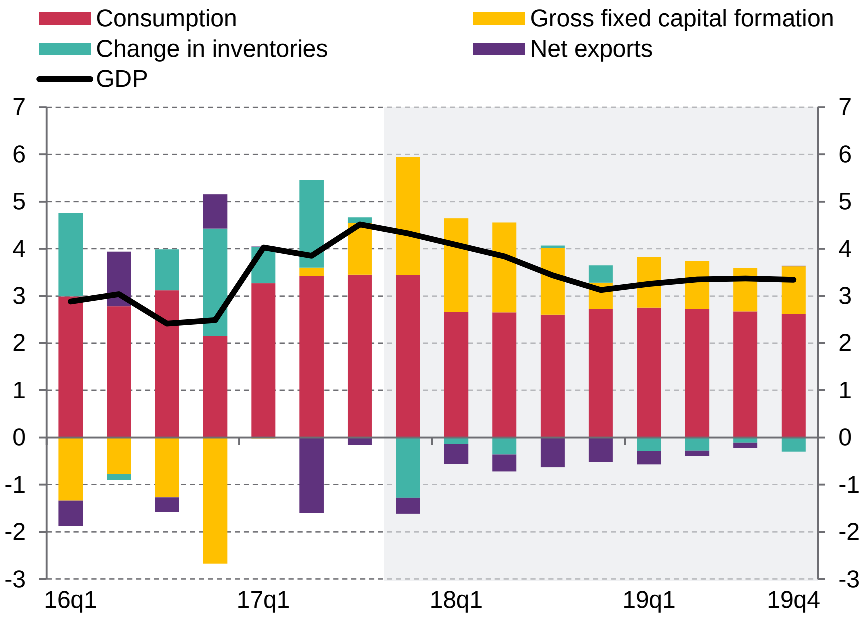
	17q2	17q3
GDP (y/y) (%)	3.9 (4.0)	4.5 (4.2)
Domestic demand (y/y) (%)	5.6 (4.9)	4.7 (5.0)
Private consumption (y/y) (%)	4.9 (4.7)	4.7 (4.2)
Public consumption (y/y) (%)	2.4 (3.0)	3.3 (3.3)
Gross fixed capital form. (y/y) (%)	0.8 (1.1)	6.1 (7.0)
Exports (y/y) (%)	2.8 (6.9)	6.5 (7.8)
Imports (y/y) (%)	6.1 (9.1)	7.0 (9.4)
Net exports contribution (p.p.)	-1.5 (-0.7)	-0.1 (-0.7)



Values from the July projection are given in brackets (17q3 seasonally adjusted). Indicators with values higher than in the July projection are marked green, whereas indicators with lower values are marked red.

Source: GUS data, NBP calculations.

In 2017 GDP is expected to grow at 4.2% and in the years 2018-2019 will slow down to the level close to the potential output growth



⇧ Private consumption as the main factor behind GDP growth over the projection horizon due to further improvement in the labour market and – in short term - payments of benefits under the "Family 500 plus" programme

⇧ Economic growth driven also by positive gross fixed capital formation dynamics – supported by the inflow of EU funds under the 2014-2020 financial framework

⇩ The decline in GDP growth in the euro area (negative contribution of net exports to growth in 2019 as a result of a slowdown in the domestic demand).

y/y, %	2016	2017	2018	2019
GDP	2.7	4.2	3.6	3.3

Source: GUS data, NBP calculations.

Economic conditions abroad

The November projection assumes a higher GDP growth in the external environment in 2017-2018

⇧ High readings of current activity indicators and both consumer and business sentiment.

⇧ Stronger economic growth in the euro area.

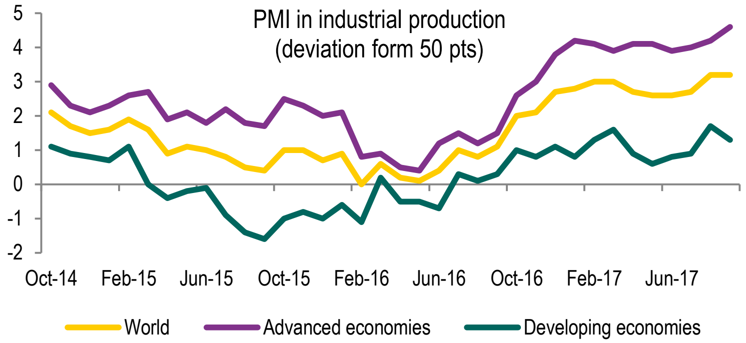
⇧ Higher growth path in China.

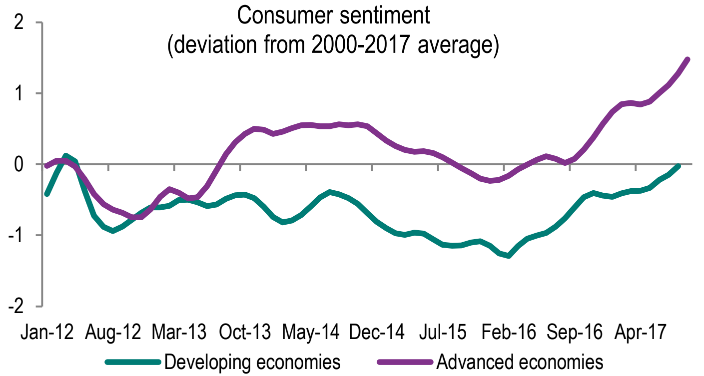
⇩ Weak long-term global economic outlook due to low productivity growth and unfavourable demographic trends.

⇩ Weak medium-term outlook for global trade growth.

GDP y/y, %	2017	2018	2019
Euro area	2.2 (1.9)	1.9 (1.7)	1.6 (1.6)
Germany	2.2 (1.9)	1.9 (1.7)	1.5 (1.5)
United States	2.2 (2.2)	2.4 (2.5)	2.1 (2.1)
United Kingdom	1.6 (1.4)	1.4 (1.5)	1.7 (1.7)

Values from the July projection (seasonally adjusted) are given in brackets. Figures with values higher than in the July projection are in green, whereas those with lower value are in red.



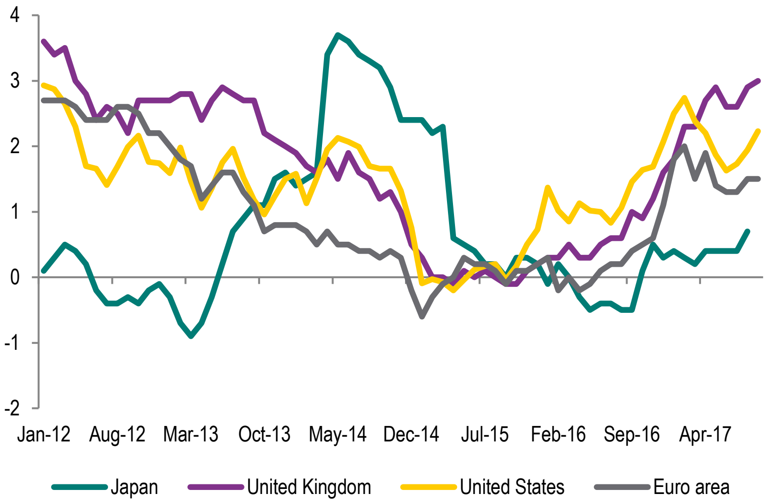


Source: OECD, Thomson Reuters Datastream, NBP calculations.
Consumer sentiment: averages of the group of countries are weighted by the nominal GDP in PPP terms.
Developed economies: The Czech Republic, Denmark, Israel, Japan, Republic of Korea, New Zeland, Norway, euro area, US, Sweden, Switzerland, UK.
Emerging economies: Brazil, China, Mexico, Poland, Russia, South Africa, Hungary, Turkey.

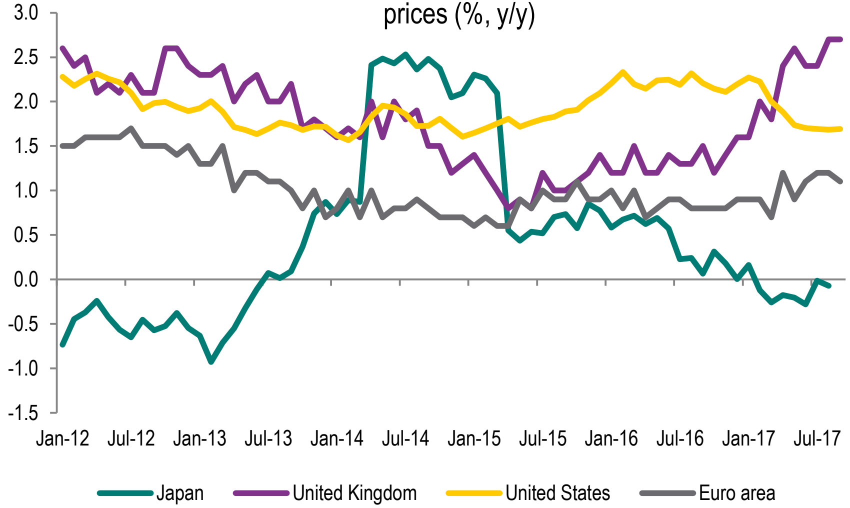
In the short run - a lower inflation is expected in Poland’s external environment

- Despite positive output gap consumer price inflation in the US is lower than expected in 2017.
- The forecast of inflation in the euro area has been lowered due to revised estimates of potential output growth in the EA.

CPI inflaction in advanced economies (%, y/y)



Consumer inflation in main developed economies excluding food and energy prices (%, y/y)

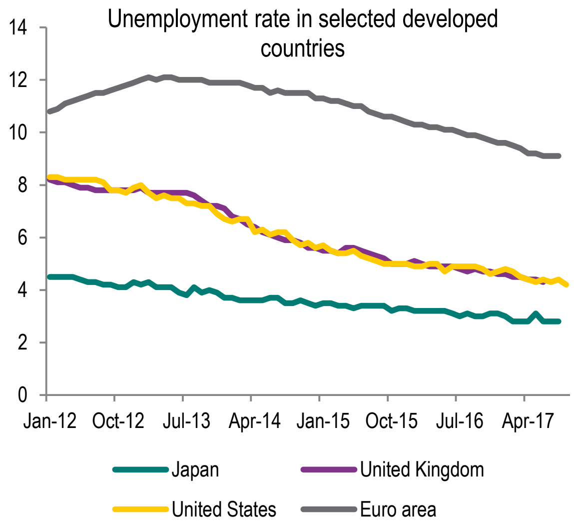


Source: OECD.

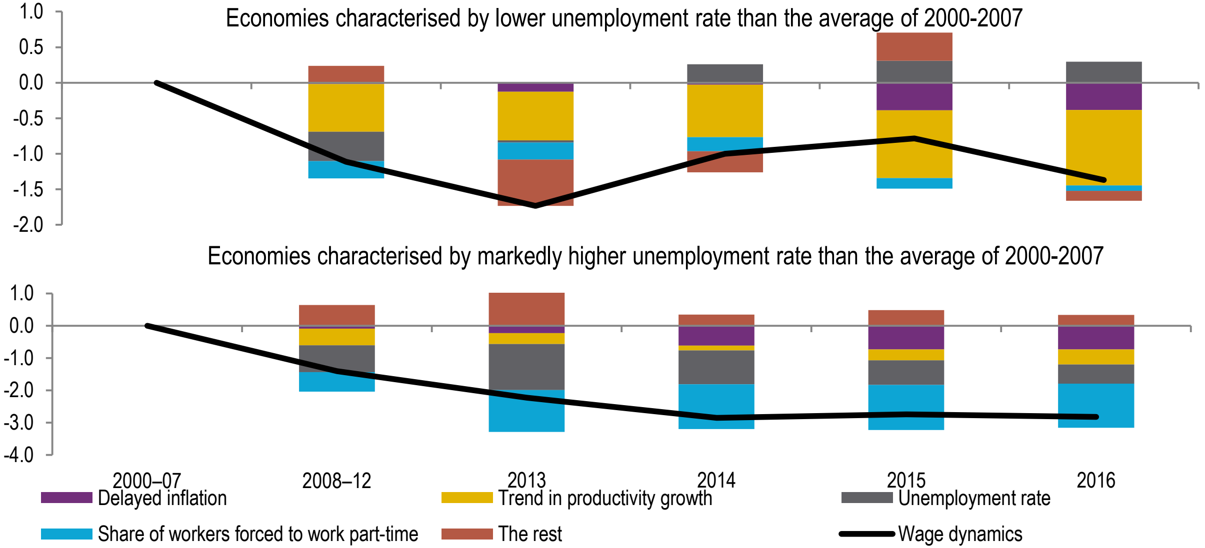
The heightened uncertainty about inflation outlook due to persistently low wage growth

Despite tight labour markets conditions, wage growth in the main developed economies remains weak.

Low wage pressure is due, *inter alia*, to: i) sluggish growth in labour productivity; ii) low inflation expectations; iii) still low labour utilisation in some countries; iv) increase in labour participation in the groups with lower wages (women, elderly people); v) reduced workers' wage-bargaining power and higher preferences for the job security and benefit packages over the wage increase; vi) an increased importance of temporary or part-time jobs, vii) an impact of structural reforms; viii) a declining number of hours worked.



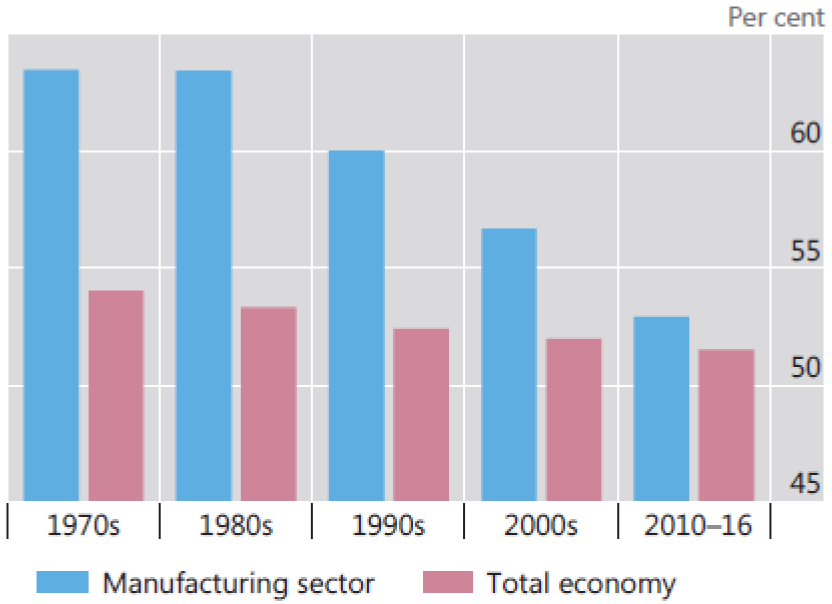
Factors explaining the deviations of wage growth from the average of 2000-2007 according to IMF research (WEO, 2017):



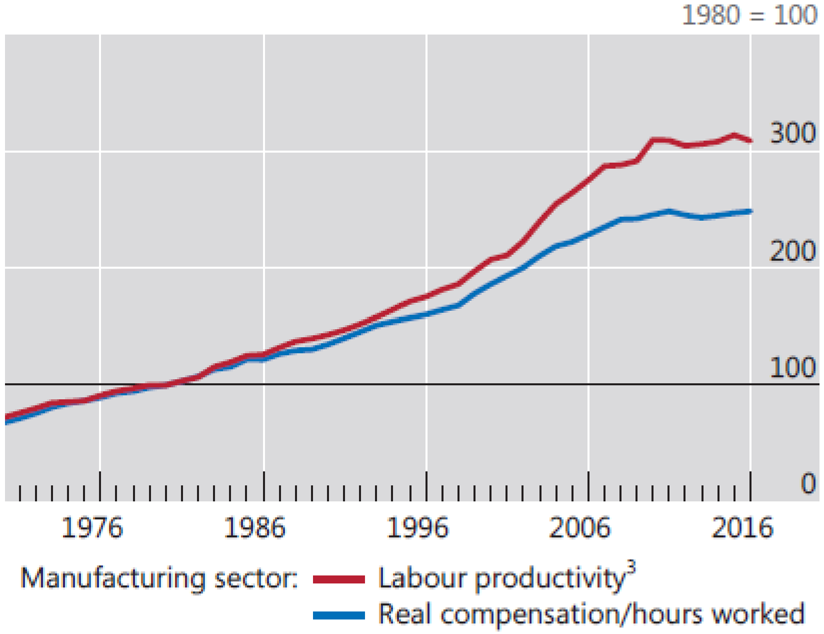
Source: OECD.

Labour market in G7 countries

Labour share (% of GDP)



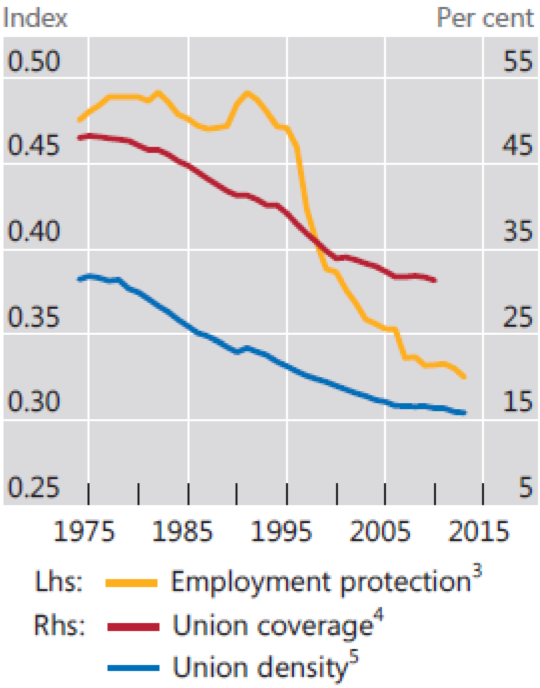
Labour productivity and wages (1980=100)



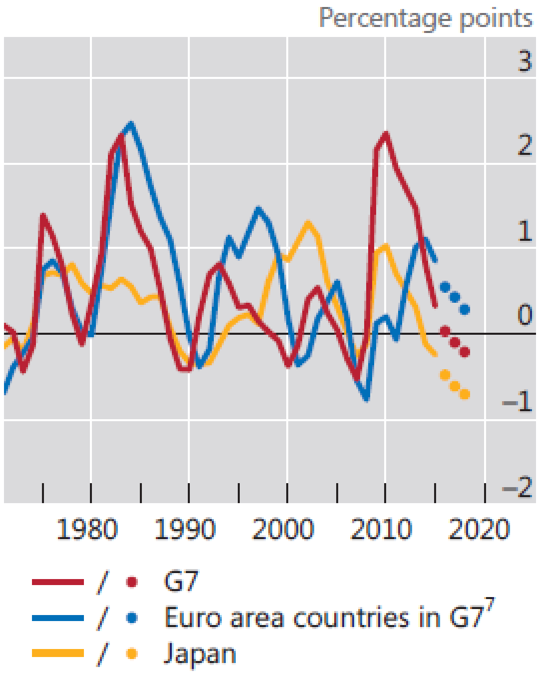
Source: BIS, 87th Annual Report.

Labour market in G7 countries

Labour's pricing power (%)

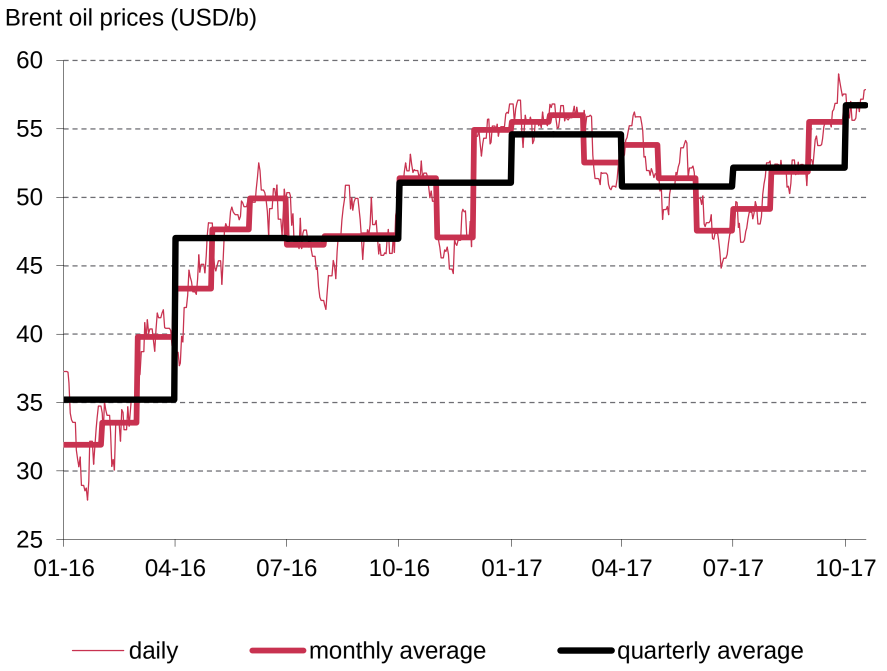


Unemployment gap

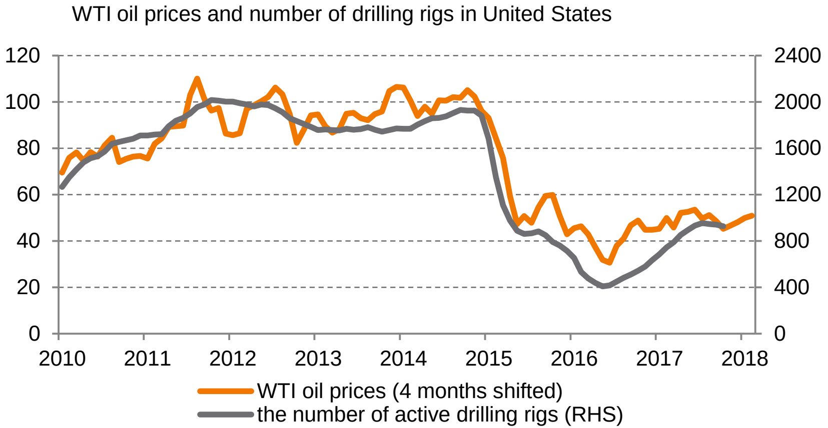


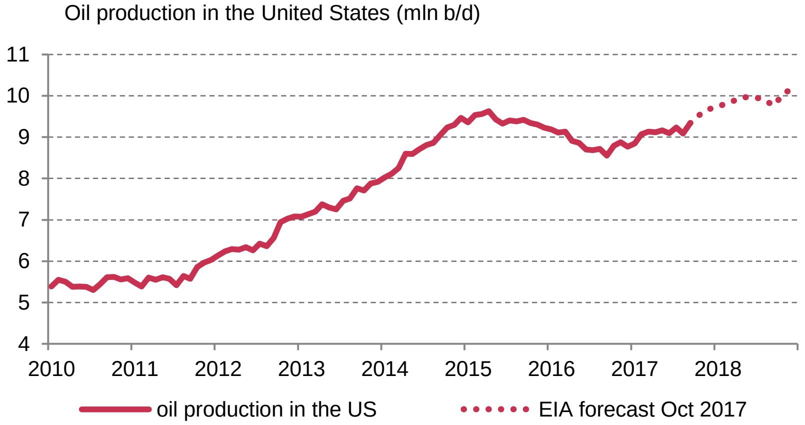
Source: BIS, 87th Annual Report.

Expected stabilization of oil prices



Source: *Bloomberg.*

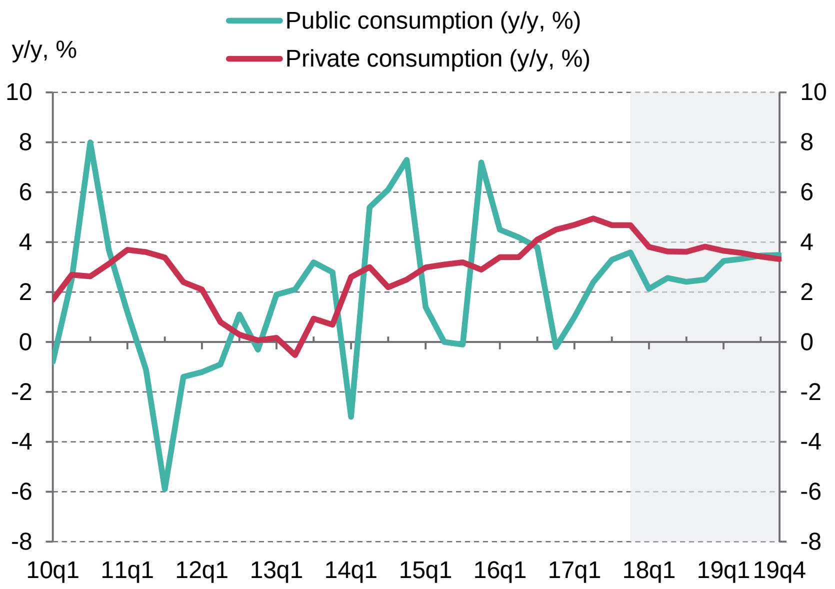




Source: The United States Department of Energy.

Consumption demand

Consumption demand as the main driver of GDP growth in the projection



Private consumption:

⇧ Good labour market conditions.

⇧ Improvement in consumer sentiment.

⇧ In 2017 GDP growth supported by the "Family 500 Plus" programme.

⇧ Low interest rates facilitate financing consumption through borrowing.

⇩ Purchasing power of households reduced by rising inflation

Public consumption :

⇩ Relatively slow growth in current expenditures and in subsidies financing current expenditure of other units of the sector (2017 Budget Act and draft 2018 BA, incl. further wage freeze of part of the government sector workers)

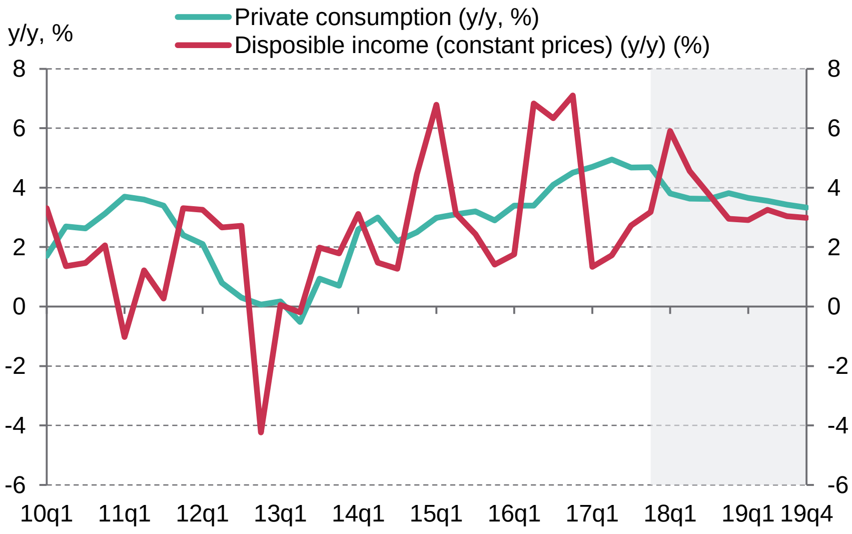
⇧ Lack of detailed information on the continuation of cutting public expenditure in 2019.

y/y, %	2016	2017	2018	2019
Private consumption	3.8	4.7	3.7	3.5
Public consumption	2.8	2.4	2.4	3.4

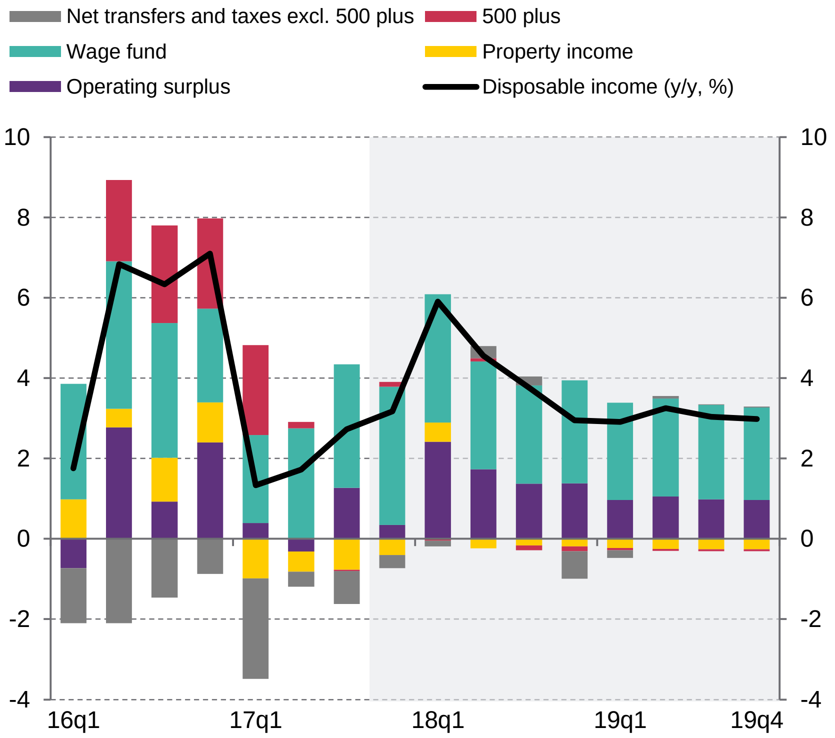
Source: GUS data, NBP calculations.

Good households' financial situation

- Further decline in unemployment rate and acceleration of wage growth are expected, although the purchasing power of households will be reduced by rising inflation.
- In 2016-2017 dynamics of households' disposable income will be elevated by the growth in family benefits, due to the programme „Family 500 plus", which was implemented in April 2016 (it will affect private consumption with a lag due to the intertemporal consumption smoothing mechanism).



Disposable income decomposition (constant prices) (y/y, %)

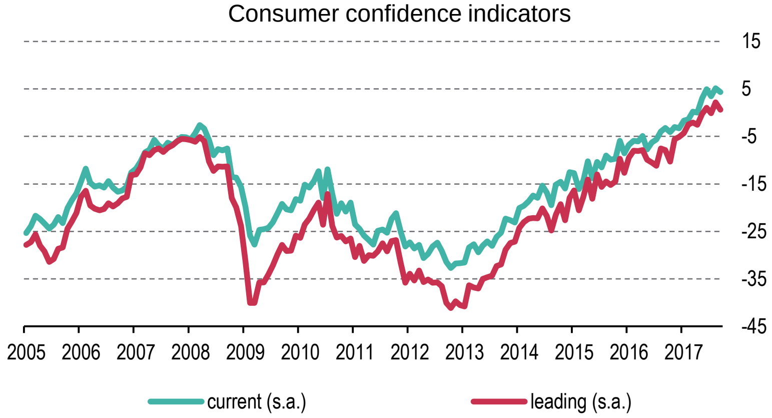


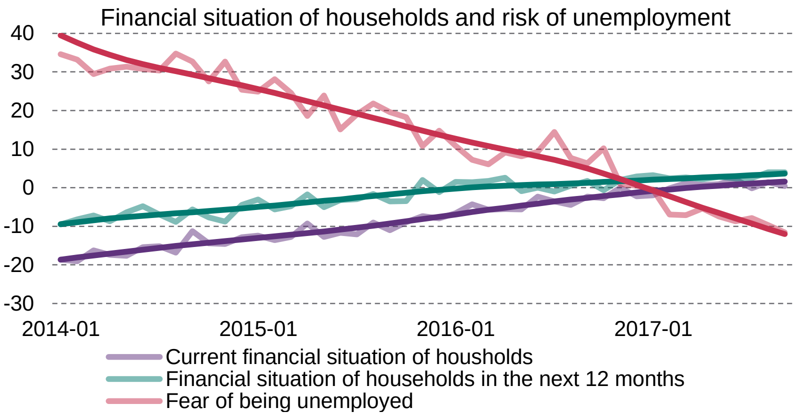
Source: GUS data, Eurostat, NBP calculations.

Consumption is driven by favourable consumer sentiment and very good labour market conditions

	17q2		17q3	
ULC (r/r, %)	2,7	(1,6)	3,1	(1,9)
Labour productivity (y/y,%)	1,9	(2,7)	2,2	(2,8)
Gross wages (y/y, %)	5,0	(4,3)	5,4	(4,8)
Employment LFS (y/y, %)	1,9	(1,2)	2,3	(1,3)
Unemployment rate LFS (%)	4,9	(5,1)	4,6	(5,0)
Participation rate (%)	56,7	(56,4)	56,7	(56,3)

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

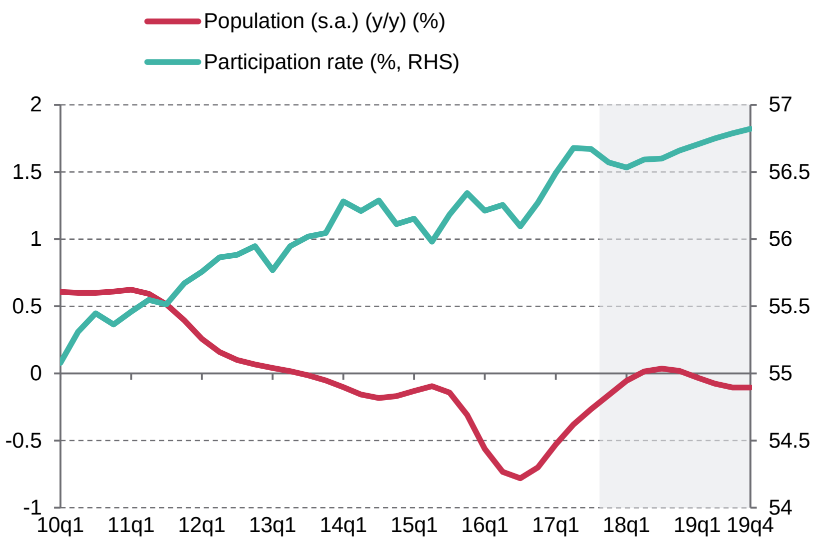


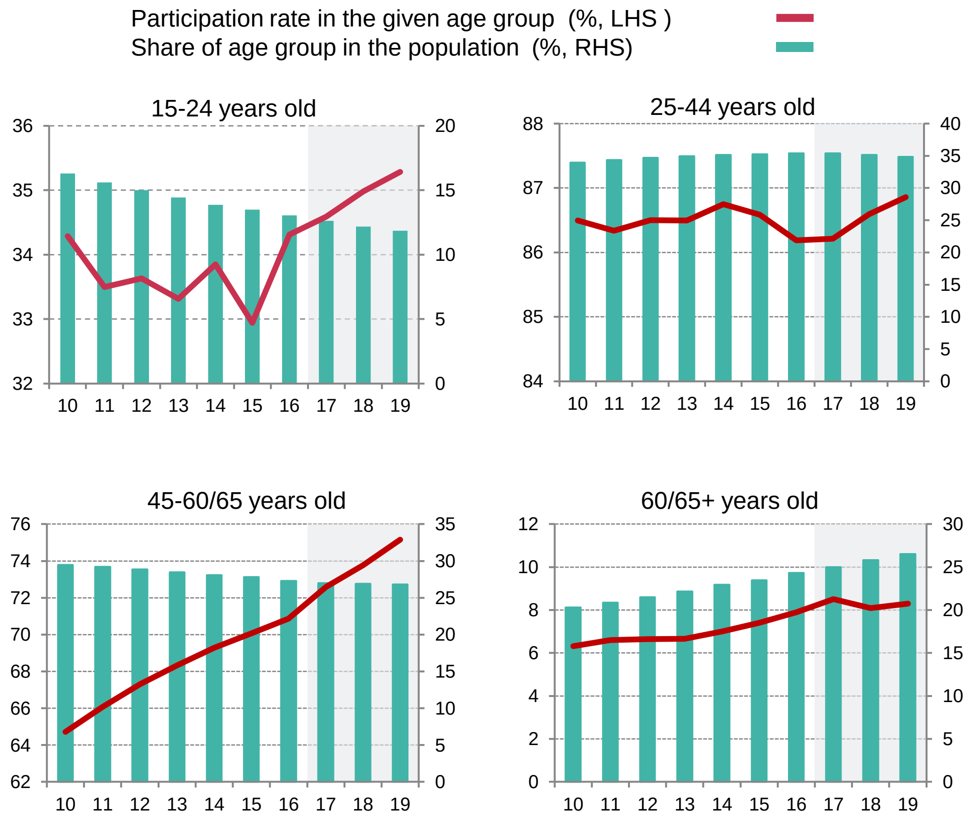


Source: GUS data, NBP calculations.

Increasing participation rates, but labour supply affected by changes in the demographic structure

Changes in population and participation rate

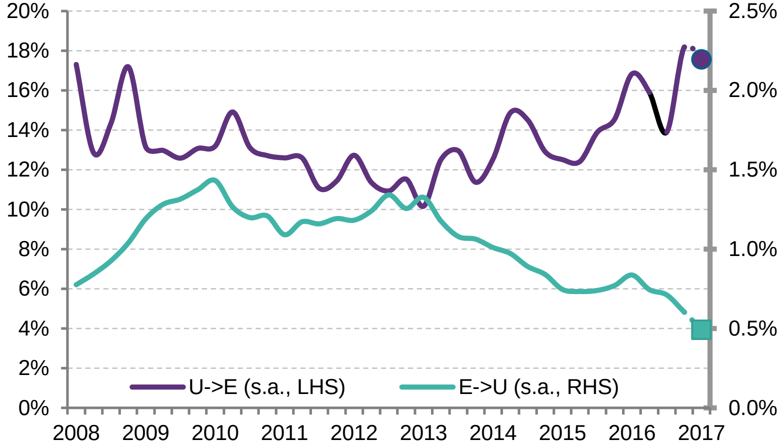




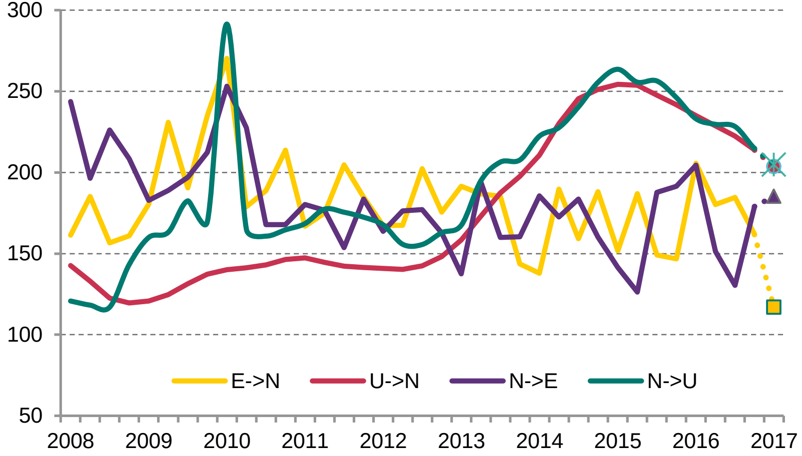
Source: GUS data, NBP calculations.

The lowest in the history probability of loosing job and transition from employment to inactivity

Probabilities of flows between employment (E) and unemployment (U)



Flows to and from inactivity (N)
(number of people in thous. per quarter)



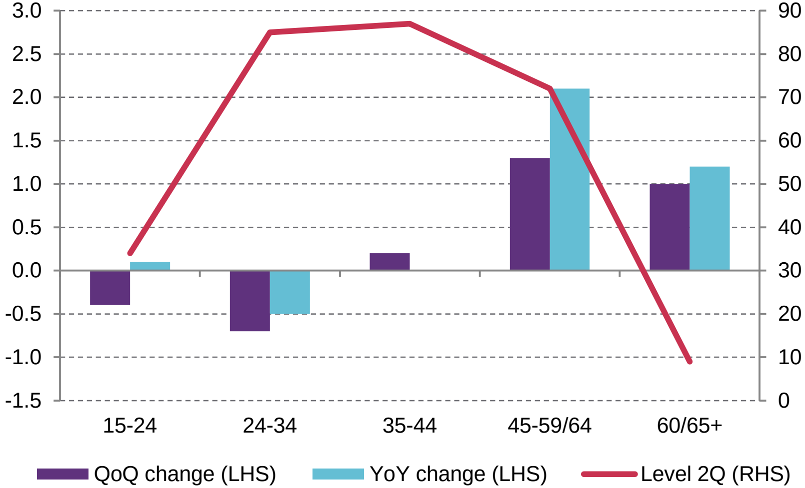
- The lowest in the history probability of loosing job (E->U).
- The highest in the LFS history (since 1992) probability of the transition from unemployment to employment (U->E).

- Recent increase of LFPR of people aged 50+ reflected in the drop of the flows from employment to inactivity (E->N). Companies retain 50+ employees.
- Since 2013 higher intensity of transitions between inactivity (N) and unemployment (U) due to activation of people loosely attached to labour market. This positively influences labour supply.

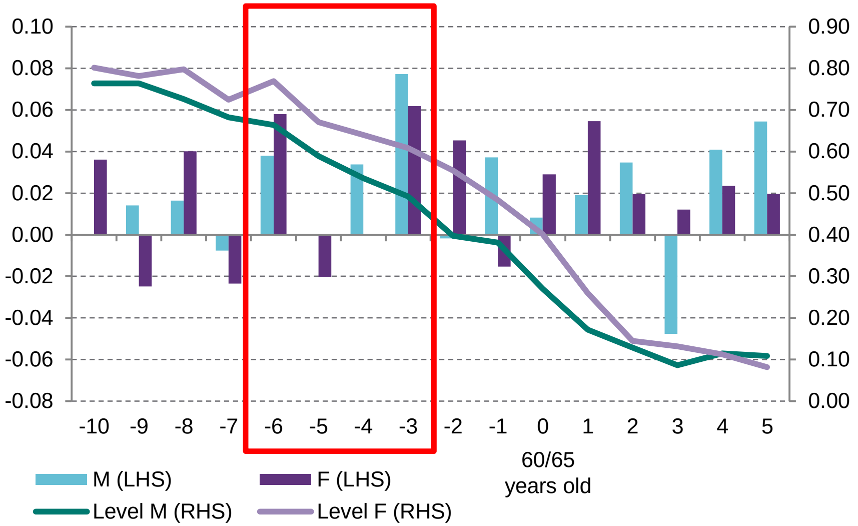
Source: GUS data, NBP calculations.

Growing labour force participation of people 45+ on the eve of lowering retirement age

Labour force participation and its changes



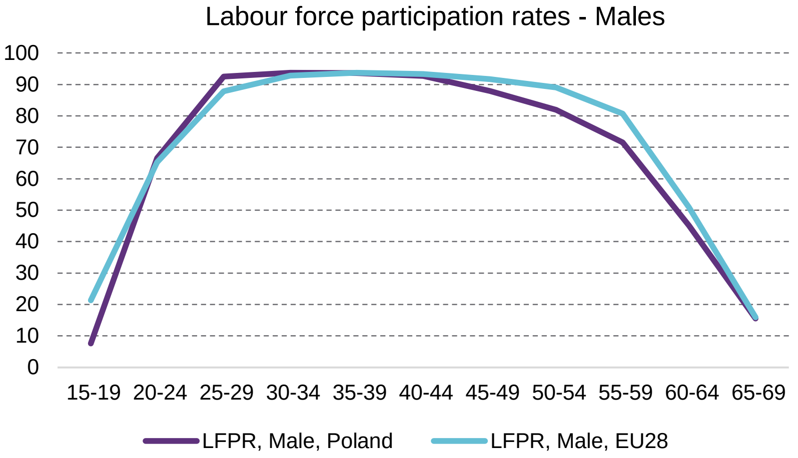
Changes in labour force participation by distance to age 60/65

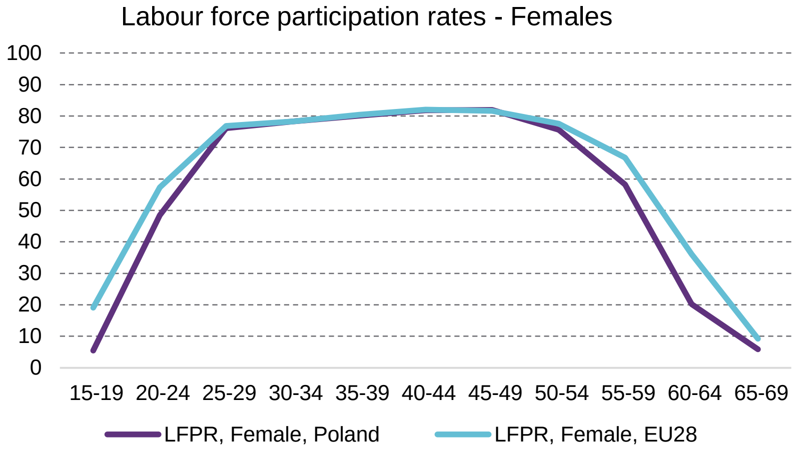


- Unitil the second quarter of 2017, despite the planned lowering of retirement age, labour force participation is growing faster than in the corresponding quarters of 2016 – lack of workers?
- Biggest changes do not apply to retirement age, but 3-6 years before retirement and are related to job retention of older workers

Source: GUS data, NBP calculations.

Labour force participation in the pre-retirement age is still lower than in the EU28 average





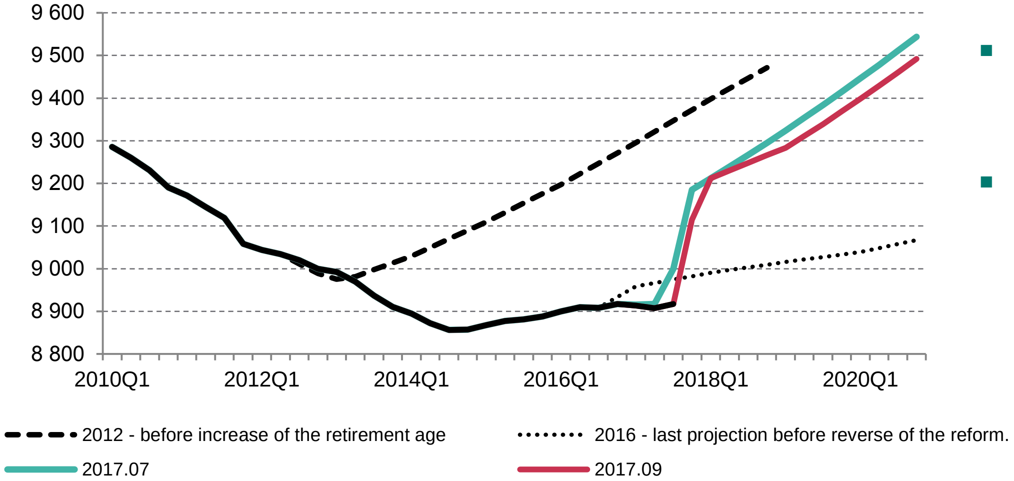
- Labour force participation of people at „prime-age" is close to the EU average of 28.
- Despite the reduction of early retirement in Poland, there is still a problem of the relatively low activity of men aged 50+ in relation to the EU28.
- Successive generations are more and more active in the labour market - there is a potential for increased labour force participation.

- Lower than average in the EU28 labour force participation of women up to the age of 24 is associated with a high level of academic enrollment, mainly in full-time studies.
- Labour force participation of women aged 25-54 does not differ significantly from the EU28 average.
- Quite early retirement remains a problem due to retirement age (60 years), although there is a potential for further growth in labour force participation for people aged of 55-59.

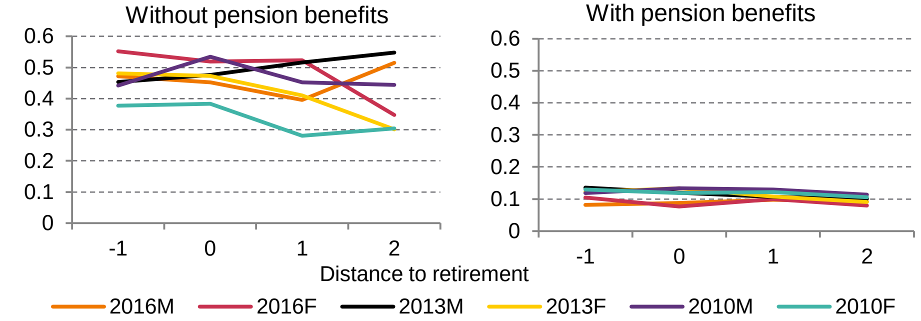
Source: Labour force sourvey.

Good labour market situation can spread over time the effects of lowering the retirement age

The number of retirees (thous.)



Labour force participation of people within the retirement age

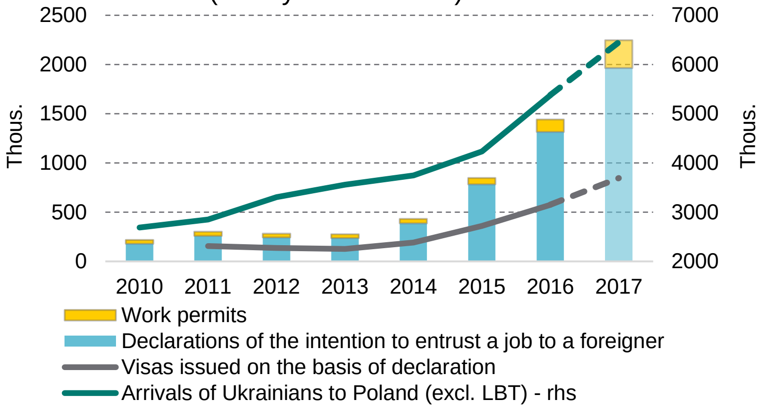


- According to GUS data, the number of retirees and pensioners in Q1-Q3 2017 was lower than in the projection of 2016, which did not take into account lowering of retirement age. This is due to the good situation on the labour market.
- According to The Polish Social Insurance Institution (ZUS) estimates, applications for retirement due to lowering the retirement age **could amount to about 330 thousand. people** by the end of 2017. The NBP's assessment is similar, but submitting the application does not mean that the number of retirees will increase immediately. Therefore, estimates of the increase in the number of pensioners are slightly lower and spread over time because::
  - submitting the application does not mean going for retirement
  - to retire, employment contract need to be terminated,
  - some people may need time to collect all the documents needed to establish the initial capital.
- In the current projection, the jump in the number of retirees due to lowering the retirement age will be visible in the fourth quarter of 2017 and the first quarter of 2018. Moreover, in the coming years people who are approaching the age of 60/65 (who would have to wait longer for retirement based on old regulations) will retire early.
- Historically low unemployment can cause **the labour force participation of retired people** to decline not as rapidly as it has been observed in the past.

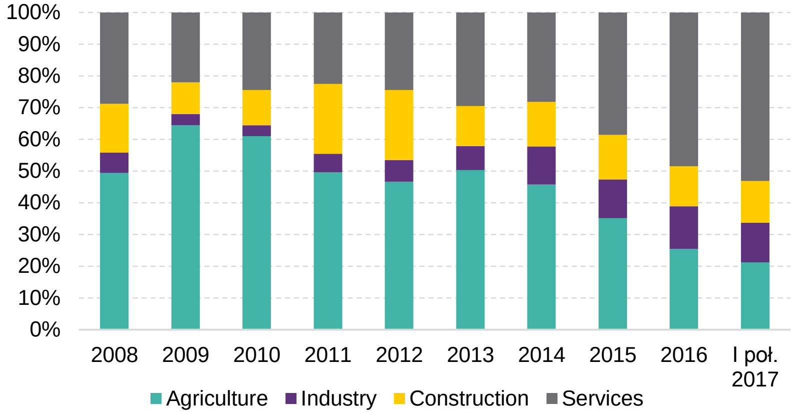
Source: GUS data, NBP calculations.

Immigration from Ukraine

Number of immigrants on the Polish labour market (mostly from Ukraine)



Structure of employer's declarations by sector



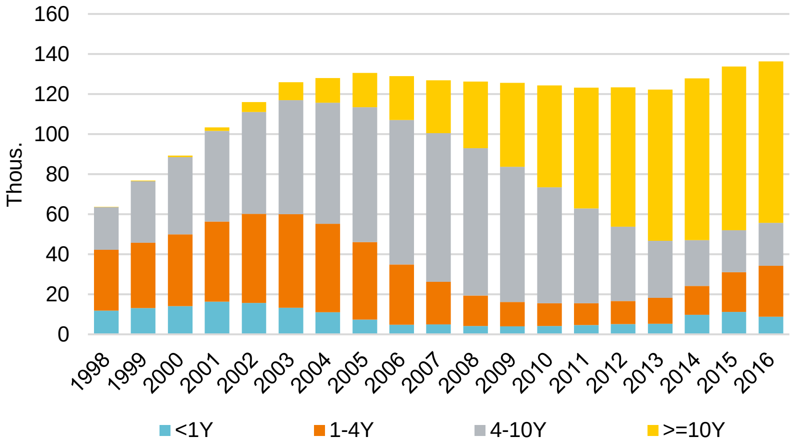
- Data for the first half of 2017 indicate that Poland issued over **108 thous. work permits** for foreigners and registered **948 thous. employer's declarations** that form the basis for applying for a visa.
- In 2017, the number of immigrant workers in Poland may be 60% higher than in the previous year.
- These estimates is confirmed by the growing number of border crossings between Poland and Ukraine

- Total change in sectoral structure of immigrant jobs in 2014-2016.
- Most of the immigrants work in services, there is also a significant increase in employment in the industry.
- Permanent employment contracts are more and more frequent in sectors with less „underground economy” than in agriculture and construction.

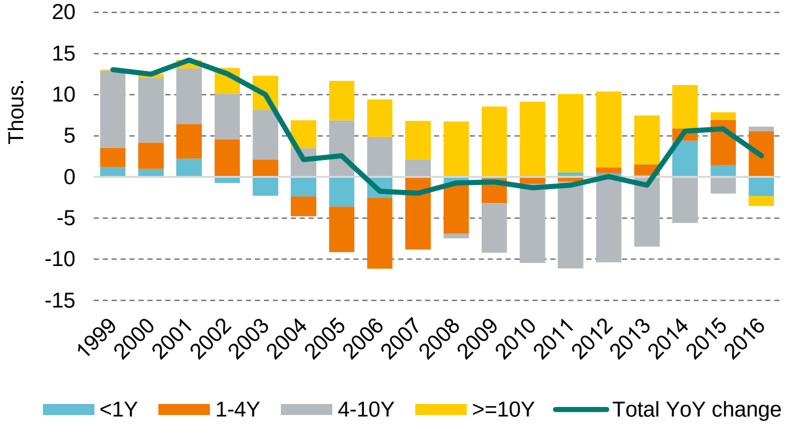
Source: The National Border Guard and Ministry of Family, Labour and Social Policy data, NBP calculations..

The recent liberalization of EU visa policy towards Ukraine does not result in significant outflow of immigrants from Poland

UA citizens in Germany by length of stay (level)



UA citizens in Germany by length of stay (YoY change)



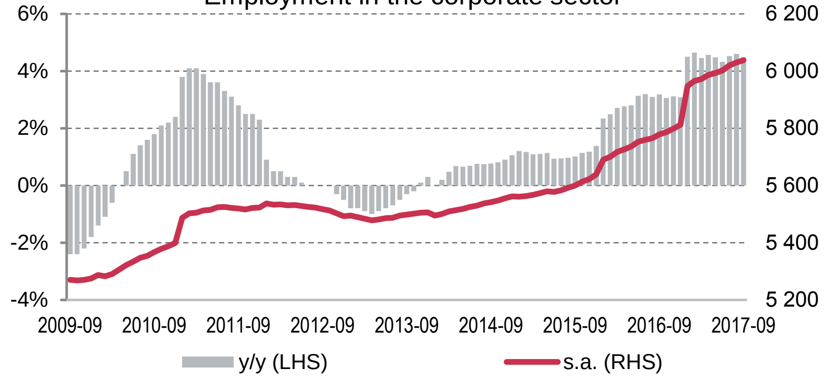
- Since June 2017 Ukrainians are exempted from EU short-stay visa requirements.
- Although visa liberalisation doesn't mean opening of the EU labour market. Regarding the legalization of employment regulations have not changed.

- The scale of migration flows of Ukrainian citizens to Germany seems to be low compared to Poland.
- Long- and medium-term immigrants dominate in the structure of Ukrainian migration to Germany.

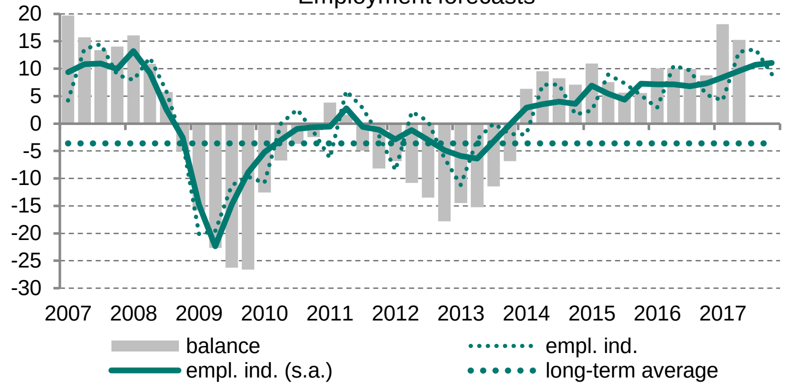
Source: GUS data, NBP calculations.

Despite favourable labour demand conditions …

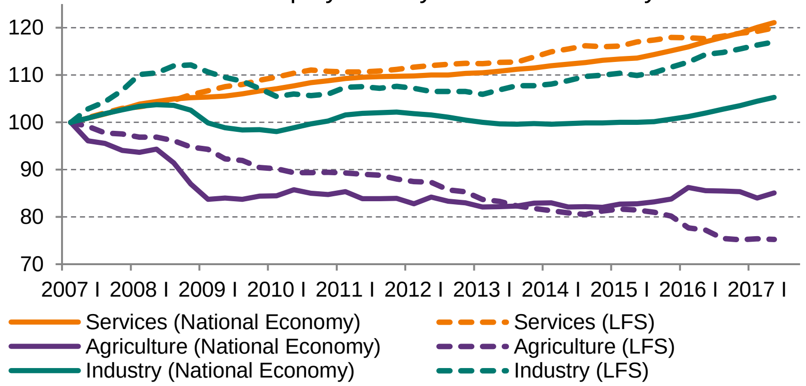
Employment in the corporate sector



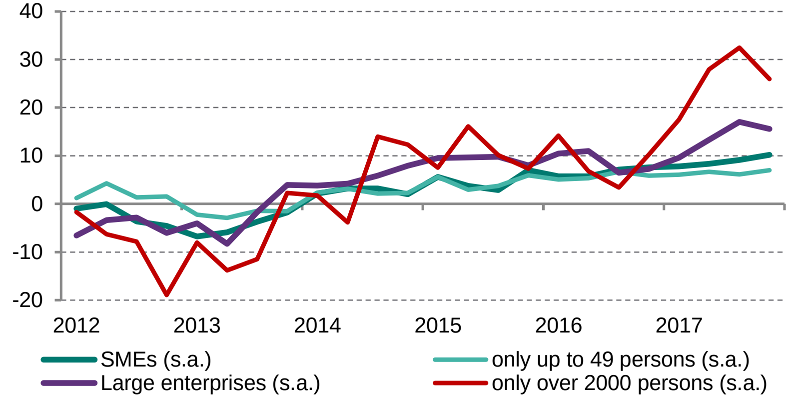
Employment forecasts



Increase of employment by sector of economy

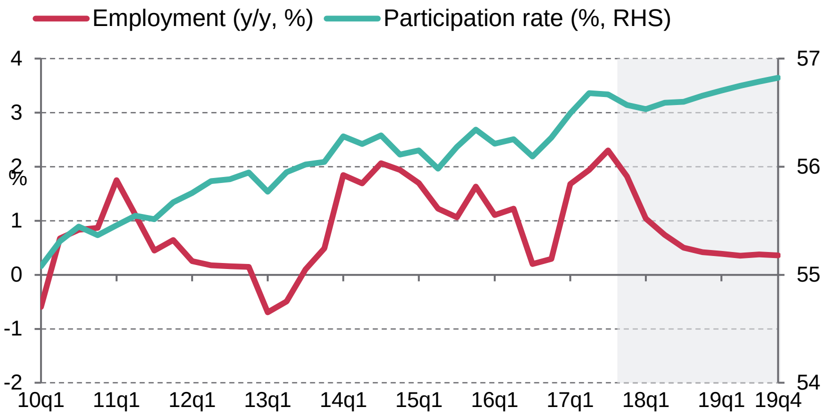


Employment forecasts by company size

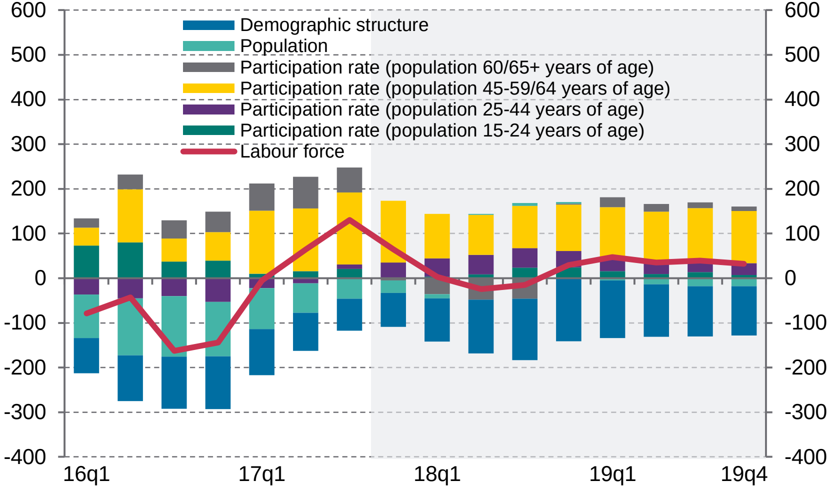


Source: GUS data, NBP calculations , Quick Monitoring NBP, F-01/I-01 GUS.

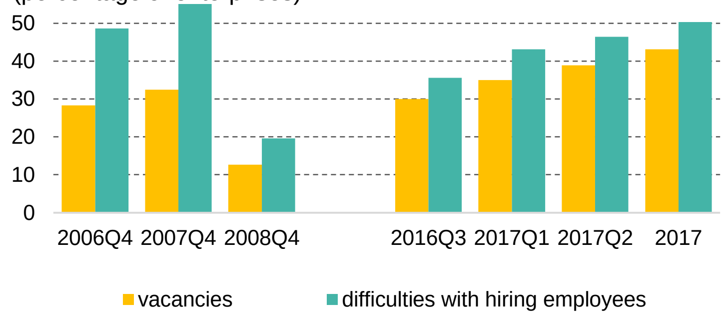
... limited labour supply will lead to a slowdown in employment growth



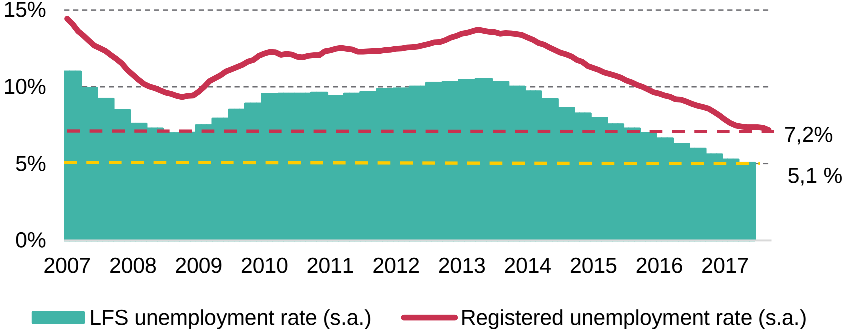
Change of labour force, thous. y/y



Vacancies and difficulties with hiring employees (percentage of enterprises)

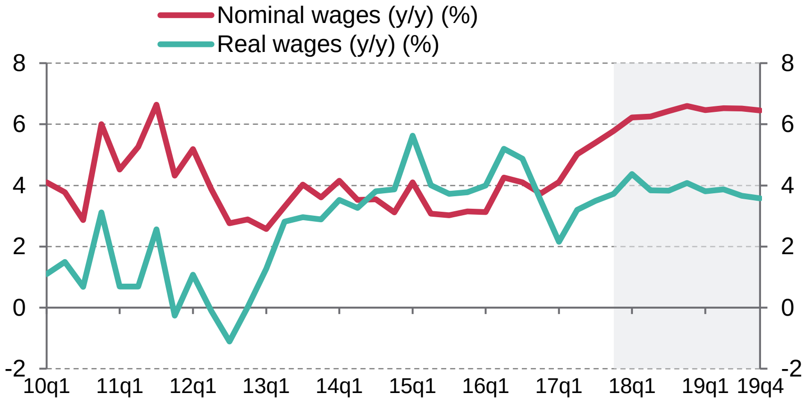


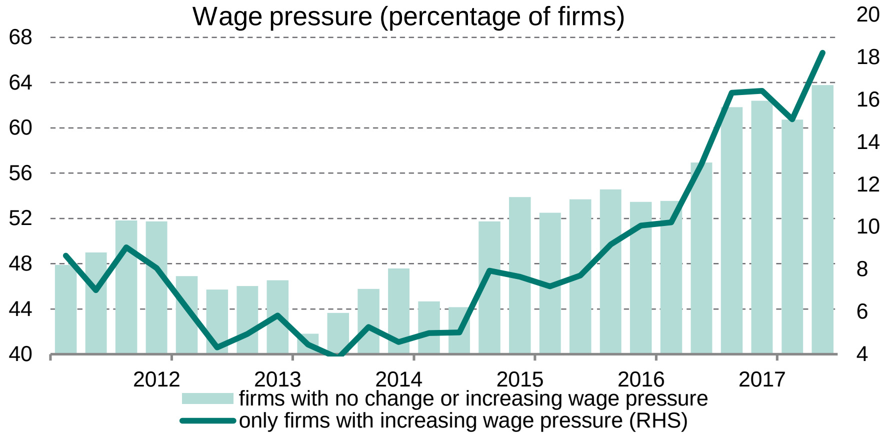
Unemployment rate

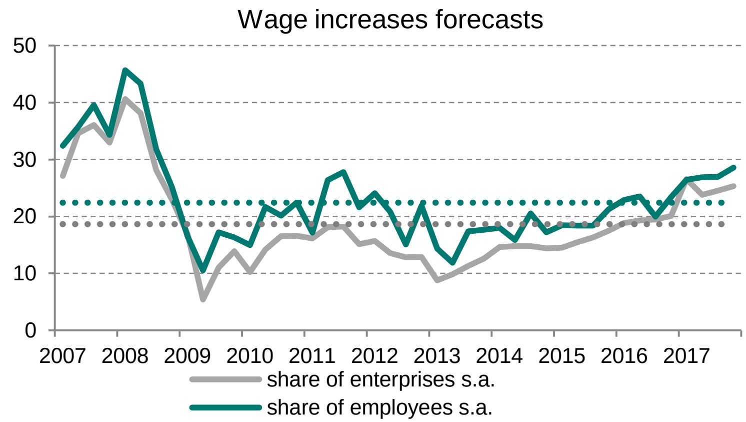


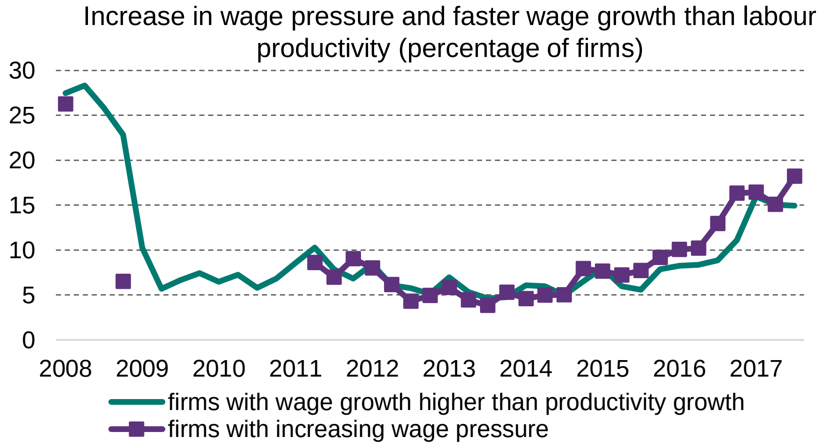
Source: GUS data, NBP calculations, Quick Monitoring NBP.

Higher wage dynamics





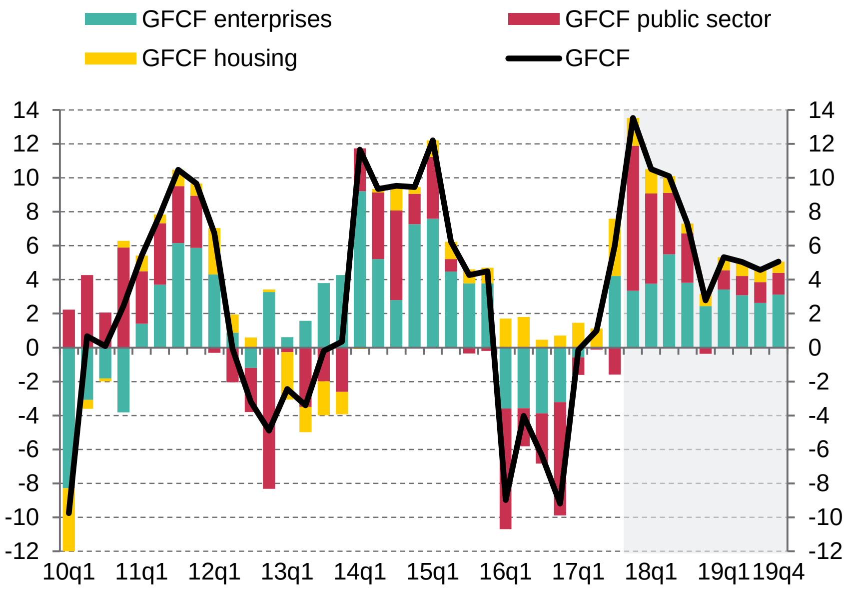




Source: Quick Monitoring NBP, NBP calculations.

Investment demand

Increase in investment since 2017



Private investment:

⇧ Increasing use of funds from 2014-2020 EU financial perspective

⇧ Improving forecasts of demand, orders and production

⇧ Improving investor sentiments.

⇧ Low interest rates.

⇧ Capacity utilisation in the economy highest since 2008.

Public investment:

⇧ Increasing use of funds from 2014-2020 EU financial perspective.

Housing investment:

⇧ Good labour market conditions.

⇧ Low interest rates.

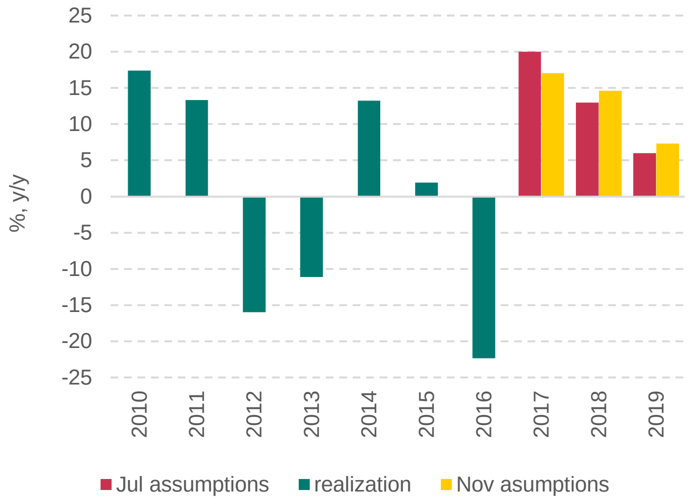
y/y, %	2016	2017	2018	2019
Gross fixed capital formation	-7.9	5.8	7.6	5.0

Source: GUS data, NBP calculations.

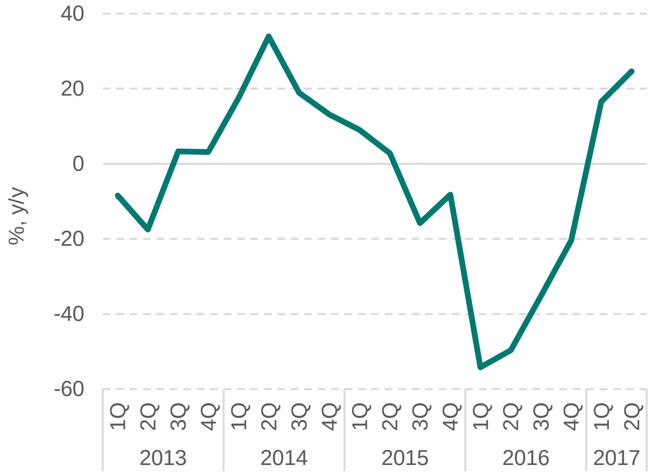
Current data support the scenario of acceleration of public investment in 2017, though at a rate lower than assumed in the previous round

Slower pace of growth in public investment in 2017 caused by low level of road investment in Q1-Q3 and lower than expected level of military equipment delivery in 2017

Total public investment growth,% YoY



Investment expenditures of local government units,% YoY

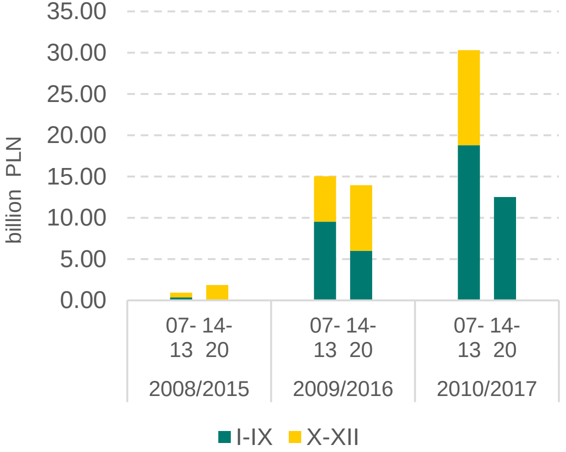


Source: Ministry of Finance data, Eurostat, The National Road Fund, own calculations.

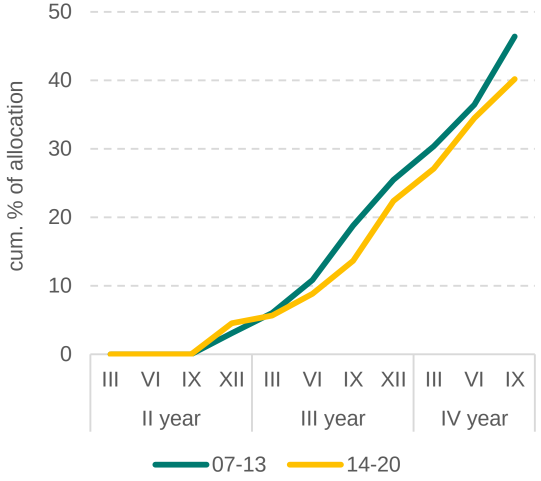
The high level of signed contracts for the use of EU funds supports the high growth of EU funds absorption over the projection horizon

Slower rate of EU funds absorption from 2014-2020 perspective compared to the previous one indicates a lower utilization of EU funds in 2017.

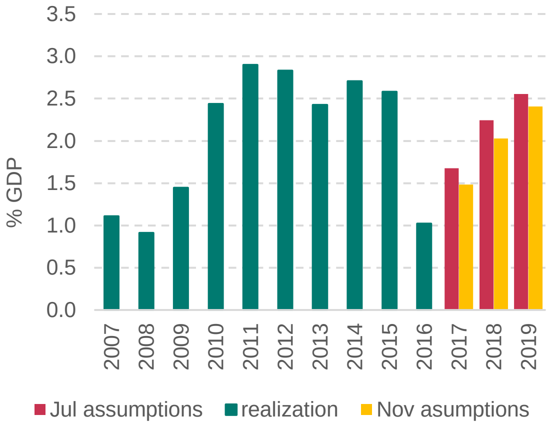
Payment requests from beneficiaries – PLN billion



Value of signed contracts for projects financed from Cohesion Policy funds, cumulative % of allocation

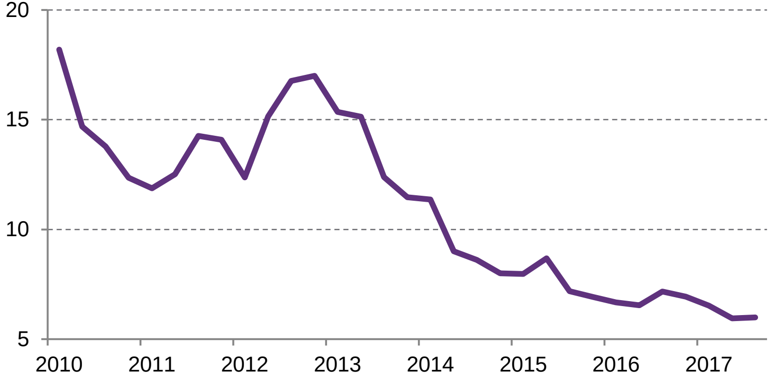


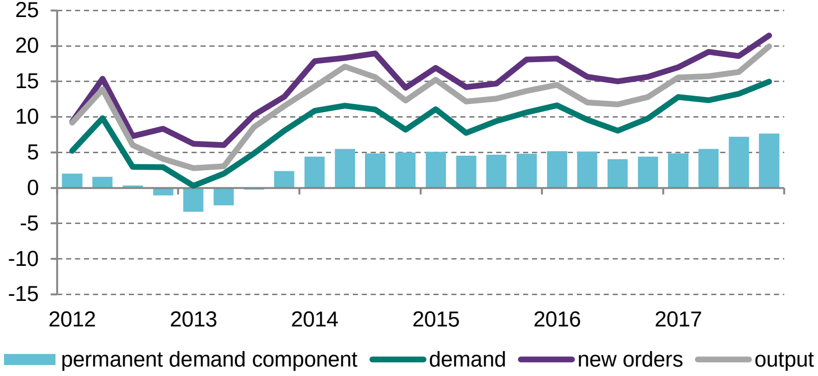
The use of EU funds (without CAP and RDP)



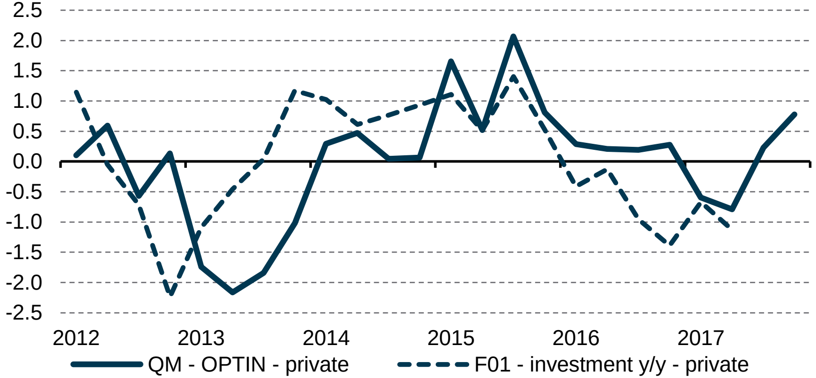
Source: GUS, Ministry of Finance data, own calculations.

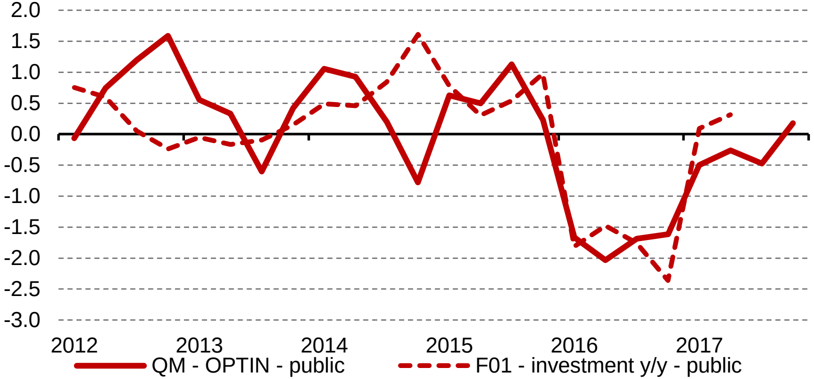
Survey among enterprises point to low demand barriers, growing optimism, …





Overall investor optimism ratings (standardized index)

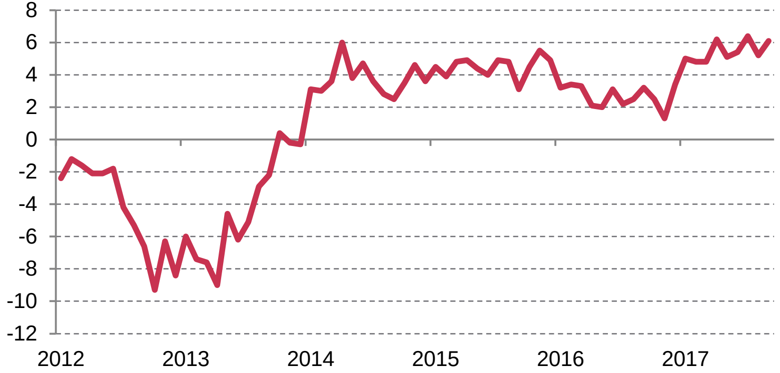




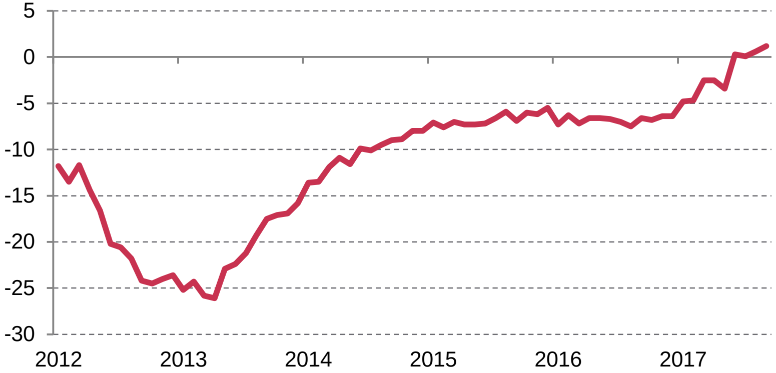
Source: Quick Monitoring NBP.

… further economic recovery and improvement in the forecasts of orders

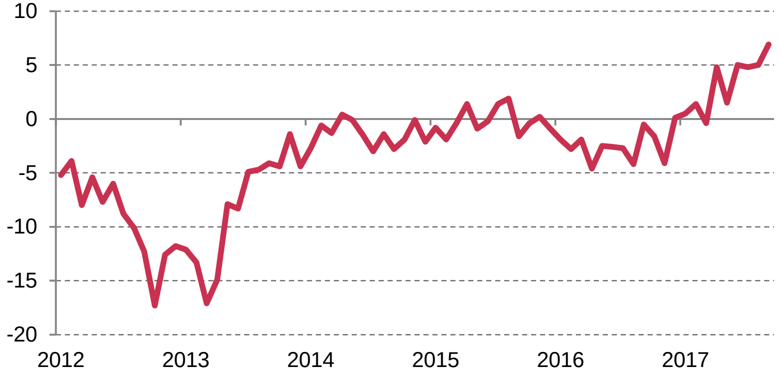
Industry - general economic climate indicator



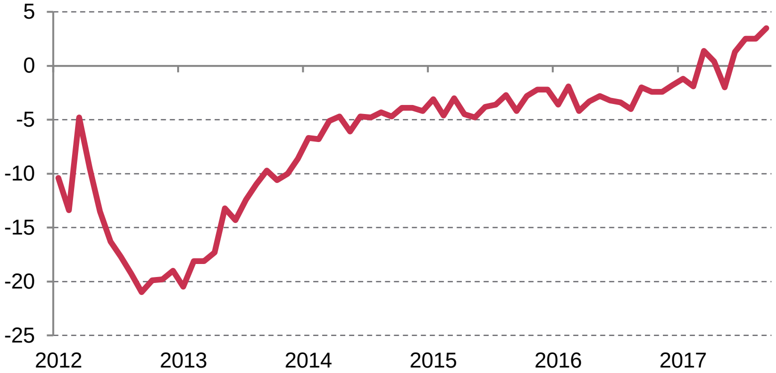
Construction - general economic climate indicator



Industry - a portfolio of domestic and foreign orders

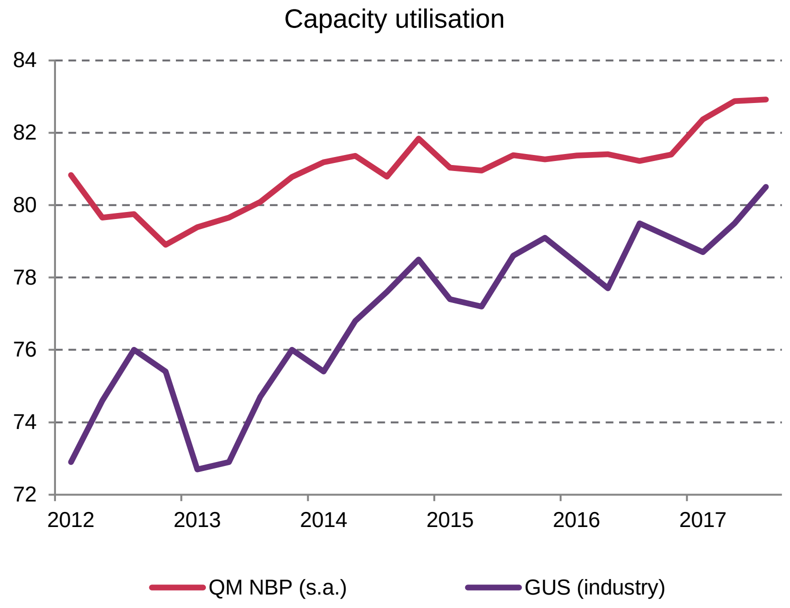


Construction - a portfolio of domestic orders

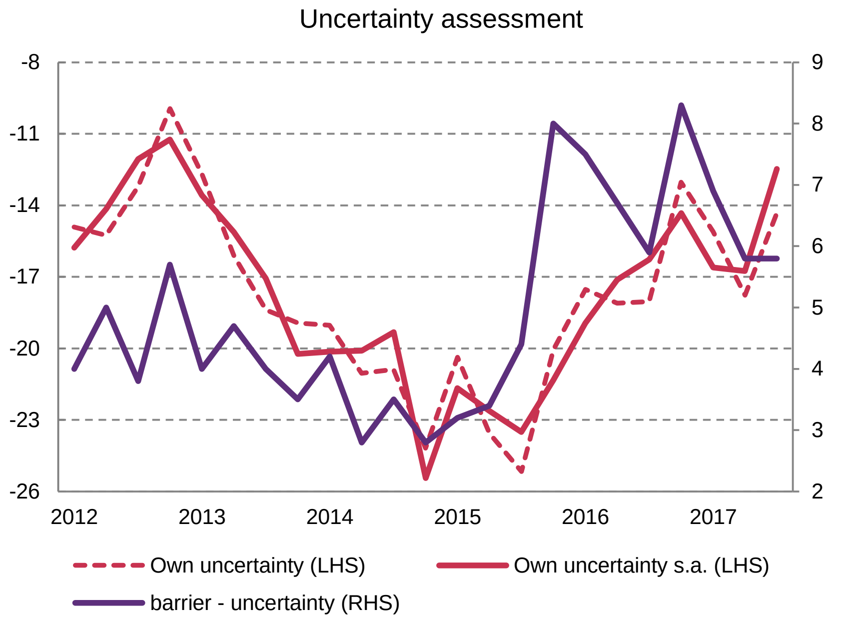


Source: GUS data.

… and high capacity utilisation in the economy



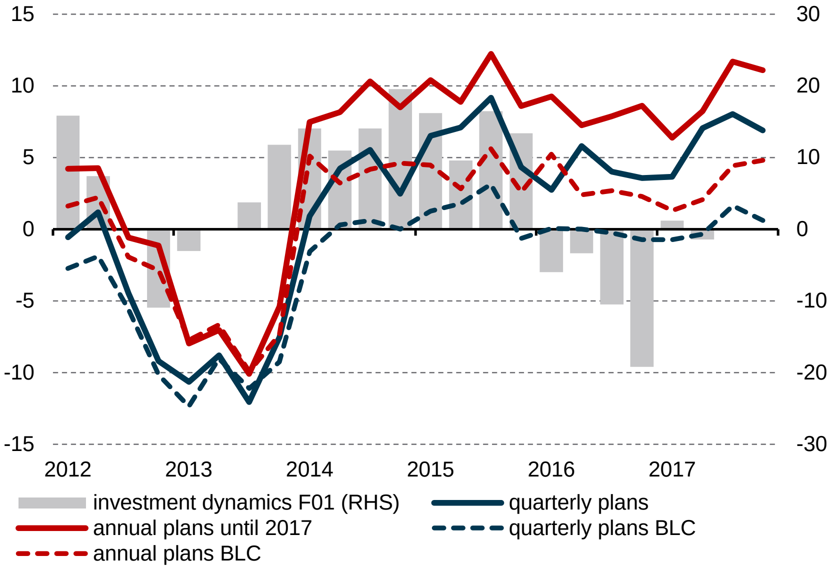
Source: Quick Monitoring NBP, GUS data.



Źródło: Szybki Monitoring NBP.

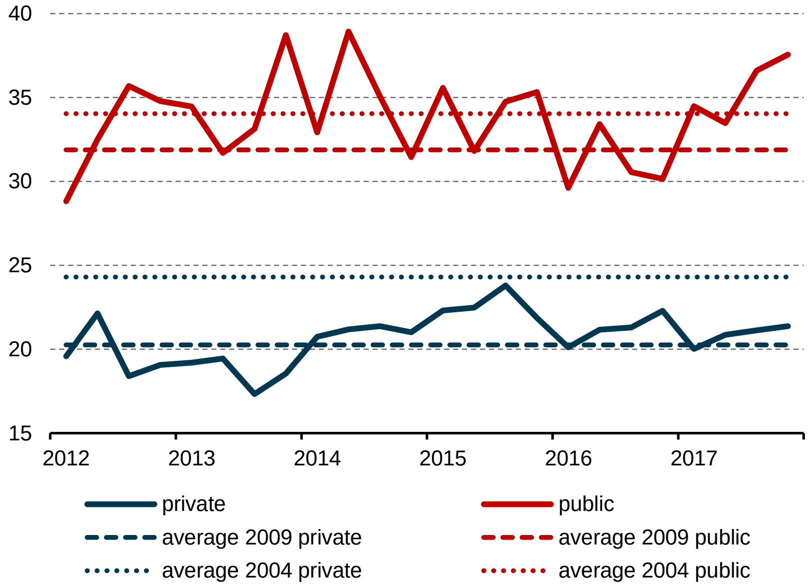
Companies plan to increase investment expenditure

Planned changes in investment outlays



Planned change of investment in the quarter-on-quarter and in the current year-on-year. Balance of change, balance of large changes BLC (increase-decrease).

New investment index among sectors

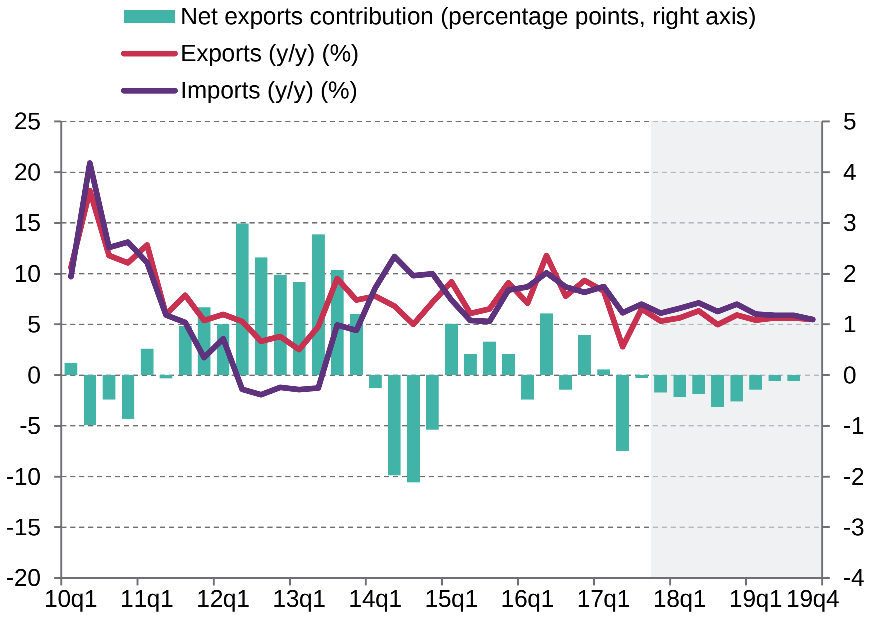


Share of companies planning new investments in the next quarter horizon.

Source: Quick Monitoring NBP, GUS data.

Foreign trade

Net exports will limit GDP growth



Exports:

⇧ High profitability of exporters (high price profitability)

⇩ Expected slowdown in the euro area growth.

⇩ Appreciation of the zloty exchange rate.

Imports:

⇧ In 2017 acceleration of consumption and investment dynamics.

⇩ Lower growth of inventories in the second half of 2017.

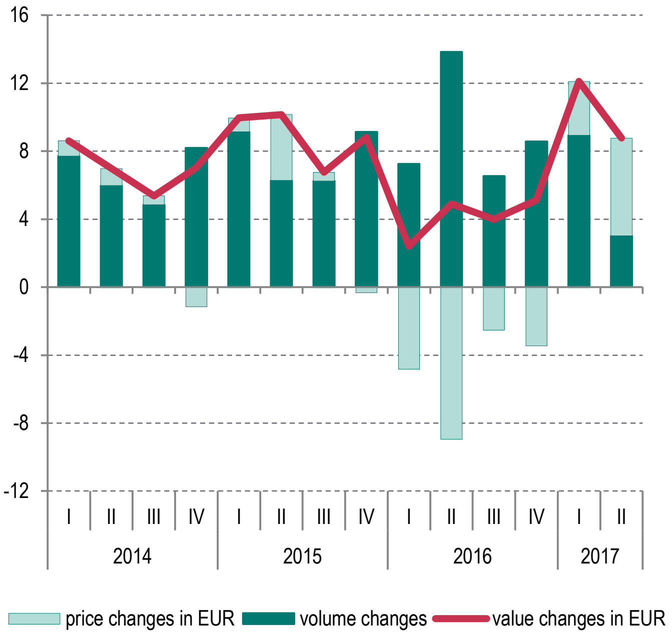
⇩ From 2018 slower domestic demand growth.

y/y pp.	2016	2017	2018	2019
Net exports contribution	0.3	-0.4	-0.5	-0.1

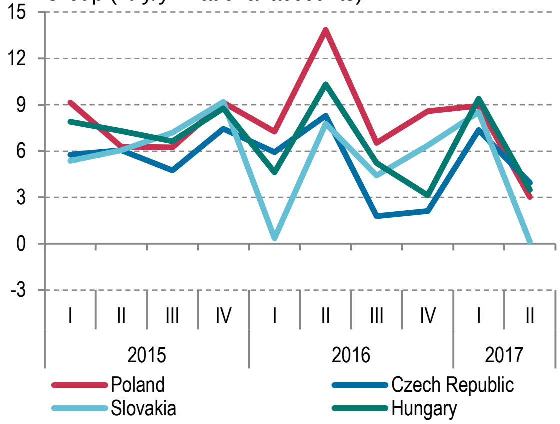
Source: GUS data, NBP calculations.

Changes in Polish exports

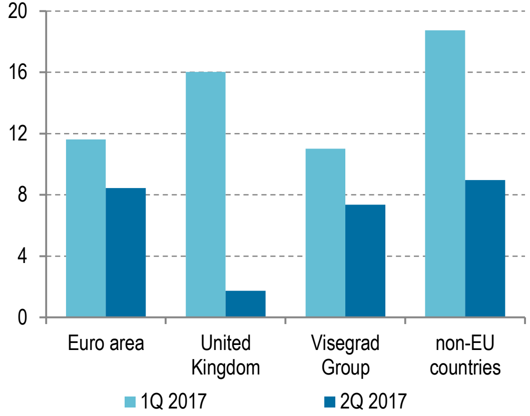
Dynamics of Polish exports - national accounts (% y/y)



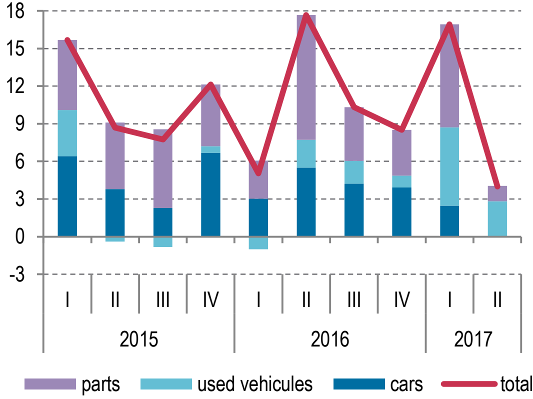
Changes in the volume of exports in the Visegrad Group (% y/y - national accounts)



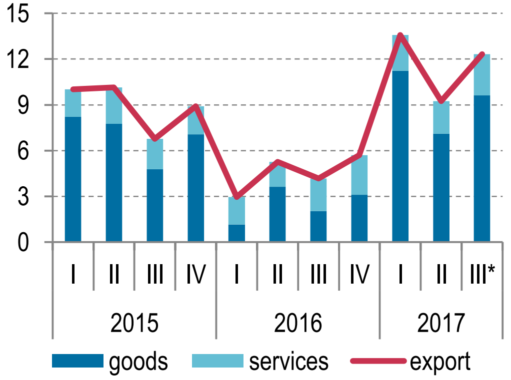
Changes in Polish exports by groups of countries (%, y/y, current prices, s.a.)



Export changes of the Polish automotive industry (% y/ y, current prices)



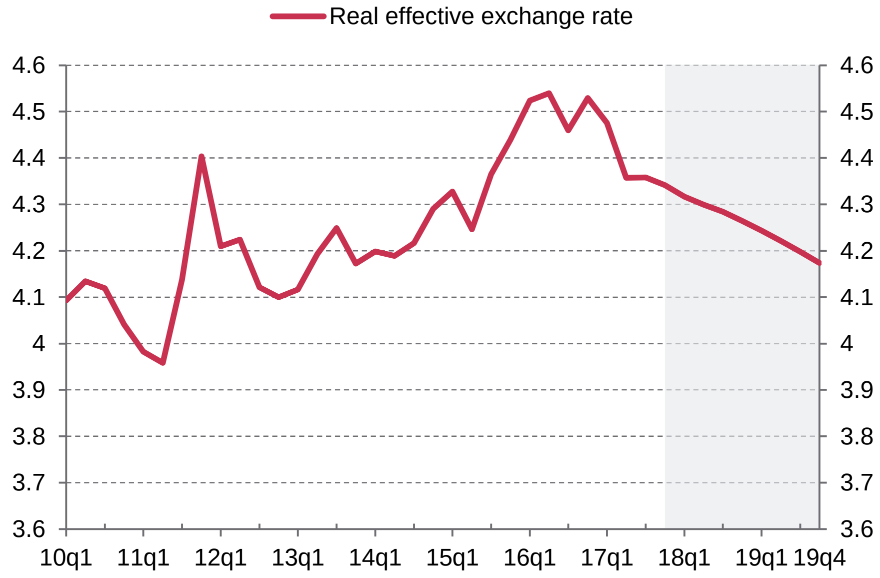
Changes in Polish exports according to Balance of Payments statistics (% y/y, current prices)



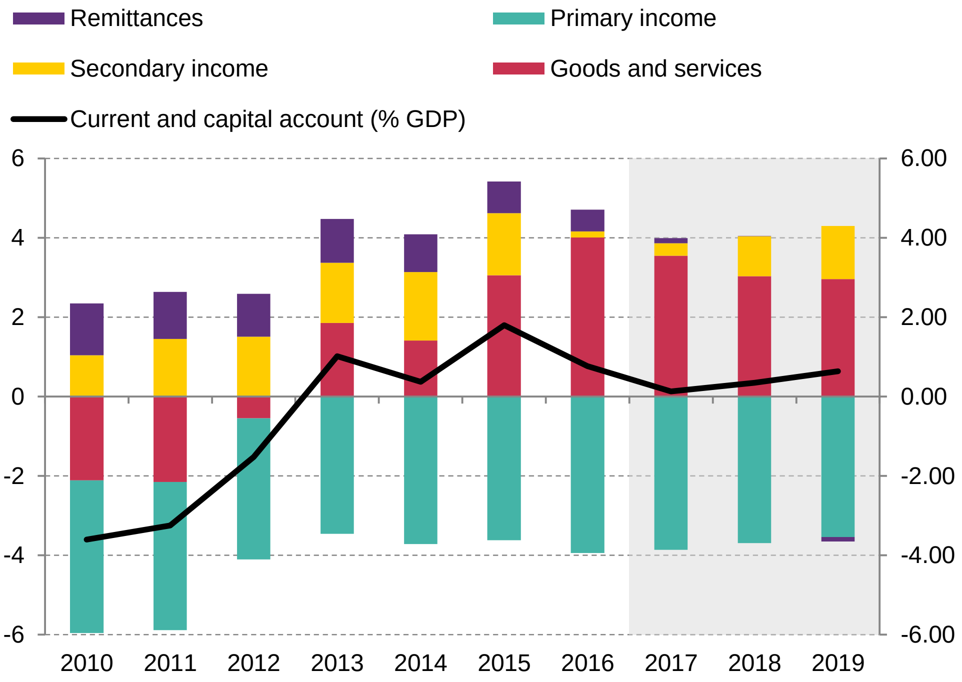
* *data include July and August*

Source: CPB data, Eurostat, Quick Monitoring NBP.

Gradual appreciation of the zloty



Positive current and capital account balance over the projection horizon



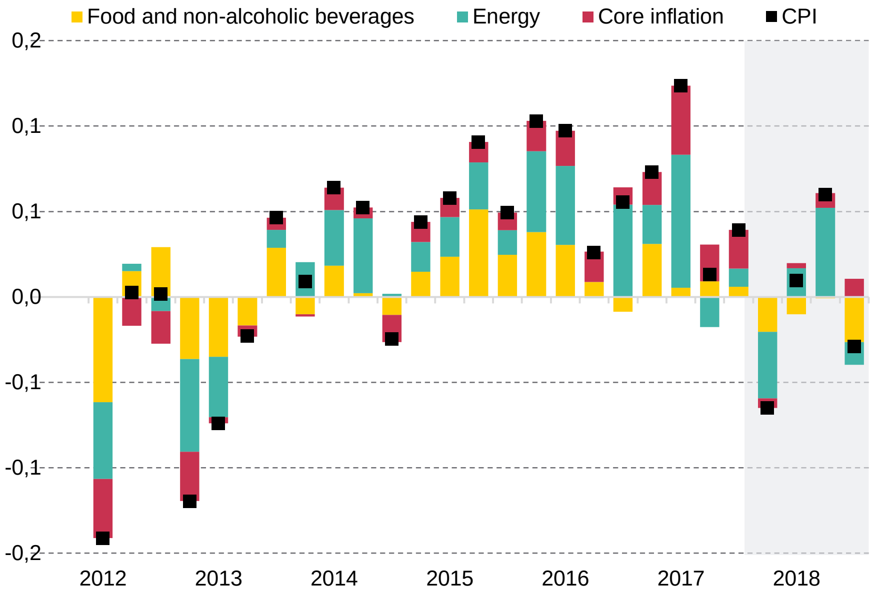
Source: GUS data, NBP calculations.

Inflation

At the turn of 2017/2018 lower CPI inflation due to the base effect

y/y, %	17q2		17q3	
CPI inflation	1.8	(1.9)	1.9	(2.1)
Core inflation	0.8	(0.8)	0.8	(1.2)
Food prices inflation	3.4	(3.7)	4.6	(4.2)
Energy prices inflation	3.1	(3.4)	1.9	(2.1)

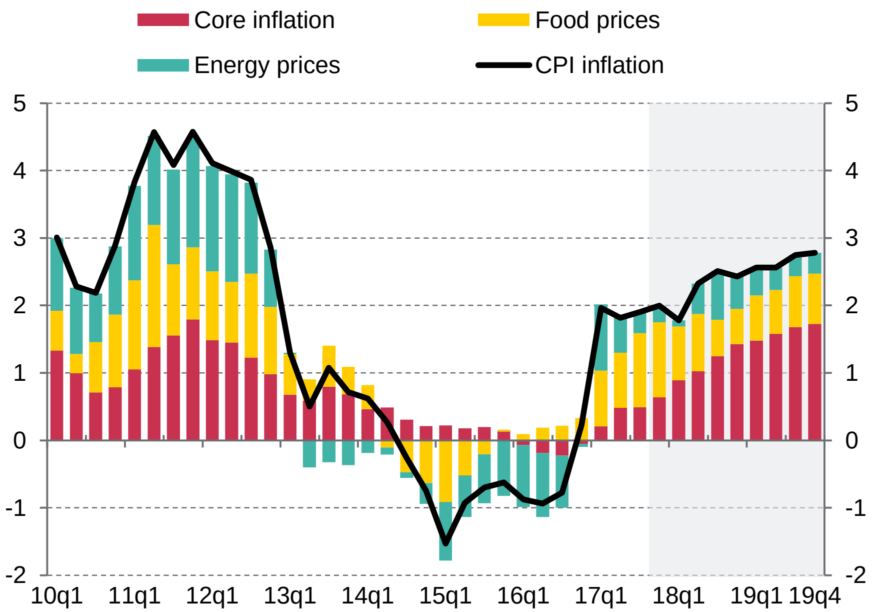
Base effect – the influence on CPI



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

Source: GUS data, NBP calculations.

Consumer prices dynamics gradually reaching inflation target

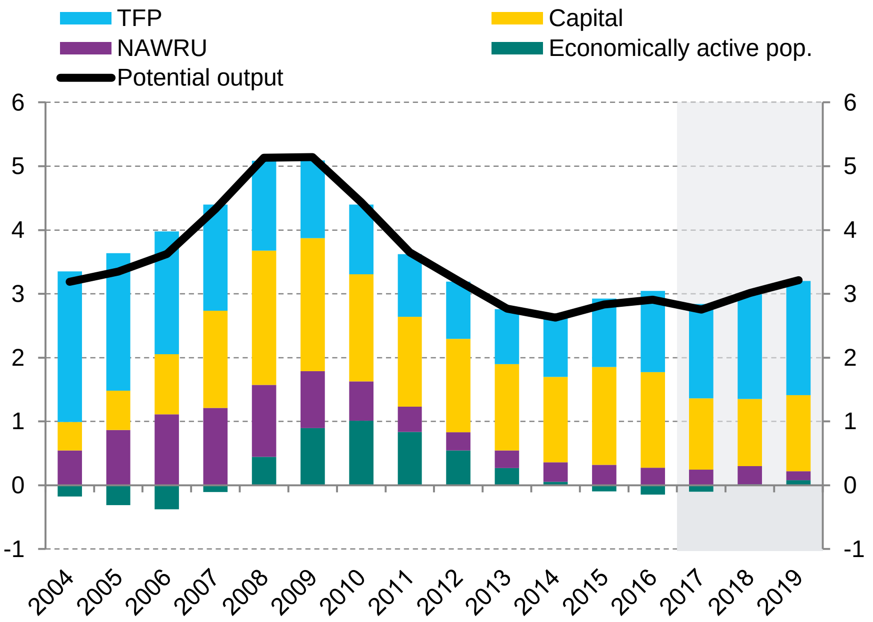


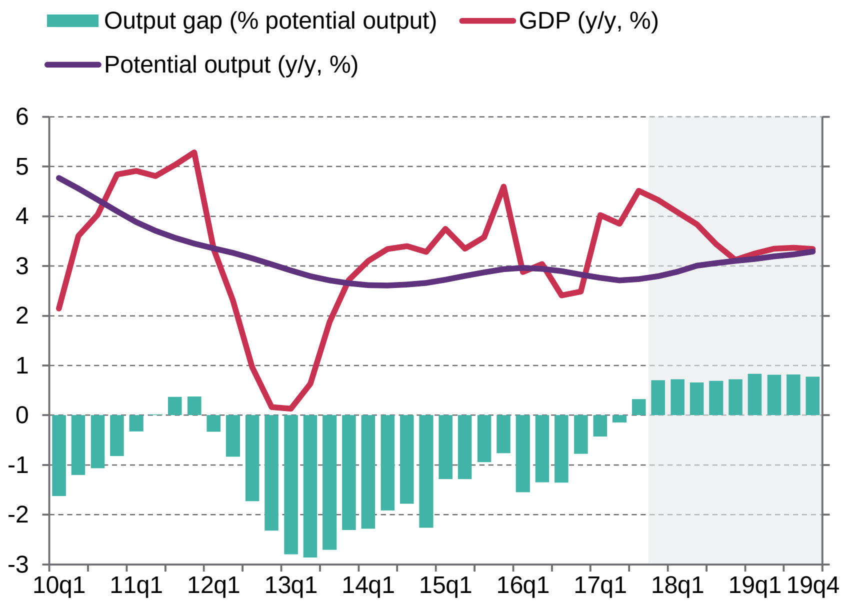
- ⇧ In 2017 - growth in food and energy prices supported by temporary factors.
- ⇧ Increase in cost pressure:
  - ⇧ dynamics of unit labour costs will accelarate,
  - ⇩ low inflation in the euro area ,
  - ⇩ Over the projection horizon, stabilization of global energy commodity prices combined with the forecasted depreciation of the US dollar, the currency in which commodities are quoted.
- ⇧ Increase in demand pressure – positive output gap (however, the sensitivity of price growth to changes in the domestic economic conditions has decreased in the recent years)

y/y, %	2016	2017	2018	2019
CPI inflation	-0.6	1.9	2.3	2.7

Source: GUS data, NBP calculations.

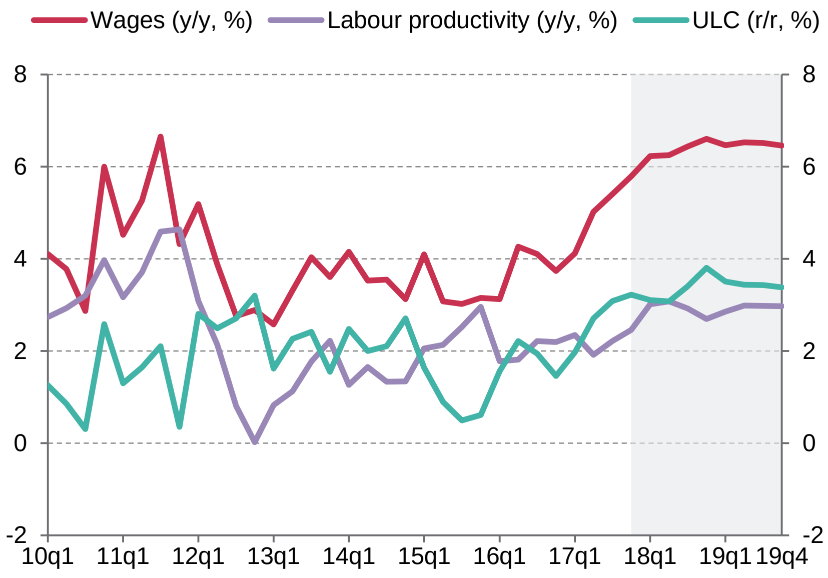
In the years 2018-2019 the output gap will not exceed 1% of potential output

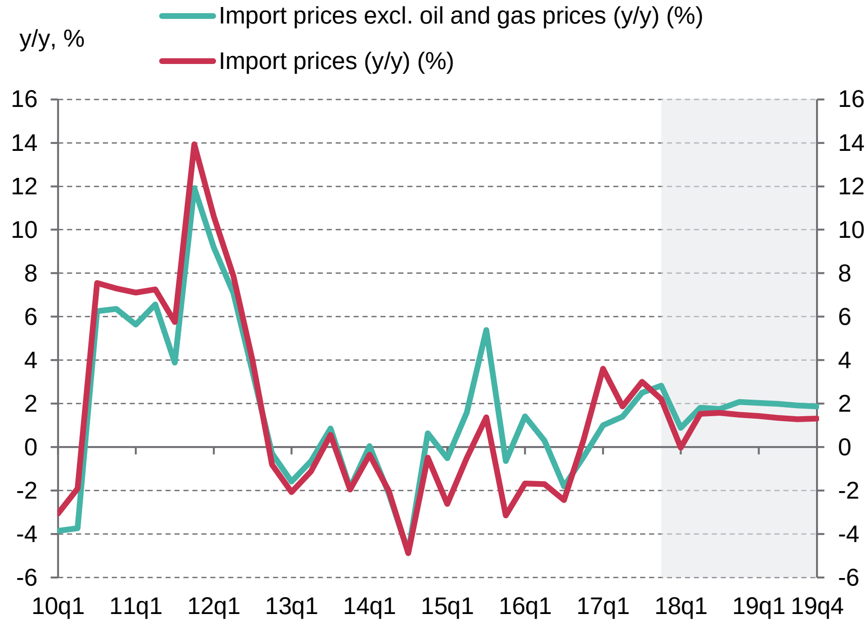




Source: GUS data, NBP calculations.

The impact of rising cost pressure in domestic market limited by the moderate growth in import prices

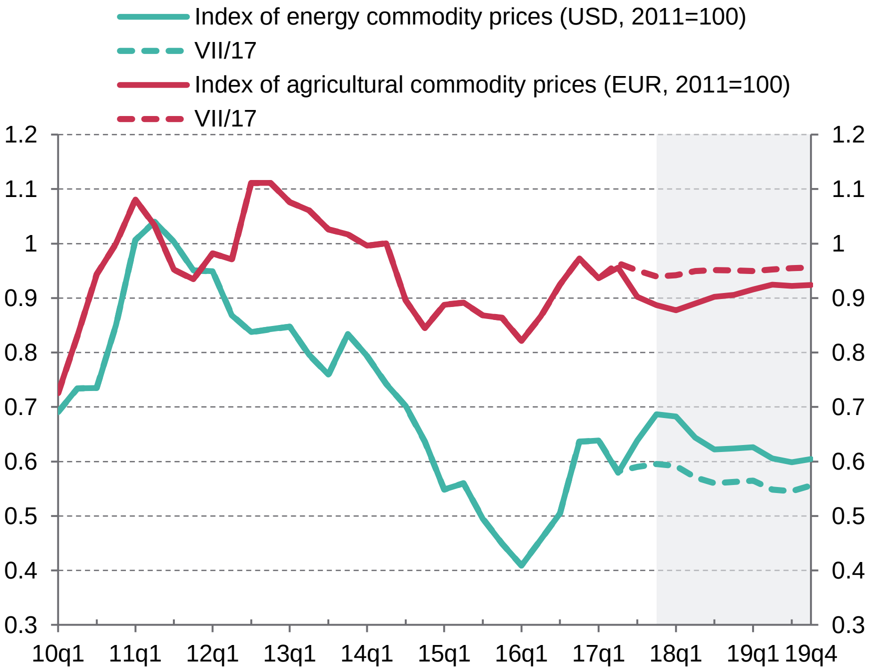


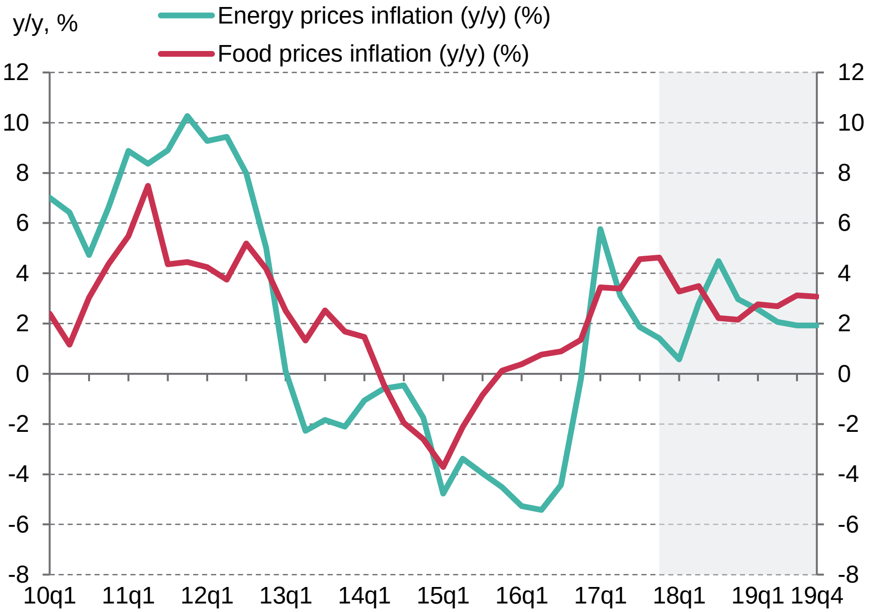


Source: GUS data, NBP calculations.

Energy commodity prices after a hike in the short term will gradually decrease

The index of agricultural commodity prices will stand at a low, but gradually increasing level





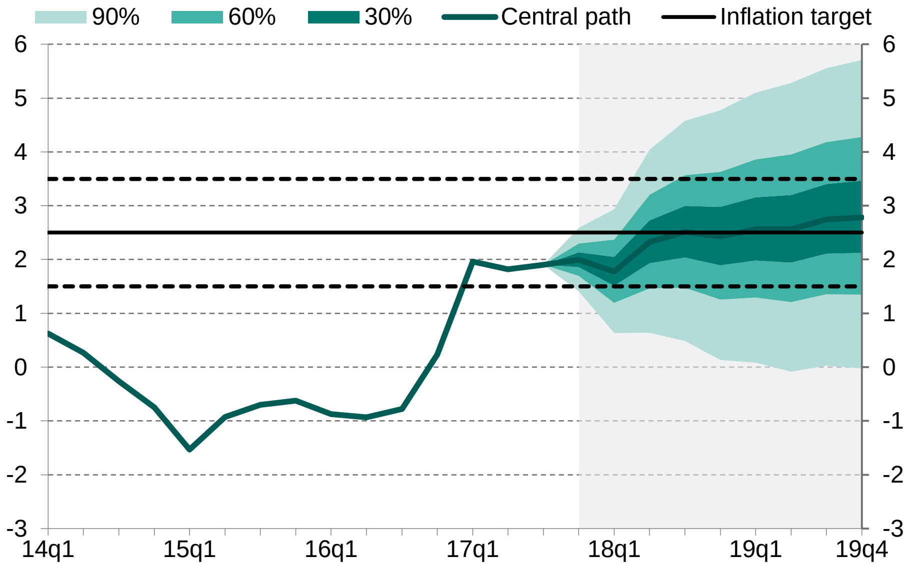
Source: GUS data, NBP calculations, Bloomberg, Reuters.

Uncertainty

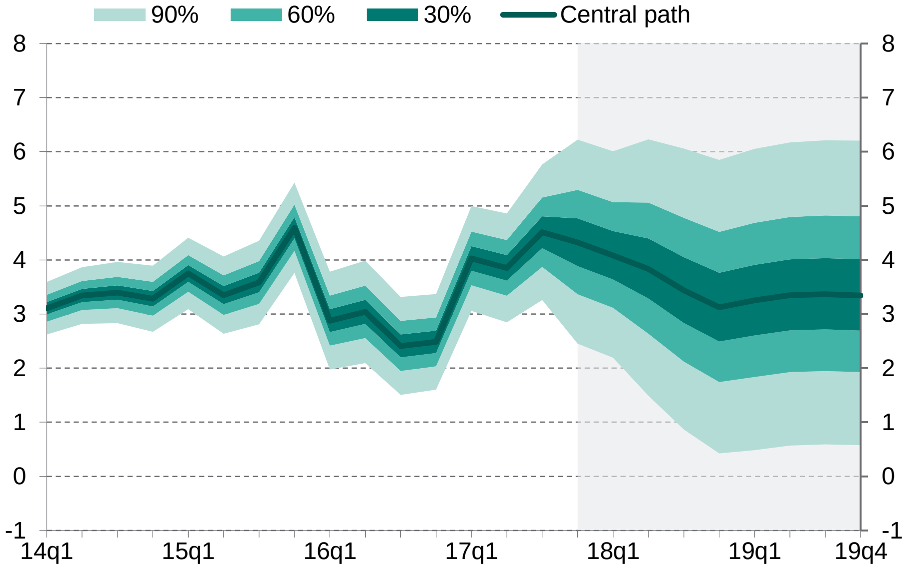
- Risk factors
- Fan charts

Risk area	Description	Impact	Scale of impact
Deterioration of global growth outlook	▪ Decline in the US economy (household and corporate sentiment deterioration as a result of a smaller scope of reforms or a delay in their implementation, stock market correction). ▪ Sentiment deterioration and stronger economic slowdown in the euro area (stability of the financial system, uncertainty concerning Brexit agreement, disintegration tendencies, elections in Italy). ▪ Escalation of tensions on the Korean Peninsula.	Inflation ⇩ GDP ⇩	**
Improvement in global economic conditions	▪ Higher economic growth in US (positive effect of fiscal stimulus and stronger improvement in household and corporate sentiment increasing faster growth of consumption and investment expenditure, increase in infrastructure expenditure). ▪ Higher economic growth in the euro area (higher dynamics of investment, stronger improvement in competitiveness due to structural reforms implemented in some of the member countries).	Inflation ⇧ GDP ⇧	**
Changes in labour supply	▪ Impact of lowering of retirement age on the labour participation rate – uncertain numer of people going into inactivity, depending on the labour market situation. ▪ Return migration of Poles. ▪ Scale of migration of Ukrainian citizens to Poland (incl. impact of the introduction of a visa-free regime in EU for Ukrainian citizens).	Inflation ⬄ GDP ⬄	*
Crude oil prices in the global markets	▪ Fluctuations in the oil supply in the global markets: - unknown shape of future OPEC's supply policy, - impact of the disturbance in Iraq's oil production due to the increase tensions after the independence referendum in Kurdistan. ▪ Global growth outlook, especially in the emerging Asian countries.	Inflation ⬄ GDP ⬄	*
Conclusions		Inflation ⬄ GDP ⬄	

CPI inflation y/y, %



GDP y/y, %



CPI y/y, %	below 1,5%	below 2,5%	below 3,5%	below centr. path	in the range 1,5-3,5%
2017	0%	100%	100%	50%	100%
2018	22%	59%	89%	49%	67%
2019	21%	45%	70%	49%	49%

CPI y/y, %	central path	50% probability interval	
2017	1.9	1.9	2.0
2018	2.3	1.6	2.9
2019	2.7	1.7	3.7

GDP y/y, %	central path	50% probability interval	
2017	4.2	3.8	4.6
2018	3.6	2.8	4.5
2019	3.3	2.3	4.3

Source: GUS data, NBP calculations.

We protect the value of money