



LATVIJAS REPUBLIKAS FISKĀLĀS DISCIPLĪNAS PADOME

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To _____ No _____

Mrs Baiba Bāne
State Secretary
Ministry of Finance
e-mail: pasts@fm.gov.lv

Mrs Inta Vasaraudze
The Director of
Department of Economic Analysis

On the endorsement of the macroeconomic indicator forecast with commentaries

Dear Mrs B. Bāne,
Dear Mrs I. Vasaraudze!

According to Article 20 of the Fiscal Discipline Law (hereafter – FDL) medium-term macroeconomic forecasts, including forecasts of growth rate of the gross domestic product (hereafter – GDP), deflator forecasts of the GDP and forecasts of growth rate of the potential GDP shall be developed by the Ministry of Finance (hereafter – MoF). According to the Article 28, Part 2 of the FDL, the Fiscal Discipline Council (hereafter – Council) shall perform an independent assessment of potential GDP and nominal GDP calculation by the MoF.

Article 4, Part 4 of the Regulation (EU) Nr.473/2013 (21 May 2013) of the European Parliament and the Council on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area, stipulates that draft annual state budget and draft medium term budget framework (hereafter – MTBF) shall be based on independent macroeconomic forecasts that are prepared or endorsed by independent bodies.

According to the Memorandum of Understanding (hereafter – MoU) between the MoF and the Council, signed on 8 February 2016, the Council shall assume the responsibility of the independent body and endorse the MoF macroeconomic forecasts twice a year – (i) while preparing the Stability Programme, and (ii) the annual state budget and the MTBF.

The first version of the macroeconomic forecast for drafting *Latvia's Stability Programme (hereafter – SP) 2018-2021* was provided to the Council by the MoF on 5 February 2018, and later on 8 February 2018 with incorporated changes to the macroeconomic framework suggested by external consultations with the Ministry of Economics and the Bank of Latvia.

The MoF's macroeconomic forecast was presented and discussed at the Council meeting with the MoF on 9 February 2018. As a result of the discussion, **the Council did not agree with the 2017 output gap as 0.1% of potential GDP**, asking the MoF to clarify macroeconomic projections.

On 12 February 218 the Council received the updated macroeconomic projections by the MoF – adjusting the potential GDP growth and output gap for 2016-2025, and ***decided to endorse the macroeconomic indicators forecast for the purposes of preparing the SP 2018-2021*** (for the list of the endorsed macroeconomic indicators see Table 1 below) ***with such commentaries***:

The Council draws attention to the fact that the inflation forecast for 2019-2021 has been developed relatively cautiously. The Council finds substantial risks of prices accelerating mostly because of the labour market conditions and the steady wage growth. Wage growth and accelerating inflation beyond the current MoF's forecasts would highlight deterioration of productivity and result as lower economic growth potential and would indicate widening positive output gap.

The Council expresses its gratitude for the smooth co-operation and data exchange with colleagues from the MoF.

| | 2018 | 2019 | 2020 | 2021 |
|------------------------------------|------------|------------|------------|------------|
| Real GDP growth | 4.0 | 3.4 | 3.0 | 2.9 |
| Nominal GDP growth | 7.2 | 6.5 | 5.8 | 5.4 |
| Inflation (consumer prices) | 2.8 | 2.4 | 2.1 | 2.1 |
| GDP deflator | 3.1 | 3.0 | 2.7 | 2.5 |
| Potential GDP growth | 3.4 | 3.4 | 3.3 | 3.3 |
| Output gap | 1.1 | 1.0 | 0.7 | 0.3 |

Table 1. Endorsed macroeconomic indicators by the Council.

Annex: opinion on the Ministry of Finance's macroeconomic forecast.

Kind regards,

Council chairman

J. Platais

OPINION ON THE MINISTRY OF FINANCE'S MACROECONOMIC FORECAST

This document presents the opinion of the Fiscal Discipline Council (hereafter - the Council) on the macroeconomic forecast prepared by the Ministry of Finance (hereafter – MoF) that will be used for drafting Latvia's Stability Programme (hereafter – SP) 2018/21, which is scheduled to be submitted to the Saeima on mid-April 2018. An early review and endorsement of the MoF's macroeconomic projections by the Council has been agreed upon to support the efforts of the Government during the preparation of the annual SP and the medium term budget framework (hereafter – MTBF).

According to the Memorandum of Understanding, signed on 8 February 2016, the Council has a responsibility to endorse MoF's macroeconomic forecast. The Council assessed the forecast as a whole, and provides an endorsement of the key macroeconomic indicators, which are outlined below. During the endorsement process the Council was presented with detailed information on MoF's forecast (please see annex), such as the gross domestic product (hereafter – GDP) structure and development scenarios of GDP components. The Council has consulted with external experts to gain a comprehensive understanding of the developments in Latvia's economy.

The Council has a mandate to endorse the forecast of macroeconomic indicators according to the scope of Article 20 of the Fiscal discipline law (indicators are summarised in Table 3 at the end of this document).

| | 2018 | 2019 | 2020 | 2021 |
|---------------------------|------------|------------|------------|------------|
| Real GDP growth | | | | |
| MoF (Feb 2018) | 4.0 | 3.4 | 3.0 | 2.9 |
| BoL* (Dec 2017) | 4.1 | 3.2 | – | – |
| EC (Feb 2018) | 3.5 | 3.2 | – | – |
| IMF (Oct 2017) | 3.9 | 3.5 | 3.2 | 3.1 |
| Nominal GDP growth | | | | |
| MoF (Feb 2018) | 7.2 | 6.5 | 5.8 | 5.4 |
| BoL (Dec 2017) | – | – | – | – |
| EC (Nov 2017) | 6.9 | 6.5 | – | – |
| IMF (Oct 2017) | 7.0 | 5.9 | 5.5 | 5.4 |
| Inflation | | | | |
| MoF (Feb 2018) | 2.8 | 2.4 | 2.1 | 2.1 |
| BoL (Dec 2017) | 2.9 | 2.6 | – | – |
| EC (Feb 2018) | 3.1 | 2.9 | – | – |
| IMF (Oct 2017) | 3.0 | 2.5 | 2.4 | 2.3 |
| GDP deflator | | | | |
| MoF (Feb 2018) | 3.1 | 3.0 | 2.7 | 2.5 |
| BoL (Dec 2017) | – | – | – | – |
| EC (Nov 2017) | 3.4 | 3.2 | – | – |
| IMF (Oct 2017) | 3.0 | 2.4 | 2.3 | 2.2 |
| Output gap | | | | |
| MoF (Feb 2018) | 1.1 | 1.0 | 0.7 | 0.3 |
| BoL (Dec 2017) | – | – | – | – |
| EC (Nov 2017) | 2.1 | 1.4 | – | – |
| IMF (Oct 2017) | – | – | – | – |

Table 1 Key macroeconomic indicator forecasts by various institutions, % y-o-y. Data sources: MoF, BoL, EC, IMF.

**Seasonal and calendar unadjusted.*

human resources in certain industries. Non-accelerating wage rate of unemployment (NAWRU) or the natural unemployment provided by MoF for the SP 2018/21 is forecasted well above the actual unemployment forecasts. Forecasted actual unemployment level decreases in 2018 to 8% (the NAWRU forecast for 2018 is 9.7%), in 2019 to 7.7% (NAWRU 9.4%), in 2020 to 7.2% (NAWRU 8.8%), and in 2021

The MoF macroeconomic forecast of real gross domestic product (hereafter – GDP) growth, nominal GDP growth, inflation and GDP deflator is largely in line with the forecasts of the European Commission (hereafter – EC), the International Monetary Fund (hereafter – IMF) and the Bank of Latvia's (hereafter – BoL) (Table 1). However, there is an exception of assumptions regarding the output gap – the EC forecasts by 1.4 percentage points higher output gap in 2018 and by 0.5 percentage points higher in 2019, nevertheless both institutions highlight positive output gap.¹

After a better than expected economic performance in 2017, growth is likely to remain solid in the European Union (hereafter – EU). Increase in the GDP both private consumption and EU-funded investments contribute to the growth acceleration. Global goods prices have been driven by a moderate recovery in energy prices and wage increase.

Decreasing unemployment (lowest since 2009) has been pushing up wages. Unemployment rate is forecasted to decrease towards 7.0% by 2021, which is at the level of 2006. This indicates increasing difficulties in attracting the necessary

¹ European Commission Autumn 2017 Economic Forecast. Available at: https://ec.europa.eu/info/sites/info/files/saee_autumn_2017_en.pdf, accessed on 08.02.2018.

to 7.0% (NAWRU 8.4%). Low unemployment level continues the pressure to raise wages. This may lead to the risk of inflation being higher than forecasted, we return to this issue later in the opinion.

The Council endorses the real GDP growth forecast for SP 2018/21. Compared to the previous forecast in August 2017, which was prepared for the MTBF 2018/20, the real GDP growth rate has been raised by 0.6 percentage points in 2018 and 0.2 percentage points in 2019, but lowered by 0.2 percentage points in 2020 (Chart 1). The forecast for nominal GDP growth rates together with GDP deflator has been raised for all years.

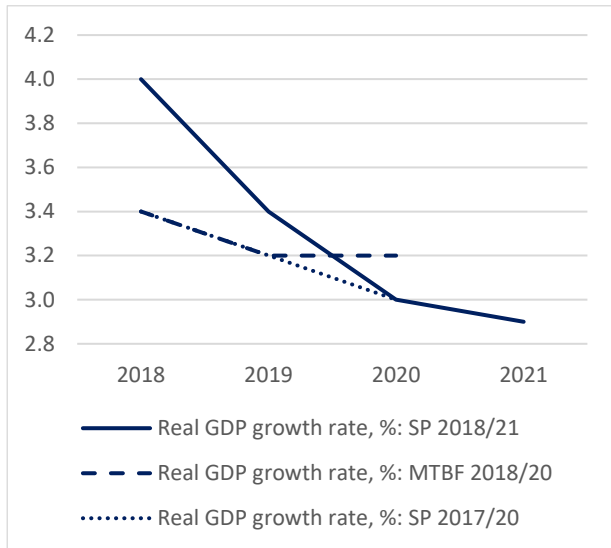


Chart 1 Forecast for real GDP growth, y-o-y.
Data source: MoF.

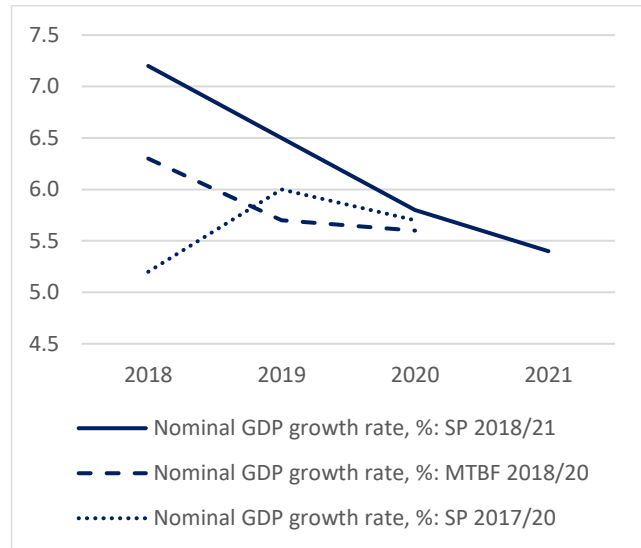


Chart 2 Forecast for nominal GDP growth, y-o-y.
Data source: MoF.

The Council endorses the nominal GDP growth forecast for the SP 2018/21. The MoF has further raised the nominal GDP growth forecast for 2018 to 2021 (Chart 2). The revisions are mainly related to considerable revisions of GDP deflator.

The Council endorses the change in the consumer price index (hereafter – CPI) (inflation) forecast for the SP 2018/21. In 2017, the CPI has increased by 2.9% (annual raise according to European statistics, Eurostat), and it has slightly overreached the previously expected level of 2.8%. Therefore, since August 2017, there are no changes made to the inflation forecast (Chart 3).

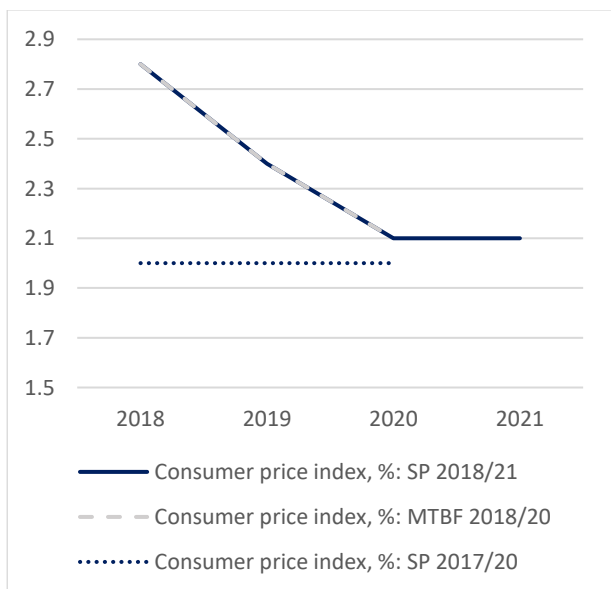


Chart 3 Forecast for inflation, y-o-y.
Data source: MoF.

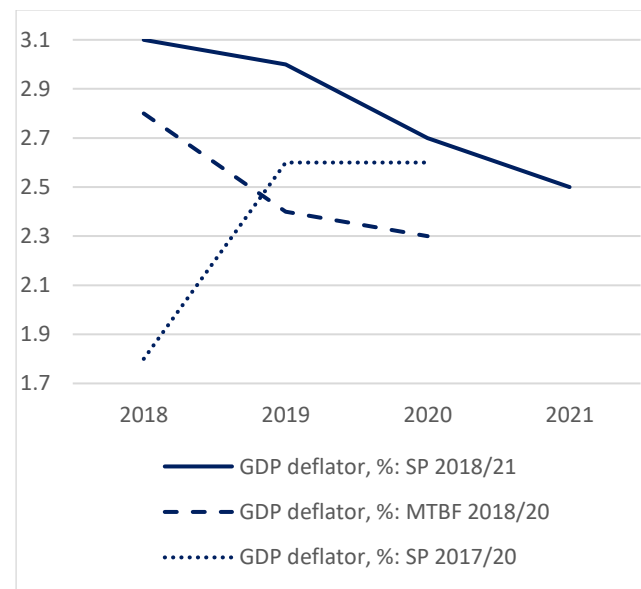


Chart 4 Forecast for GDP deflator, y-o-y.
Data source: MoF.

The Council endorses the GDP deflator forecast for the SP 2018/21. The GDP deflator forecast has been revised upwards by 0.3 percentage points in 2018, 0.6 percentage points in 2019 and 0.4 percentage points in 2020 (Chart 4).

The Council endorses the potential GDP growth and output gap forecast for the SP 2018/21 with comments. Since the previous endorsement of macroeconomic forecasts (please see Table 2 below), potential GDP growth has been revised upwards by 0.4 percentage points in 2018 and 2019. A 3.3% growth rate has been set for 2020 and 2021, 3.0% for 2022 and 2023, and 2.8% for 2024 and 2025 (the expanded time horizon is necessary for further calculations of the expenditure benchmark).

The pressure to the wage growth from the labour market remains high (unemployment forecasts remain significantly below the NAWRU forecasts) and therefore inflation outcome and forecasts might be significantly higher than the current MoF's forecasts, particularly for 2020-2021. The Council notes that faster increase of wages and inflation also will demand lower potential GDP growth and higher positive output gap. In situation when the inflation outcome and wage growth will be higher than current forecasts the Council will ask the MoF to update the potential GDP growth and output gap forecasts.

| | 2018 | 2019 | 2020 | 2021 |
|---|------------|------------|-------------|------------|
| Potential GDP growth (August 2017) | 3.0 | 3.0 | 3.0 | |
| Potential GDP growth (February 2018) | 3.4 | 3.4 | 3.3 | 3.3 |
| changes in potential GDP | 0.4 | 0.4 | 0.3 | |
| Output gap (August 2017) | 0.3 | 0.5 | 0.8 | |
| Output gap (February 2018) | 1.1 | 1.0 | 0.7 | 0.3 |
| changes in output gap | 0.4 | 0.5 | -0.1 | |

Table 2 Changes in potential GDP growth and output gap forecasts since August 2017, %.

Average potential GDP growth rate from 2018 to 2025 is above 3.0% threshold. The Council notes that the projected potential GDP growth over the eight-year period above the 3% threshold is high and there are significant constraints on the potential GDP growth in Latvia in the long run above 2.5%².

The Council finds the economy of Latvia in positive output gap in 2017 and the trend continuing strongly in 2018. The business cycle is on an upswing with strong confidence, high employment, and increasing pressure on wage inflation. Cyclical factors have been the key contributors for the economic growth, which cannot last without adequate structural changes enabling increase in productivity.

The Council finds substantial risks of prices accelerating mostly because of the labour market conditions and the steady wage growth. Wage growth and accelerating inflation beyond the current MoF's forecasts would highlight deterioration of productivity and result as lower economic growth potential and would indicate widening positive output gap.

² Fiscal sustainability report 2017-2037. Available at: <http://fiscalcouncil.lv/fiscal-sustainability-report-2017-2037>, accessed on 08.02.2018.

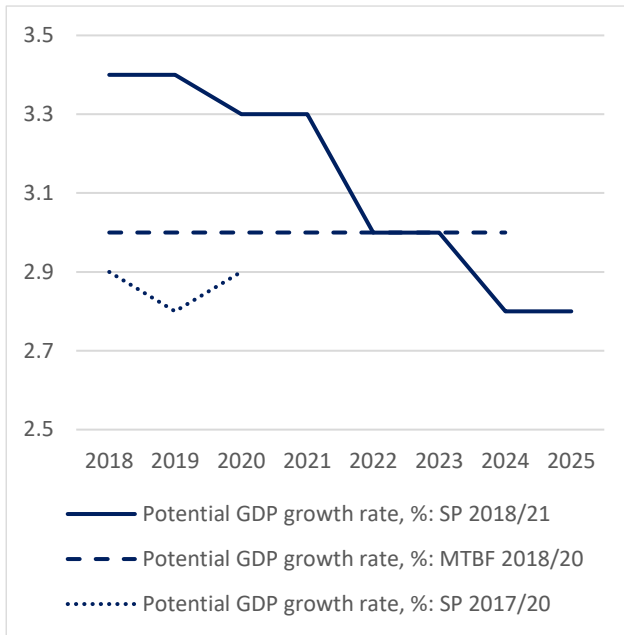


Chart 5 Potential GDP growth, %, y-o-y.
Data source: MoF.

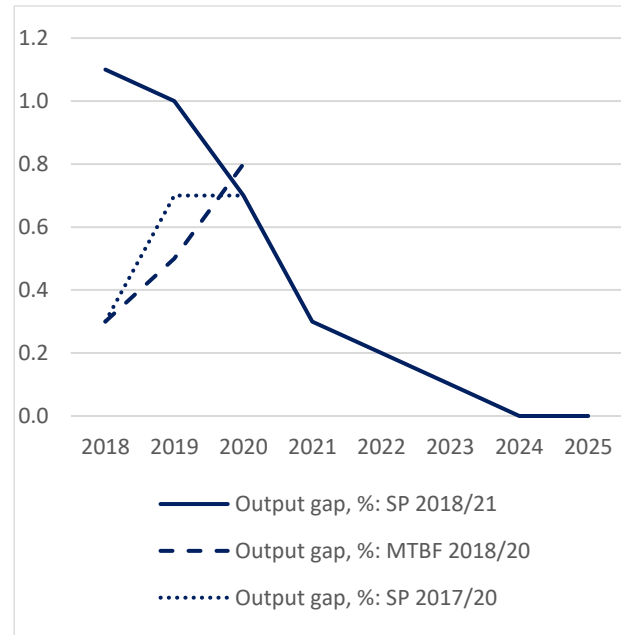


Chart 6 Output gap, % of potential GDP.
Data source: MoF.

| | 2018 | 2019 | 2020 | 2021 |
|------------------------------------|------------|------------|------------|------------|
| Real GDP growth | 4.0 | 3.4 | 3.0 | 2.9 |
| Nominal GDP growth | 7.2 | 6.5 | 5.8 | 5.4 |
| Inflation (consumer prices) | 2.8 | 2.4 | 2.1 | 2.1 |
| GDP deflator | 3.1 | 3.0 | 2.7 | 2.5 |
| Potential GDP growth | 3.4 | 3.4 | 3.3 | 3.3 |
| Output gap | 1.1 | 1.0 | 0.7 | 0.3 |

Table 3 Macroeconomic forecast indicators endorsed by the Council.

Broadly, the Council considers the MoF's macroeconomic forecasts to be realistic and endorses them, while the price inflation and wage growth should be watched as an evidence of lower growth potential and widening positive output gap. In addition, the Council:

1. Reiterates its recommendation to improve the sensitivity analysis for the SP 2018/21 by incorporating in the tables of both optimistic and pessimistic scenarios the following indicators:
 - a. Real GDP growth rate;
 - b. Total budget revenue;
 - c. Budget balance;
 - d. Budget deficit.
2. Has performed an evaluation of macroeconomic forecast since 2004 (see Annex) and recommend the MoF to begin a regular self-assessment of macroeconomic forecasting that would help of data revisions in the future.

Prepared in cooperation with SIA "Ernst & Young Baltic" in accordance with the contract signed on 15 September 2017 for the provision of macroeconomic expert advisory services. Available at: http://fdp.gov.lv/files/uploaded/FDP_1_15_1427_20170915_FDP2017_3_Ligums_makro.pdf

Makroekonomiskie rādītāji / Macroeconomic indicators

| | | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|--|--|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|
| Nr. | Rādītājs | Indicator | Mērvienība / Unit | | | | | | | | | | | | |
| | | | t-4 | t-3 | t-2 | t-1 | t | t+1 | t+2 | t+3 | t+4 | t+5 | t+6 | t+7 | t+8 |
| Iekšzemes kopprodukts (IKP) | | | Gross domestic product (GDP) expenditure perspective | | | | | | | | | | | | |
| 1 | Reālais IKP | Real GDP | tūkst. / thsd. EUR | 20 365 | 20 754 | 21 343 | 21 786 | 22 771 | 23 689 | 24 487 | 25 220 | 25 949 | | | |
| 2 | Nominālais IKP | Nominal GDP | tūkst. / thsd. EUR | 22 832 | 23 682 | 24 353 | 24 927 | 26 867 | 28 814 | 30 690 | 32 474 | 34 238 | | | |
| 3 | IKP pieaugums salīdzināmās cenās | Real GDP growth | % | 2.6 | 1.9 | 2.8 | 2.1 | 4.5 | 4.0 | 3.4 | 3.0 | 2.9 | | | |
| 4 | IKP pieaugums faktiskajās cenās | Nominal GDP growth | % | 4.3 | 3.7 | 2.8 | 2.4 | 7.8 | 7.2 | 6.5 | 5.8 | 5.4 | | | |
| IKP izdevumu aspekts: rādītāji salīdzināmās cenās | | | GDP expenditure perspective: real figures | | | | | | | | | | | | |
| 5 | Privātais patēriņš | Private consumption | tūkst. / thsd. EUR | 12 766 | 12 942 | 13 266 | 13 703 | 14 418 | 15 301 | 15 838 | 16 286 | 16 705 | | | |
| 6 | Valdības patēriņš | Government consumption | tūkst. / thsd. EUR | 3 460 | 3 525 | 3 590 | 3 689 | 3 840 | 3 959 | 4 069 | 4 181 | 4 289 | | | |
| 7 | Bruto kapitāla veidošana | Gross capital formation | tūkst. / thsd. EUR | 4 936 | 4 521 | 4 614 | 4 588 | 5 698 | 6 215 | 6 567 | 6 962 | 7 383 | | | |
| 8 | ..bruto pamatkapitāla veidošana | ..gross fixed capital formation | tūkst. / thsd. EUR | 4 637 | 4 640 | 4 617 | 3 926 | 4 618 | 5 135 | 5 597 | 5 992 | 6 413 | | | |
| 9 | ..krājumu pārmaiņas | ..inventories | tūkst. / thsd. EUR | 299 | -119 | -3 | 662 | 1 080 | 1 080 | 970 | 970 | 970 | | | |
| 10 | Preču un pakalpojumu eksports | Exports of goods and services | tūkst. / thsd. EUR | 11 967 | 12 682 | 13 060 | 13 593 | 14 132 | 14 691 | 15 265 | 15 838 | 16 432 | | | |
| 11 | Preču un pakalpojumu imports | Imports of goods and services | tūkst. / thsd. EUR | 12 764 | 12 916 | 13 189 | 13 787 | 15 316 | 16 477 | 17 252 | 18 047 | 18 859 | | | |
| IKP izdevumu aspekts: pieaugums salīdzināmās cenās | | | GDP expenditure perspective: growth in real figures | | | | | | | | | | | | |
| 12 | Privātais patēriņš | Private consumption | % | 5.0 | 1.4 | 2.5 | 3.3 | 5.2 | 6.1 | 3.5 | 2.8 | 2.6 | | | |
| 13 | Valdības patēriņš | Government consumption | % | 1.6 | 1.9 | 1.9 | 2.7 | 4.1 | 3.1 | 2.8 | 2.8 | 2.6 | | | |
| 14 | Bruto kapitāla veidošana | Gross capital formation | % | -4.6 | -8.4 | 2.1 | -0.6 | 24.2 | 9.1 | 5.7 | 6.0 | 6.0 | | | |
| 15 | ..bruto pamatkapitāla veidošana | ..gross fixed capital formation | % | -6.0 | 0.1 | -0.5 | -15.0 | 17.6 | 11.2 | 9.0 | 7.1 | 7.0 | | | |
| 16 | ..krājumu pārmaiņas | ..change in inventories | - | - | - | - | - | - | - | - | - | - | | | |
| 17 | Preču un pakalpojumu eksports | Exports of goods and services | % | 1.1 | 6.0 | 3.0 | 4.1 | 4.0 | 4.0 | 3.9 | 3.8 | 3.8 | | | |
| 18 | Preču un pakalpojumu imports | Imports of goods and services | % | 0.4 | 1.2 | 2.1 | 4.5 | 11.1 | 7.6 | 4.7 | 4.6 | 4.5 | | | |
| IKP izdevumu aspekts: rādītāji faktiskajās cenās | | | GDP expenditure perspective: nominal figures | | | | | | | | | | | | |
| 19 | Privātais patēriņš | Private consumption | tūkst. / thsd. EUR | 14 039 | 14 469 | 14 679 | 15 320 | 16 638 | 18 151 | 19 240 | 20 200 | 21 155 | | | |
| 20 | Valdības patēriņš | Government consumption | tūkst. / thsd. EUR | 4 022 | 4 136 | 4 358 | 4 493 | 4 814 | 5 112 | 5 411 | 5 708 | 5 994 | | | |
| 21 | Bruto kapitāla veidošana | Gross capital formation | tūkst. / thsd. EUR | 5 579 | 5 419 | 5 440 | 4 891 | 6 136 | 6 846 | 7 462 | 8 138 | 8 801 | | | |
| 22 | ..bruto pamatkapitāla veidošana | ..gross fixed capital formation | tūkst. / thsd. EUR | 5 291 | 5 337 | 5 384 | 4 538 | 5 405 | 6 187 | 6 900 | 7 548 | 8 241 | | | |
| 23 | ..krājumu pārmaiņas | ..change in inventories | tūkst. / thsd. EUR | 288 | 81 | 56 | 353 | 732 | 658 | 562 | 590 | 560 | | | |
| 24 | Preču un pakalpojumu eksports | Exports of goods and services | tūkst. / thsd. EUR | 13 741 | 14 346 | 14 690 | 14 966 | 16 228 | 17 596 | 19 069 | 20 635 | 22 330 | | | |
| 25 | Preču un pakalpojumu imports | Imports of goods and services | tūkst. / thsd. EUR | 14 550 | 14 687 | 14 815 | 14 742 | 16 950 | 18 891 | 20 492 | 22 208 | 24 043 | | | |
| Deflatori | | | Deflators | | | | | | | | | | | | |
| 26 | IKP deflators, gads pret gadu | GDP deflator, year on year | % | 1.7 | 1.8 | 0.0 | 0.3 | 3.1 | 3.1 | 3.0 | 2.7 | 2.5 | | | |
| 27 | Privātā patēriņa deflators | Private consumption deflator | % | 0.3 | 1.7 | -1.0 | 1.0 | 3.2 | 2.8 | 2.4 | 2.1 | 2.1 | | | |
| 28 | Valdības patēriņa deflators | Government consumption deflator | % | 4.2 | 1.0 | 3.5 | 0.3 | 2.9 | 3.0 | 3.0 | 2.7 | 2.4 | | | |
| 29 | Bruto kapitāla veidošanas deflators | Capital formation deflator | % | 2.1 | 6.0 | -1.6 | -9.6 | 1.0 | 2.3 | 3.2 | 2.9 | 2.0 | | | |
| 30 | ..bruto pamatkapitāla veidošanas deflators | ..gross fixed capital formation deflator | % | 1.4 | 0.8 | 1.4 | -0.9 | 1.3 | 2.9 | 2.3 | 2.2 | 2.0 | | | |
| 31 | ..krājumu pārmaiņu deflators | ..change in inventories deflator | - | - | - | - | - | - | - | - | - | - | | | |
| 32 | Preču un pakalpojumu eksporta deflators | Exports of goods and services deflator | % | 1.3 | -1.5 | -0.6 | -2.1 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | | | |
| 33 | Preču un pakalpojumu importa deflators | Imports of goods and services deflator | % | 0.7 | -0.2 | -1.2 | -4.8 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 | | | |

Makroekonomiskie rādītāji / Macroeconomic indicators

| | | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | |
|---|---|---|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Devums reālajai IKP izaugsmei | | Contribution to real GDP growth | | | | | | | | | | | | | | |
| 34 | Privātais patēriņš | Private consumption | % | 3.1 | 0.9 | 1.6 | 2.0 | 3.3 | 3.9 | 2.3 | 1.8 | 1.7 | | | | |
| 35 | Valdības patēriņš | Government consumption | % | 0.3 | 0.3 | 0.3 | 0.5 | 0.7 | 0.5 | 0.5 | 0.5 | 0.4 | | | | |
| 36 | Bruto kapitāla veidošana | Gross capital formation | % | -1.2 | -2.0 | 0.4 | -0.1 | 5.1 | 2.3 | 1.5 | 1.6 | 1.7 | | | | |
| 37 | ..bruto pamatkapitāla veidošana | ..gross fixed capital formation | % | -1.5 | 0.0 | -0.1 | -3.2 | 3.2 | 2.3 | 1.9 | 1.6 | 1.7 | | | | |
| 38 | ..krājumu pārmaiņas | ..change in inventories | % | 0.3 | -2.0 | 0.6 | 3.1 | 1.9 | 0.0 | -0.5 | 0.0 | 0.0 | | | | |
| 39 | Preču un pakalpojumu eksports | Exports of goods and services | % | 0.6 | 3.5 | 1.8 | 2.5 | 2.5 | 2.5 | 2.4 | 2.3 | 2.4 | | | | |
| 40 | Preču un pakalpojumu imports | Imports of goods and services | % | -0.2 | -0.7 | -1.3 | -2.8 | -7.0 | -5.1 | -3.3 | -3.2 | -3.2 | | | | |
| Patēriņa cenu indekss | | Consumer price index | | | | | | | | | | | | | | |
| 41 | Patēriņa cenu indekss, gads pret gadu | Consumer price index, year on year | % | -0.1 | 0.6 | 0.2 | 0.1 | 2.9 | 2.8 | 2.4 | 2.1 | 2.1 | | | | |
| IKP ienākumu aspekts | | GDP income perspective | | | | | | | | | | | | | | |
| 42 | Pārpalikums un jauntais kopienākums | Gross operating surplus | tūkst. / thsd. EUR | 11 064 | 10 956 | 10 608 | 10 403 | 11 220 | 11 968 | 12 791 | 13 577 | 14 337 | | | | |
| 43 | Darbinieku atalgojums | Compensation of employees | tūkst. / thsd. EUR | 9 416 | 10 093 | 10 908 | 11 574 | 12 477 | 13 490 | 14 299 | 15 085 | 15 824 | | | | |
| 44 | ..darba alga | ..wages | tūkst. / thsd. EUR | 7 797 | 8 401 | 9 091 | 9 599 | 10 339 | 11 178 | 11 849 | 12 501 | 13 113 | | | | |
| 45 | ..darba devēju sociālās iemaksas | ..social contributions | tūkst. / thsd. EUR | 1 619 | 1 692 | 1 818 | 1 975 | 2 138 | 2 311 | 2 450 | 2 584 | 2 711 | | | | |
| 46 | Ražošanas un importa nodokļi | Taxes on products and imports | tūkst. / thsd. EUR | 3 028 | 3 248 | 3 388 | 3 611 | 3 883 | 4 122 | 4 415 | 4 674 | 4 987 | | | | |
| 47 | Subsīdijas | Subsidies | tūkst. / thsd. EUR | -676 | -616 | -551 | -662 | -713 | -765 | -815 | -862 | -909 | | | | |
| Iedzīvotāji un darba tirgus | | Population and labour | | | | | | | | | | | | | | |
| 48 | Iedzīvotāju kopskaits | Total population | tūkst. / thsd. | 2 024 | 2 001 | 1 986 | 1 969 | 1 950 | 1 935 | 1 919 | 1 904 | 1 890 | | | | |
| 49 | Iedzīvotāju kopskaita pieaugums | Population growth | % | -1.0 | -1.1 | -0.8 | -0.9 | -1.0 | -0.8 | -0.8 | -0.8 | -0.7 | | | | |
| 50 | Iedzīvotāji darbspējas vecumā | Working age population | tūkst. / thsd. | 1 536 | 1 496 | 1 473 | 1 450 | 1 423 | 1 402 | 1 387 | 1 375 | 1 365 | | | | |
| 51 | Ekonomiski aktīvie iedzīvotāji | Economically active population | tūkst. / thsd. | 1 014 | 992 | 994 | 989 | 981 | 974 | 971 | 965 | 962 | | | | |
| 52 | Nodarbināto skaits | Number of persons employed | tūkst. / thsd. | 894 | 885 | 896 | 893 | 895 | 896 | 896 | 896 | 895 | | | | |
| 53 | Nodarbināto skaita pieaugums | Growth of number of persons employed | % | 2.1 | -1.0 | 1.3 | -0.3 | 0.2 | 0.1 | 0.0 | 0.0 | -0.1 | | | | |
| 54 | Līdzdalības līmenis | Participation rate | % | 66.0 | 66.3 | 67.5 | 68.2 | 68.9 | 69.5 | 70.0 | 70.2 | 70.5 | | | | |
| 55 | Bezdarba līmenis | Unemployment rate | % | 11.9 | 10.8 | 9.9 | 9.6 | 8.8 | 8.0 | 7.7 | 7.2 | 7.0 | | | | |
| 56 | Bezdarba līmenis, kas neietekmē algu, % | NAWRU | %, y-o-y | 14.1 | 12.9 | 11.3 | 11.4 | 11.1 | 10.3 | 9.7 | 9.4 | 8.8 | | | | |
| Algas un produktivitāte | | Wages and productivity | | | | | | | | | | | | | | |
| 57 | Vidējā bruto alga | Average gross wage | EUR | 716 | 765 | 818 | 859 | 923 | 997 | 1 057 | 1 115 | 1 171 | | | | |
| 58 | Vidējās bruto algas pieaugums | Average gross wage growth | % | 4.5 | 6.8 | 6.9 | 5.0 | 7.5 | 8.0 | 6.0 | 5.5 | 5.0 | | | | |
| 59 | Reālās produktivitātes pieaugums | Real productivity growth | % | 0.5 | 3.0 | 1.5 | 2.4 | 4.3 | 3.9 | 3.4 | 3.0 | 3.0 | | | | |
| Potenciālais IKP un izlaižu starpība | | Potential GDP and output gap | | | | | | | | | | | | | | |
| 60 | Potenciālais IKP 2010. gada cenās | Potential GDP in the prices of 2010 | MIO EUR | 20 304 | 20 785 | 21 386 | 21 929 | 22 664 | 23 435 | 24 243 | 25 055 | 25 870 | 26 646 | 27 445 | 28 225 | 29 015 |
| 61 | Potenciālā IKP pieaugums | | %, y-o-y | 2.1 | 2.4 | 2.9 | 2.5 | 3.3 | 3.4 | 3.4 | 3.3 | 3.3 | 3.0 | 3.0 | 2.8 | 2.8 |
| 62 | Darbaspēka devums | Potential labour | % | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| 63 | Kapitāla devums | Potential capital stock | % | 2.4 | 2.3 | 2.2 | 1.5 | 2.1 | 2.2 | 2.2 | 2.1 | 2.0 | | | | |
| 64 | Faktoru produktivitātes devums | Potential total factor productivity (TFP) | % | -0.3 | 0.2 | 0.7 | 1.1 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 | | | | |
| 65 | Izlaižu starpība | Potential TFP growth | % | 0.3 | -0.1 | -0.2 | -0.7 | 0.5 | 1.1 | 1.0 | 0.7 | 0.3 | 0.2 | 0.1 | 0.0 | 0.0 |
| 66 | Izlaižu starpība | Output gap | MIO EUR | 2 528 | 2 897 | 2 967 | 2 997 | 4 203 | 5 380 | 6 447 | 7 418 | 8 369 | | | | |

ANNEX

Evaluation of the Annual Macroeconomic Forecasts¹

The internationally recognized best practice in public finance management includes regular evaluation of the macroeconomic forecasts that are used in the fiscal planning. The aim is, first, to assure the transparency and accountability of the public governance and, second, to improve the forecasting based on objective analysis of the predictive model performance. The target of this evaluation is to analyse the accuracy of the Ministry's of Finance annual macroeconomic forecasts in order to improve the medium term fiscal policy planning. The evaluation starts with the outline of results, followed by methodological explanations of forecast error calculations.

RESULTS

Since 2013, one to four-year ahead GDP growth rate forecasts have been higher than actual outturns, while the current year GDP growth has been slightly underestimated. Looking at the trends of the GDP growth rate forecast errors, the time horizon can be divided in four periods. From 2004 to 2009, the GDP growth rate forecasts were lower the actual outturns. Since 2010, the trend changed to the opposite – the actual GDP decrease was larger than expected. During the economic recovery, the forecasts were below the actual outturns again, but since 2013, the one to four-year ahead forecasts have been too optimistic. These trends apply to both nominal and real GDP growth rates (see Charts 1 and 2 below).

Since 2013, annual current year inflation forecasts have been close to zero percent, and one to four-year ahead forecasts have been expected to exceed the 2% threshold, but the inflation target has not been reached yet. Until 2008, the expected inflation was lower than the actual outturns, e.g., from 2004 to 2006, the one to four-year ahead inflation forecasts were below 6%, but the inflation rate in fact exceeded 10% in 2007 and 15% in 2008. Since 2013, the one to four-year ahead inflation forecasts have been above the inflation target of 2%, but the target has not been reached yet, and the inflation rate has stabilized below 1% (see Chart 4).

| Forecast errors 2004-2016 | Current year forecast (T) | | | One-year ahead forecast (T+1) | | | Two-year ahead forecast (T+2) | | | Three-year ahead forecast (T+3) | | |
|-----------------------------------|------------------------------|------|------|----------------------------------|------|-------|----------------------------------|------|-------|------------------------------------|------|-------|
| | ME | MAE | RMSE | ME | MAE | RMSE | ME | MAE | RMSE | ME | MAE | RMSE |
| Nominal GDP growth | 1,18 | 2,06 | 2,82 | 0,28 | 7,57 | 10,62 | -1,45 | 9,48 | 13,08 | -3,49 | 7,73 | 12,33 |
| Real GDP growth | 0,12 | 1,18 | 1,93 | -1,36 | 4,48 | 7,14 | -2,96 | 5,51 | 8,95 | -4,37 | 5,55 | 9,32 |
| GDP deflator | 1,01 | 1,08 | 1,37 | 1,55 | 4,10 | 5,01 | 1,45 | 5,28 | 6,36 | 0,90 | 4,42 | 6,08 |
| Inflation (PCI) | -0,02 | 0,30 | 0,48 | 0,78 | 3,15 | 3,90 | 1,17 | 4,14 | 5,25 | 0,95 | 3,51 | 5,06 |

Table 1. Error estimates for macroeconomic indicators forecasted by MoF (Council's calculations)

Neither the regular revision of actual data by the Central Statistical Bureau nor the transition to the new European System of National and Regional Accounts have changed the overall trends of forecast errors. Because of the revision of the actual data, large difference between the first actual outturn and data as of today (according to ESA 95) is observed in 2007 - nominal GDP growth rate

¹ Annex is prepared in cooperation with Ernst & Young Baltic Ltd. according to the agreement on macroeconomic consultation services, available online (in Latvian):

http://fdp.gov.lv/files/uploaded/FDP_1_15_1427_20170915_FDP2017_3_Ligums_makro.pdf

increased by 7,4 percentage points and GDP deflator increased by 7 percentage points. In 2013/2014, the European System of National and Regional Accounts was changed from ESA 95 to ESA 2010, the largest difference has appeared for the real GDP growth rate and GDP deflator in 2009 – the indicators changed by 3,3 percentage point increase and 8,4 percentage point decrease respectively.

| Real GDP growth rate forecast errors | Mean error | | | Mean absolute error | | | Root mean squared error | | |
|--------------------------------------|--------------|----------------|----------------|---------------------|----------------|----------------|-------------------------|----------------|----------------|
| | Current Year | One-year Ahead | Two-year Ahead | Current Year | One-year Ahead | Two-year Ahead | Current Year | One-year Ahead | Two-year Ahead |
| | MoF (budget) | 0,123 | -1,358 | -2,964 | 1,185 | 4,475 | 5,509 | 1,934 | 7,143 |
| EC (spring) | 0,262 | -1,533 | N/A | 2,646 | 4,683 | N/A | 3,401 | 7,344 | N/A |
| EC (autumn) | 0,115 | -0,950 | -2,645 | 0,731 | 3,967 | 5,027 | 1,204 | 6,006 | 8,541 |

Table 2. Comparison of error estimates for real GDP forecasts by EC and MoF

Further, data visualisation is used to analyse the relevance of the data updates, it includes the first actual outturns, as well as data as of today (January 17, 2018) according to both ESA95² and ESA2010³.

| | | | |
|--|--|--------------------------------------|---------------------------------------|
| First actual outturn (taken from the attachment to the State budget) | Data as of today according to ESA 2010 | Data as of today according to ESA 95 | Annual macroeconomic forecasts by MoF |
|--|--|--------------------------------------|---------------------------------------|

Table 3. Curve designations in graphs below

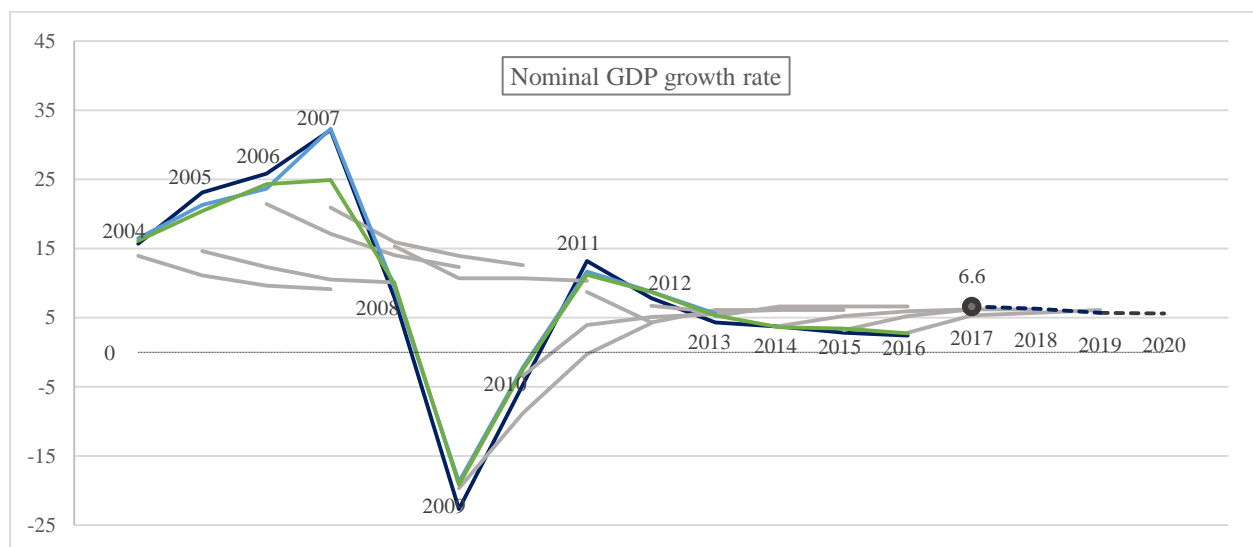


Chart 1 Nominal GDP growth rate, % - annual forecasts by MoF and actual outturns

² European system of national and regional accounts fully implemented in 1998, available online: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:European_system_of_national_and_regional_accounts_\(ESA95\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:European_system_of_national_and_regional_accounts_(ESA95))

³ European system of national and regional accounts fully implemented in 2014, available online: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:European_system_of_national_and_regional_accounts_\(ESA_2010\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:European_system_of_national_and_regional_accounts_(ESA_2010))

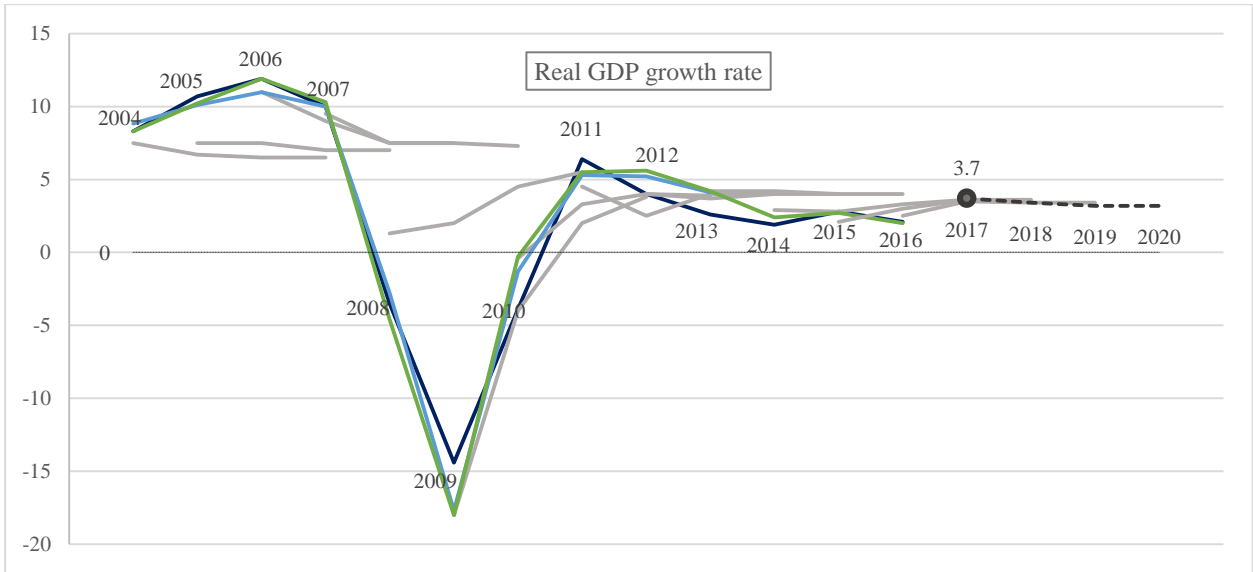


Chart 2 Real GDP growth rate, % - annual forecasts by MoF and actual outcomes

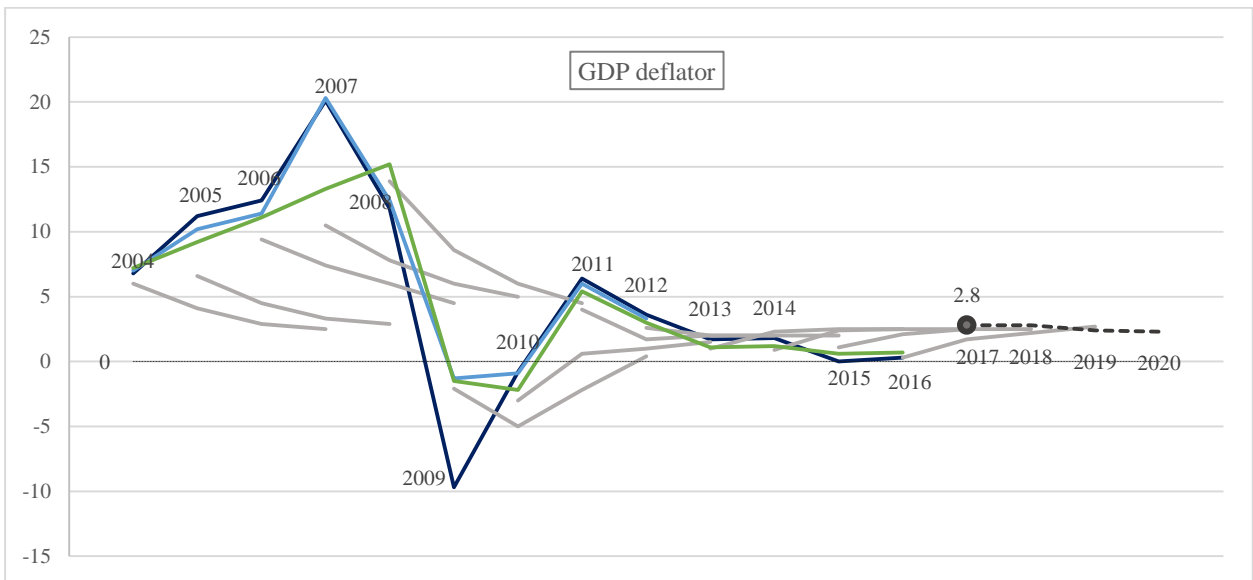


Chart 3 GDP deflator, % - annual forecasts by MoF and actual outcomes

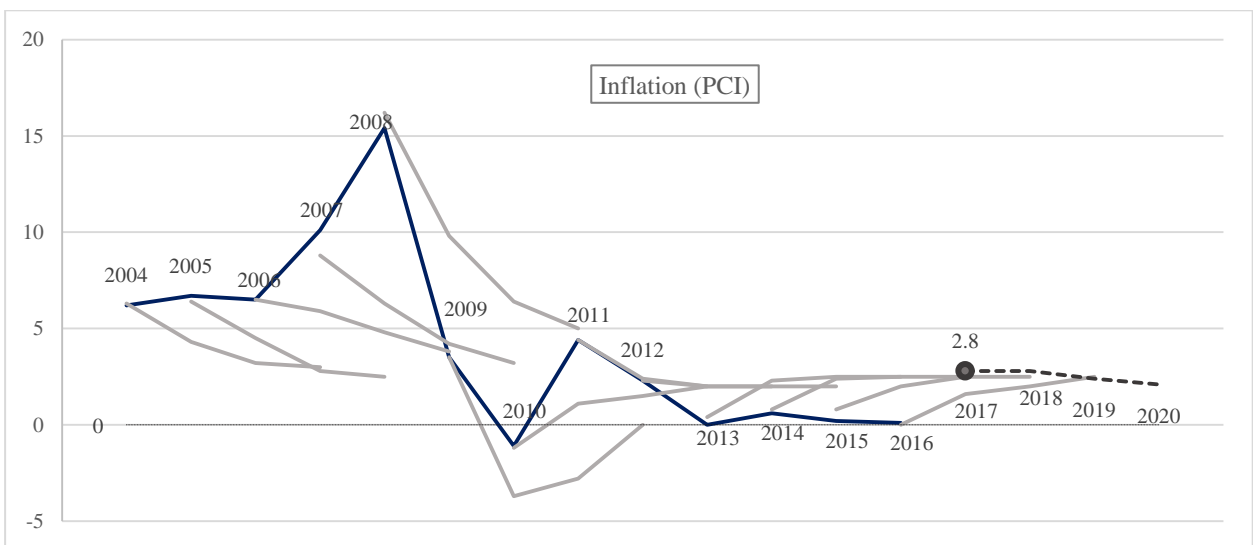


Chart 4 Inflation (PCI), % - annual forecasts by MoF and actual outcomes (do not change in time)

Ministry of Finance (MoF) has a well-developed macroeconomic forecasting methodology, but it implies similar patterns of forecast errors as European Commission (EC). MoF and EC have overestimated the real GDP growth rate in short term - both one-year and two-year ahead forecasts on average have been too optimistic (see negative ME in table 2). According to the findings by European Commission Directorate-General for Economic and Financial Affairs⁴ it is not only the EC but also OECD and IMF researchers too, who “practically never forecast a negative growth rate in the second year of their short term forecasts”.

This evaluation is prepared for the further use within the analysis of the fiscal policy planning. Real time macroeconomic data are vital in the understanding the economic cycle. However, for implementing the counter-cyclical fiscal policy the expectations of the macroeconomic data in the medium-term are as important as the actual outturns. This evaluation has analysed the accuracy of the macroeconomic forecasts by the Ministry of Finance since 2004. To conclude, whether the government has followed the counter-cyclical fiscal policy rules the further analysis should look at:

- The annually planned fiscal deficit (according to the medium-term State budget) and the actual State deficit data against the forecasted and actual macroeconomic indicators, to see, if the yearly deficit level tends to be counter-cyclical.
- Second, an evaluation of the State revenue and expenditure forecasts has to be carried out.

METHODOLOGY

An annual forecast of macroeconomic indicators plays an important role in the medium-term fiscal policy planning. Since 2016, Fiscal Discipline Council is responsible for the approval of the annual macroeconomic forecasts that are initially developed by Ministry of Finance. The macroeconomic forecast includes five indicators (nominal GDP growth, real GDP growth, GDP deflator, inflation (consumer price index) and potential GDP growth⁵), and is used in the further calculations within the Stability and Growth Pact⁶ and the medium term State budget. Therefore, the accuracy of the macroeconomic forecast has an influence on the fiscal policy planning, specifically on the counter-cyclical fiscal policy implementation.

This evaluation of the annual macroeconomic forecasts analyses the data since 2004, and it has two parts: first, forecasting accuracy is examined by calculating forecast errors and using data visualisation, second, the annual forecast of the real GDP growth rate by Ministry of Finance is compared with the forecast by European Commission. The data sources are the attachment *Main Macroeconomic Indicators* to the annual State budget (MoF forecast) and EC’s annual spring and autumn forecast reports.

The following error estimates are used to measure the accuracy of the macroeconomic forecasts.

1. Mean Error (ME)

It is the average error of difference between the actual (y_j) and forecasted (\hat{y}_j) values.

$$ME = \frac{1}{n} \sum_{j=1}^n (y_j - \hat{y}_j)$$

2. Mean Absolute Error (MAE)

It is the average error of absolute difference between the actual (y_j) and forecasted (\hat{y}_j) values.

⁴ EC (2017) *Evaluating Medium Term Forecasting Methods and their Implications for EU Output Gap Calculations* Discussion Paper 070, ISSN: 2443-8022, available online: https://ec.europa.eu/info/sites/info/files/dp070_en.pdf

⁵ Potential GDP growth rate is a model-based estimate and, therefore, is not included in this evaluation.

⁶ Assessment of Latvia’s convergence programme according to Stability and Growth Pact, available online: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country/latvia/fiscal-surveillance-latvia_en

$$MAE = \frac{1}{n} \sum_{j=1}^n |y_j - \hat{y}_j|$$

3. Root Mean Squared Error (RMSE)

It is the sample standard deviation of the difference between actual (y_j) and forecasted (\hat{y}_j) values.

$$RMSE = \sqrt{\frac{1}{n} \sum_{j=1}^n (y_j - \hat{y}_j)^2}$$

MoF and EC use different forecast horizons, they vary from one-year ahead up to three-year ahead forecasts. EC has a forecasting horizon of two-years in spring and three-years in autumn both starting with the current year, while the annual macroeconomic forecast by MoF has the longest forecasting horizon of four-years starting with the current year.

In the fiscal planning the most recent data at the time are used, nevertheless the fact that actual data are regularly revised by the Central Bureau of Statistics. Therefore, forecast errors are calculated using the first actual outturns, which are published one year after the forecasted year and are used in the fiscal policy planning. The consequent report by the same author is used (see tables below).

| CURRENT YEAR | Year, when forecast is published | | | One year after | | | Two years after | Three years after |
|---------------------|----------------------------------|------|---------|------------------------|------|---------|-----------------|-------------------|
| | <i>Forecast for Year T</i> | | | <i>Actual Outturns</i> | | | - | - |
| Forecast error | April | June | October | April | June | October | | |
| EC (spring) | X | | | X | | | - | - |
| EC (autumn) | | | X | | | X | | |
| MoF (budget) | | X | | | X | | | |

Table 4. The data used for calculating the current year forecast error

| ONE-YEAR AHEAD | Year, when forecast is published | | | One year after | Two years after | | | Three years after |
|---------------------|----------------------------------|------|---------|----------------|------------------------|------|---------|-------------------|
| | <i>Forecast for Year T+1</i> | | | - | <i>Actual Outturns</i> | | | - |
| Forecast error | April | June | October | | April | June | October | |
| EC (spring) | X | | | - | X | | | - |
| EC (autumn) | | | X | | | | X | |
| MoF (budget) | | X | | | | X | | |

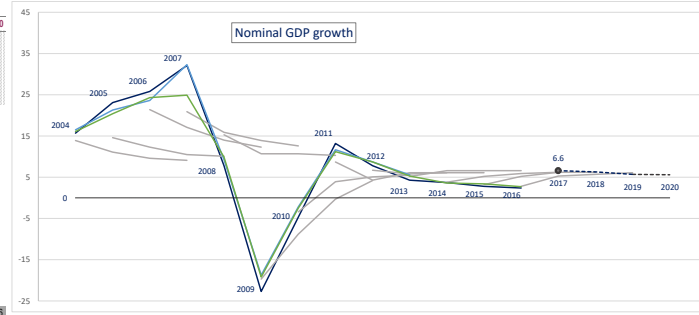
Table 5. The data used for calculating the year-ahead forecast error

| TWO-YEAR AHEAD | Year, when forecast is published | | | One year after | Two years after | Three years after | | |
|---------------------|----------------------------------|------|---------|----------------|-----------------|------------------------|------|---------|
| | <i>Forecast for Year T+2</i> | | | - | - | <i>Actual Outturns</i> | | |
| Forecast error | April | June | October | | | April | June | October |
| EC (spring) | N/A | | | - | - | | | |
| EC (autumn) | | | X | | | | | X |
| MoF (budget) | | X | | | | | X | |

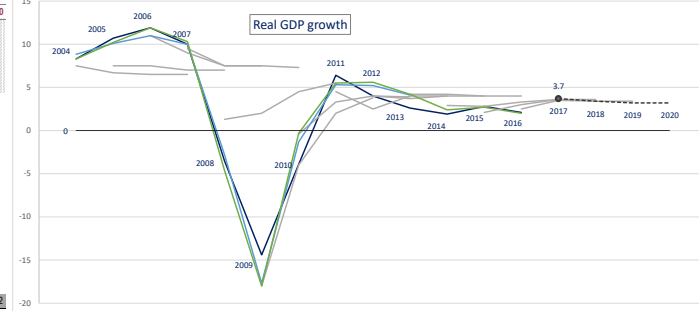
Table 6. The data used for calculating the two-year ahead forecast error

forecas
t

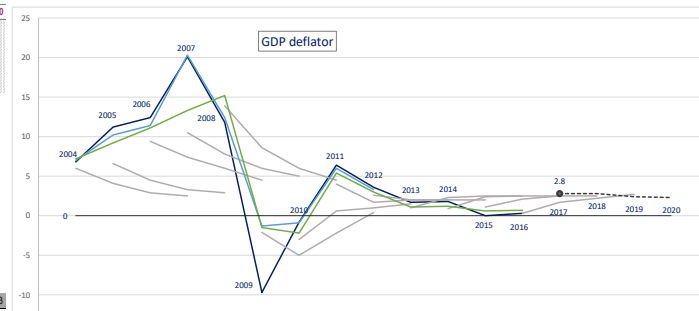
| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Nominal GDP growth (Actual, FM budget) | 16.1 | 20.4 | 24.3 | 24.9 | 9.9 | -19.2 | -2.5 | 11.2 | 8.7 | 5.3 | 3.6 | 3.4 | 2.7 | | | | |
| Nominal GDP growth (Actual, ESA2010) | 15.7 | 23.1 | 25.8 | 32.1 | 7.8 | -22.7 | -4.7 | 13.2 | 7.8 | 4.3 | 3.7 | 2.8 | 2.4 | | | | |
| Nominal GDP growth (Actual, ESA95) | 16.5 | 21.3 | 23.6 | 32.3 | 9.3 | -18.7 | -2.2 | 11.7 | 8.7 | 5.6 | | | | 6.6 | | | |
| 2017 Ministry of Finance | | | | | | | | | | | | | | | | | |
| 2004 | | 13.9 | | | | | | | | | | | | | | | |
| 2005 | | | 14.6 | | | | | | | | | | | | | | |
| 2006 | | | | 11.1 | | | | | | | | | | | | | |
| 2007 | | | | | 9.6 | | | | | | | | | | | | |
| 2008 | | | | | | 9.1 | | | | | | | | | | | |
| 2009 | | | | | | | 10.1 | | | | | | | | | | |
| 2010 | | | | | | | | 10.5 | | | | | | | | | |
| 2011 | | | | | | | | | 12.3 | | | | | | | | |
| 2012 | | | | | | | | | | 13.9 | | | | | | | |
| 2013 | | | | | | | | | | | 12.6 | | | | | | |
| 2014 | | | | | | | | | | | | 10.3 | | | | | |
| 2015 | | | | | | | | | | | | | 4.2 | | | | |
| 2016 | | | | | | | | | | | | | | 8.7 | | | |
| 2017 | | | | | | | | | | | | | | | 6.1 | | |



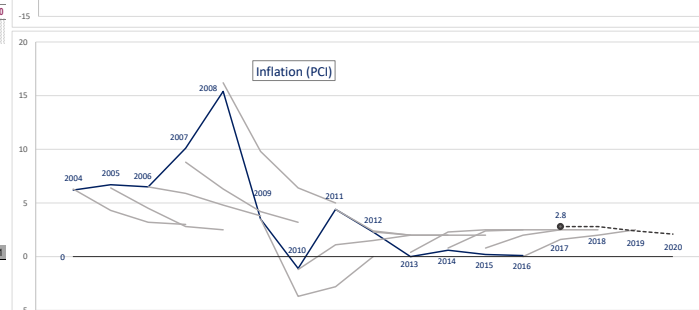
| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|-------------------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Real GDP growth (Actual, FM budget) | 8.3 | 10.2 | 11.9 | 10.3 | -4.6 | -18.0 | -0.3 | 5.5 | 5.6 | 4.2 | 2.4 | 2.7 | 2.0 | | | | |
| Real GDP growth (Actual, ESA2010) | 8.3 | 10.7 | 11.9 | 10.0 | -3.5 | -14.4 | -3.9 | 6.4 | 4.0 | 2.6 | 1.9 | 2.8 | 2.1 | | | | |
| Real GDP growth (Actual, ESA95) | 8.8 | 10.1 | 11.0 | 10.0 | -2.8 | -17.7 | -1.3 | 5.3 | 5.2 | 4.1 | | | | 3.7 | | | |
| 2017 Ministry of Finance | | | | | | | | | | | | | | | | | |
| 2004 | | 7.5 | | | | | | | | | | | | | | | |
| 2005 | | | 6.7 | | | | | | | | | | | | | | |
| 2006 | | | | 6.5 | | | | | | | | | | | | | |
| 2007 | | | | | 6.5 | | | | | | | | | | | | |
| 2008 | | | | | | 7.0 | | | | | | | | | | | |
| 2009 | | | | | | | 7.0 | | | | | | | | | | |
| 2010 | | | | | | | | 7.5 | | | | | | | | | |
| 2011 | | | | | | | | | 7.3 | | | | | | | | |
| 2012 | | | | | | | | | | 7.3 | | | | | | | |
| 2013 | | | | | | | | | | | 4.0 | | | | | | |
| 2014 | | | | | | | | | | | | 4.0 | | | | | |
| 2015 | | | | | | | | | | | | | 4.0 | | | | |
| 2016 | | | | | | | | | | | | | | 4.0 | | | |
| 2017 | | | | | | | | | | | | | | | 3.6 | | |



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| GDP deflator (Actual, FM budget) | 7.2 | 9.2 | 11.1 | 13.3 | 15.2 | -1.5 | -2.2 | 5.4 | 3.0 | 1.1 | 1.2 | 0.6 | 0.7 | | | | |
| GDP deflator (Actual, ESA2010) | 6.8 | 11.2 | 12.4 | 20.1 | 11.8 | -9.7 | -0.8 | 6.4 | 3.6 | 1.7 | 1.8 | 0.0 | 0.3 | | | | |
| GDP deflator (Actual, ESA95) | 7.0 | 10.2 | 11.4 | 20.3 | 12.4 | -1.3 | -0.9 | 6.0 | 3.3 | | | | | 2.8 | | | |
| 2017 Ministry of Finance | | | | | | | | | | | | | | | | | |
| 2004 | | 6.0 | | | | | | | | | | | | | | | |
| 2005 | | | 4.1 | | | | | | | | | | | | | | |
| 2006 | | | | 2.9 | | | | | | | | | | | | | |
| 2007 | | | | | 2.5 | | | | | | | | | | | | |
| 2008 | | | | | | 2.9 | | | | | | | | | | | |
| 2009 | | | | | | | 4.5 | | | | | | | | | | |
| 2010 | | | | | | | | 5.0 | | | | | | | | | |
| 2011 | | | | | | | | | 4.5 | | | | | | | | |
| 2012 | | | | | | | | | | 4.5 | | | | | | | |
| 2013 | | | | | | | | | | | 0.4 | | | | | | |
| 2014 | | | | | | | | | | | | 0.4 | | | | | |
| 2015 | | | | | | | | | | | | | 1.5 | | | | |
| 2016 | | | | | | | | | | | | | | 2.0 | | | |
| 2017 | | | | | | | | | | | | | | | 2.0 | | |



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Inflation (cons. price index). Actual data | 6.2 | 6.7 | 6.5 | 10.1 | 15.4 | 3.5 | -1.1 | 4.4 | 2.3 | 0.0 | 0.6 | 0.2 | 0.1 | | | | |
| 2017 Ministry of Finance | | | | | | | | | | | | | | | | | |
| 2004 | | 6.3 | | | | | | | | | | | | | | | |
| 2005 | | | 4.3 | | | | | | | | | | | | | | |
| 2006 | | | | 3.2 | | | | | | | | | | | | | |
| 2007 | | | | | 3.0 | | | | | | | | | | | | |
| 2008 | | | | | | 2.5 | | | | | | | | | | | |
| 2009 | | | | | | | 3.8 | | | | | | | | | | |
| 2010 | | | | | | | | 3.8 | | | | | | | | | |
| 2011 | | | | | | | | | 5.0 | | | | | | | | |
| 2012 | | | | | | | | | | 0.0 | | | | | | | |
| 2013 | | | | | | | | | | | 0.0 | | | | | | |
| 2014 | | | | | | | | | | | | 2.0 | | | | | |
| 2015 | | | | | | | | | | | | | 2.0 | | | | |
| 2016 | | | | | | | | | | | | | | 2.5 | | | |
| 2017 | | | | | | | | | | | | | | | 2.5 | | |



Data on January 17, 2018. Data sources:

ESA95 http://data.csb.gov.lv/pwweb/lv/arhivs/arhivs_ikgad_ikp_eks95/?tablelist=true&rxid=22982e57-4b0b-454e-a79c-4a1dadbb8bf5

ESA20: http://data.csb.gov.lv/pwweb/lv/kfkm/ekfkm_ikgad_ikp/?tablelist=true&rxid=cdcb978c-22bd-416a-aacc-a650d3e2c0

| Real GDP growth | | | | | | | | | | | | | | | | |
|-----------------------------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|--|
| Report: S-Spring & A-Autumn | | | | | | | | | | | | | | | | |
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | |
| S 2004 | 7.5 | 6.2 | 6.2 | | | | | | | | | | | | | |
| A 2004 | 7.5 | 7.5 | 6.7 | | | | | | | | | | | | | |
| S 2005 | 7.5 | 8.5 | 7.2 | 6.9 | | | | | | | | | | | | |
| A 2005 | 7.2 | 8.3 | 9.1 | 7.7 | 7.1 | | | | | | | | | | | |
| S 2006 | 7.2 | 8.5 | 10.2 | 8.5 | 7.6 | | | | | | | | | | | |
| A 2006 | 7.2 | 8.6 | 10.2 | 11.0 | 8.9 | 8.0 | | | | | | | | | | |
| S 2007 | 7.2 | 8.7 | 10.6 | 11.9 | 9.6 | 7.9 | | | | | | | | | | |
| A 2007 | 7.2 | 8.7 | 10.6 | 11.9 | 10.5 | 7.2 | 6.2 | | | | | | | | | |
| S 2008 | 7.2 | 8.7 | 10.6 | 12.2 | 10.3 | 3.8 | 2.5 | | | | | | | | | |
| A 2008 | 8.7 | 10.6 | 12.2 | 10.3 | -0.8 | -2.7 | 1.0 | | | | | | | | | |
| S 2009 | | | | 10.0 | -4.6 | -13.1 | -3.2 | | | | | | | | | |
| A 2009 | | 10.6 | 12.2 | 10.0 | -4.6 | -18.0 | -4.0 | 2.0 | | | | | | | | |
| S 2010 | | 10.6 | 12.2 | 10.0 | -4.6 | -18.0 | -3.5 | 3.3 | | | | | | | | |
| A 2010 | | | 12.2 | 10.0 | -4.2 | -18.0 | -0.4 | 3.3 | 4.0 | | | | | | | |
| S 2011 | | | 12.2 | 10.0 | -4.2 | -18.0 | -0.3 | 3.3 | 4.0 | | | | | | | |
| A 2011 | | | | 9.6 | -3.3 | -17.7 | -0.3 | 4.5 | 2.5 | 4.0 | | | | | | |
| S 2012 | | | | 9.6 | -3.3 | -17.7 | -0.3 | 5.5 | 2.2 | 3.6 | | | | | | |
| A 2012 | | | | | -3.3 | -17.7 | -0.9 | 5.5 | 4.3 | 3.6 | 3.9 | | | | | |
| S 2013 | | | | | -3.3 | -17.7 | -0.9 | 5.5 | 5.6 | 3.8 | 4.1 | | | | | |
| A 2013 | | | | | -3.3 | -17.7 | -1.3 | 5.3 | 4.0 | 4.1 | 4.2 | | | | | |
| S 2014 | | | | | | -1.3 | 5.3 | 5.2 | 4.1 | 3.8 | 4.1 | | | | | |
| A 2014 | | | | | | 5.0 | 4.8 | 4.2 | 4.2 | 2.6 | 2.9 | 3.6 | | | | |
| S 2015 | | | | | | 5.0 | 4.8 | 4.2 | 4.2 | 2.4 | 2.3 | 3.2 | | | | |
| A 2015 | | | | | | 6.2 | 4.0 | 3.0 | 2.8 | 2.4 | 3.0 | 3.3 | | | | |
| S 2016 | | | | | | | 4.0 | 3.0 | 2.4 | 2.7 | 2.8 | 3.1 | | | | |
| A 2016 | | | | | | | | 2.9 | 2.1 | 2.7 | 1.9 | 2.8 | | | | |
| S 2017 | | | | | | | | | 2.1 | 2.7 | 2.0 | 3.2 | | | | |
| A 2017 | | | | | | | | | 1.9 | 2.8 | 2.1 | 4.2 | | | | |
| ESA 2010 | 8.4 | 8.3 | 10.7 | 11.9 | 10.0 | -3.5 | -14.4 | -3.9 | 6.4 | 4.0 | 2.6 | 1.9 | 2.8 | 2.1 | | |
| ESA 95 | 7.7 | 8.8 | 10.1 | 11.0 | 10.0 | -2.8 | -17.7 | -1.3 | 5.3 | 5.2 | 4.1 | N/A | N/A | N/A | | |

| | mean error | | | | | mean absolute error | | | | | root mean squared error | | | | |
|------|-------------|-------------|-------------|-------------|--------------|---------------------|-------------|-------------|-------------|--------------|-------------------------|-------------|-------------|-------------|--------------|
| | CY (spring) | CY (autumn) | YA (spring) | YA (autumn) | 2YA (autumn) | CY (spring) | CY (autumn) | YA (spring) | YA (autumn) | 2YA (autumn) | CY (spring) | CY (autumn) | YA (spring) | YA (autumn) | 2YA (autumn) |
| 2004 | 2.3 | 0.8 | | | | 2.3 | 0.8 | | | | 5.29 | 0.64 | | | |
| 2005 | 3.0 | 1.1 | 4.0 | 3.5 | | 3 | 1.1 | 4 | 3.5 | | 9.00 | 1.21 | 16.00 | 12.25 | |
| 2006 | 3.4 | 0.9 | 5.0 | 4.2 | 5.2 | 3.4 | 0.9 | 5 | 4.2 | 5.2 | 11.56 | 0.81 | 25.00 | 17.64 | 27.04 |
| 2007 | 0.7 | -0.2 | 2.7 | 1.4 | 3.2 | 0.7 | 0.2 | 2.7 | 1.4 | 3.2 | 0.49 | 0.04 | 7.29 | 1.96 | 10.24 |
| 2008 | -8.4 | -3.8 | -12.5 | -11.8 | -12.6 | 8.4 | 3.8 | 12.5 | 11.8 | 12.6 | 70.56 | 14.44 | 156.25 | 139.24 | 158.76 |
| 2009 | -4.9 | 0.0 | -20.5 | -15.3 | -24.2 | 4.9 | 0 | 20.5 | 15.3 | 24.2 | 24.01 | 0.00 | 420.25 | 234.09 | 585.64 |
| 2010 | 3.2 | 0.1 | 2.9 | 3.7 | -1.3 | 3.2 | 0.1 | 2.9 | 3.7 | 1.3 | 10.24 | 0.01 | 8.41 | 13.69 | 1.69 |
| 2011 | 2.2 | 1.0 | 2.2 | 2.2 | 3.5 | 2.2 | 1 | 2.2 | 2.2 | 3.5 | 4.84 | 1.00 | 4.84 | 4.84 | 12.25 |
| 2012 | 3.4 | 0.7 | 1.6 | 2.5 | 1.0 | 3.4 | 0.7 | 1.6 | 2.5 | 1 | 11.56 | 0.49 | 2.56 | 6.25 | 1.00 |
| 2013 | 0.3 | 0.2 | 0.5 | 0.6 | 0.2 | 0.3 | 0.2 | 0.5 | 0.6 | 0.2 | 0.09 | 0.04 | 0.25 | 0.36 | 0.04 |
| 2014 | -1.4 | 0.2 | -1.7 | -1.3 | -1.1 | 1.4 | 0.2 | 1.7 | 1.3 | 1.1 | 1.96 | 0.04 | 2.89 | 1.69 | 1.21 |
| 2015 | 0.4 | 0.3 | -1.4 | -0.2 | -1.5 | 0.4 | 0.3 | 1.4 | 0.2 | 1.5 | 0.16 | 0.09 | 1.96 | 0.04 | 2.25 |
| 2016 | -0.8 | 0.2 | -1.2 | -0.9 | -1.5 | 0.8 | 0.2 | 1.2 | 0.9 | 1.5 | 0.64 | 0.04 | 1.44 | 0.81 | 2.25 |
| 2017 | | | | | | | | | | | | | | | |
| | 0.262 | 0.115 | -1.533 | -0.950 | -2.645 | 2.646 | 0.731 | 4.683 | 3.967 | 5.027 | 3.401 | 1.204 | 7.344 | 6.006 | 8.541 |

| Real GDP growth rate forecast error | Mean error | | | Mean absolute error | | | Root mean squared error | | | |
|--|--------------------|----------------|----------------|---------------------|----------------|----------------|-------------------------|----------------|----------------|-------|
| | Current Year | One-year Ahead | Two-year Ahead | Current Year | One-year Ahead | Two-year Ahead | Current Year | One-year Ahead | Two-year Ahead | |
| | EC (spring) | 0.262 | -1.533 | N/A | 2.646 | 4.683 | N/A | 3.401 | 7.344 | N/A |
| | EC (autumn) | 0.115 | -0.950 | -2.645 | 0.731 | 3.967 | 5.027 | 1.204 | 6.006 | 8.541 |
| MoF (budget) | 0.123 | -1.358 | -2.964 | 1.185 | 4.475 | 5.509 | 1.934 | 7.143 | 8.947 | |

| Reālā IKP pīcauguma prognožu kļūda | Vidējā kļūda | | | Vidējā absolūtā kļūda | | | Vidējā kvadrātiskā kļūda (kvadrātsakne) | | | |
|---------------------------------------|-----------------------|---------------|----------------------|-----------------------|---------------|----------------------|--|---------------|----------------------|-------|
| | Tekošais gads | Nākamais gads | Divi gadi uz priekšu | Tekošais gads | Nākamais gads | Divi gadi uz priekšu | Tekošais gads | Nākamais gads | Divi gadi uz priekšu | |
| | EK (pavasaris) | 0.262 | -1.533 | N/A | 2.646 | 4.683 | N/A | 3.401 | 7.344 | N/A |
| | EK (rudens) | 0.115 | -0.950 | -2.645 | 0.731 | 3.967 | 5.027 | 1.204 | 6.006 | 8.541 |
| FM (budžets) | 0.123 | -1.358 | -2.964 | 1.185 | 4.475 | 5.509 | 1.934 | 7.143 | 8.947 | |

