



## LATVIJAS REPUBLIKAS FISKĀLĀS DISCIPLĪNAS PADOME

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RIGA

15.02.2019. No 1-08/215

To                          No                         

**Mrs Baiba Bāne**  
**State Secretary**  
**Ministry of Finance**

**Mrs Inta Vasaraudze**  
**The Director of**  
**Department of Economic Analysis**

*On the endorsement of the macroeconomic indicator forecast*

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 MoF's macroeconomic forecast for the *Stability Programme 2019-2022* was first submitted to the Council in 6 February 2019 and presented and discussed at the Council meeting on 7 February 2019. After the Council meeting, the Council prepared a list of follow-up questions for the MoF that were discussion between the parties on 11 February 2019.

On 11 February after discussion between the Council and MoF, *a decision was made to endorse the macroeconomic indicators forecast for the purposes of preparing the SP 2019-2022 with such commentaries:*

*The Council agrees that the current output gap is larger-positive than previously forecasted, as the Council has pointed out in previous endorsements. The Council has taken into consideration the changes in GDP data and its price levels after revision of data series for last 10 years.*

*The Council points to possible risks to the development of the Latvian economy, that have appeared in 2018 and will be present in 2019, including less favourable international trade, lower external demand, Brexit, insufficient progress with implementation of Moneyval recommendations. If conditions would evolve unfavourable, the real GDP growth rate may fall, although in the last forecast it is 0.2 percentage points higher than forecast in October 2018. Furthermore, the consequences of insufficient progress with implementation of Moneyval recommendations could lead to significant risks for further Latvia's economic growth.*

*The Council does not observe sufficient measures in the Government's work plan to achieve structural improvements in the labour market that would contribute to higher potential GDP growth.*

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

	2019	2020	2021	2022
<b>Real GDP growth</b>	<b>3.2</b>	<b>3.0</b>	<b>2.9</b>	<b>2.9</b>
<b>Nominal GDP growth</b>	<b>6.4</b>	<b>5.9</b>	<b>5.5</b>	<b>5.5</b>
<b>Inflation (consumer prices)</b>	<b>2.5</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>
<b>GDP deflator</b>	<b>3.1</b>	<b>2.8</b>	<b>2.5</b>	<b>2.5</b>
<b>Potential GDP growth</b>	<b>3.5</b>	<b>3.4</b>	<b>3.2</b>	<b>3.2</b>
<b>Output gap</b>	<b>1.4</b>	<b>1.0</b>	<b>0.7</b>	<b>0.4</b>

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) 2019/22, which is scheduled to be submitted to the Cabinet of Ministers on mid-April 2019. 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, 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 2 at the end of this document).

	2019	2020	2021	2022
<b>Real GDP growth</b>				
MoF (Feb 2019)	<b>3.2</b>	<b>3.0</b>	<b>2.9</b>	<b>2.9</b>
BoL (Dec 2018)	3.5	3.1	–	–
EC (Jan 2019) <sup>1</sup>	3.1	2.6	–	–
EC (Oct 2018) <sup>2</sup>	3.2	2.9	–	–
IMF (Oct 2018)	3.3	3.1	3.0	3.0
<b>Nominal GDP growth</b>				
MoF (Feb 2019)	<b>6.4</b>	<b>5.9</b>	<b>5.5</b>	<b>5.5</b>
BoL (Dec 2018)	–	–	–	–
EC (Oct 2018) <sup>2</sup>	5.4	5.7	–	–
IMF (Oct 2018)	5.8	5.7	5.5	5.3
<b>Inflation</b>				
MoF (Feb 2019)	<b>2.5</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>
BoL (Dec 2018)	2.9	2.5	–	–
EC (Jan 2019) <sup>1</sup>	2.7	2.1	–	–
EC (Oct 2018) <sup>2</sup>	2.7	2.4	–	–
IMF (Oct 2018)	2.4	2.4	2.4	2.3
<b>GDP deflator</b>				
MoF (Feb 2019)	<b>3.1</b>	<b>2.8</b>	<b>2.5</b>	<b>2.5</b>
BoL (Dec 2018)	–	–	–	–
EC (Oct 2018) <sup>2</sup>	2.1	2.7	–	–
IMF (Oct 2018)	2.9	3.2	3.1	3.0
<b>Output gap</b>				
MoF (Feb 2019)	<b>1.4</b>	<b>1.0</b>	<b>0.7</b>	<b>0.4</b>
BoL (Dec 2018)	–	–	–	–
EC (Oct 2018) <sup>2</sup>	2.1	1.3	–	–
IMF (Oct 2018)	–	–	–	–

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

with warnings of reputation crisis in banking sector if prevention of money laundering will not be introduced

The MoF macroeconomic forecast 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, the inflation rate is forecasted lower (in comparison to forecasts by BoL, and EC<sup>1</sup> for 2019) but the nominal GDP growth – higher (even by 1,0 percentage points in comparison to EC).

Although the output gap estimate is increased for the whole-time horizon in comparison to the previous forecast by MoF, it remains below the EC forecast. Both forecasts indicate a likely decline in real GDP growth below potential growth.

In 2018, the financial and transport sectors performed better than expected, we also saw high confidence indicators (above the long-term average) and investments (especially in construction sector, financed by the European Funds). However, in addition to historically low unemployment (since 2009) pushing up wages, **risks of weaker external trade and lower external demand are emerging<sup>2</sup>**, together

<sup>1</sup> European Commission Winter 2019 Economic Forecast. Available at: [https://ec.europa.eu/info/sites/info/files/economy-finance/ip096\\_en.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/ip096_en.pdf), accessed on 07.02.2019.

<sup>2</sup> European Commission Autumn 2018 Economic Forecast. Available at: [https://ec.europa.eu/info/sites/info/files/economy-finance/ip089\\_en\\_0.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/ip089_en_0.pdf), accessed on 07.02.2019.

at the level recommended by the MONEYVAL<sup>3</sup>.

**The Council endorses the nominal and real GDP growth forecast for SP 2019/22 with comments.** Compared to the previous forecast in October 2018, which was prepared for the MTBF 2019/21, the real GDP growth rate has been raised by 0.2 percentage points for 2019 with no changes for upcoming years (Chart 1). However, negative risks at global extent have increased, resulting in weaker external trade and lower external demand; it could slow down the real economic growth below the forecasted level for 2019.

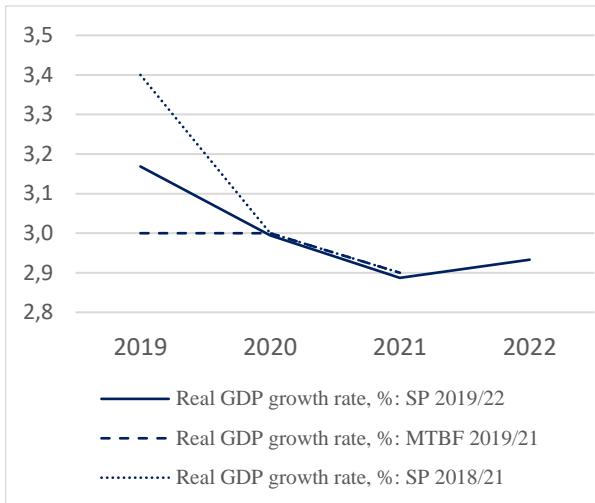


Chart 1 Forecast for real GDP growth, y-o-y.  
Data source: MoF.

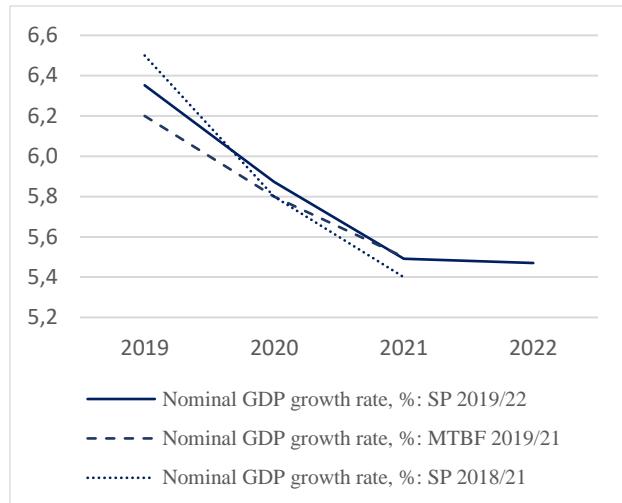


Chart 2 Forecast for nominal GDP growth, y-o-y.  
Data source: MoF.

**The Council endorses the GDP deflator and the change in the consumer price index (hereafter – CPI) (inflation) forecast for the SP 2019/22 with comments.** Since October 2018, there are no changes made to the inflation forecast (Chart 3), however, as already in previous endorsements, the Council emphasizes that the pressure on the wage growth from the labour market remains high and therefore inflation outcome might be above the current forecast, particularly for years 2020 and 2021. The CPI forecasts by the EC (2019) and Bank of Latvia are higher for both 2019 and 2020.

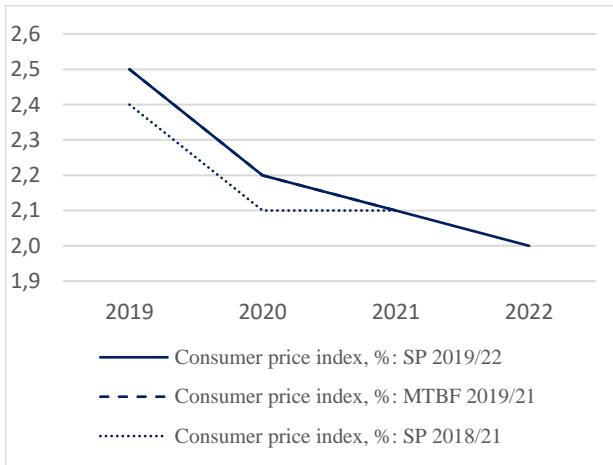


Chart 3 Forecast for inflation, y-o-y.  
Data source: MoF.

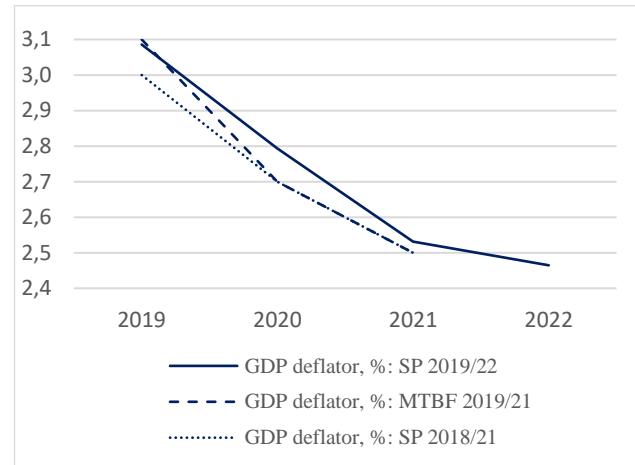


Chart 4 Forecast for GDP deflator, y-o-y.  
Data source: MoF.

**The Council endorses the potential GDP growth and output gap forecasts for the SP 2019/22 with comments.** Potential GDP growth has been revised upwards by 0.1 percentage points for 2019 and 2020, and for 0.2 percentage points for 2022. A 3.0% growth rate has been set for 2023, 2.9% for 2024, 2025 and 2026

<sup>3</sup> The Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism - MONEYVAL, July 2018. Anti-money laundering and counter-terrorist financing measures. Available at: <https://rm.coe.int/moneyval-2018-8-5th-round-mer-latvia/16808ce61b>, accessed on 07.02.2019.

"After the peak in 2017 of the economic growth in European Union (hereafter – EU), growth has moderated with emerging external demand risks and weaker external trade (domestic demand remains strong)."

(the expanded time horizon is necessary for further calculations of the expenditure benchmark). The Council agrees that the current output gap is larger-positive than previously forecasted, in fact, it could be even larger, knowing the risks of, e.g., price acceleration above the inflation rate currently forecasted by MoF that would deteriorate the productivity and result in lower economic growth potential as well as widening positive output gap. While MoF argues that there are positive structural changes in the labour market, the Council points out that the structural unemployment is high, therefore labour market continues to restrict the potential GDP growth.

***Latvia's economic growth currently is in upswing of economic cycle close to its maximum growth level. Although, in 2019, the slowdown of economic growth is probable because of raising risks, the economy will continue to growth in upcoming years. During this time, the Government should implement a restrictive fiscal policy and create a buffer for next – turning downwards – phase in the economic cycle.***

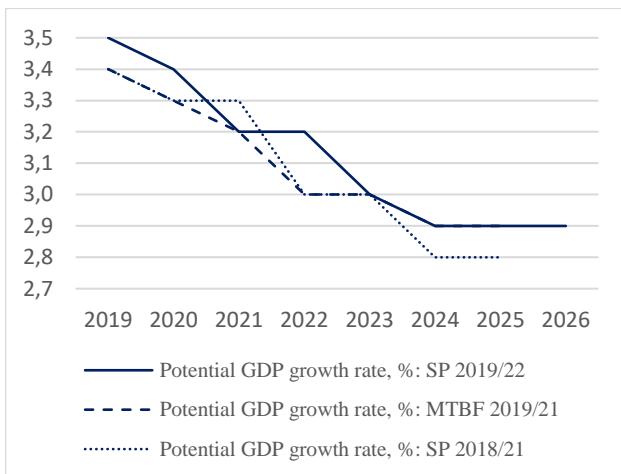


Chart 5 Potential GDP growth, %, y-o-y.

Data source: MoF.

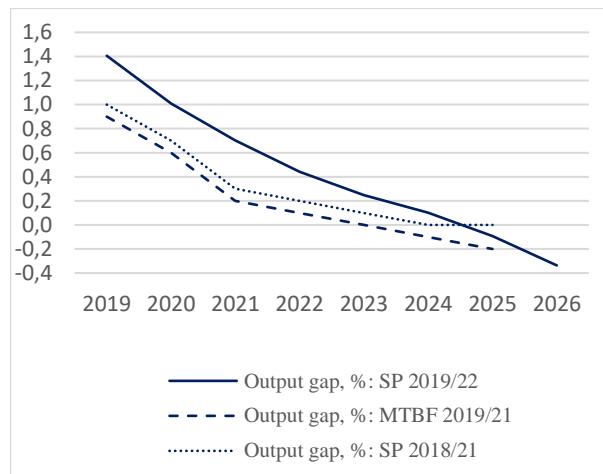


Chart 6 Output gap, % of potential GDP.

Data source: MoF.

	2019	2020	2021	2022
Real GDP growth	3.2	3.0	2.9	2.9
Nominal GDP growth	6.4	5.9	5.5	5.5
Inflation (consumer prices)	2.5	2.2	2.1	2.0
GDP deflator	3.1	2.8	2.5	2.5
Potential GDP growth	3.5	3.4	3.2	3.2
Output gap	1.4	1.0	0.7	0.4

Table 2 Macroeconomic forecast indicators endorsed by the Council. Data available also in MS Excel<sup>4</sup>.

Broadly, the Council considers the MoF's macroeconomic forecasts to be realistic and endorses them.

The Council would like to point out that the SP2019/22 should include the sensitivity analysis, where following negative risks are assessed: decreasing unemployment contributing to wage growth and inflation, unfavourable external circumstance for external trade and lower external demand, effect of Brexit; as well as reputation risks in banking sector. As in the spring forecast last year, the Council has attached an evaluation of yearly macroeconomic forecasts (in MS Excel<sup>5</sup>). The Council encourages the MoF to continue to improve both the sensitivity analysis and the evaluation of previous forecast's deviations.

The Council is also looking forward to MoF's assessment (that is going to be prepared in May 2019) of tax-reform started in 2017 results, incl. effect on economic cycle.

<sup>4</sup> Macroeconomic indicators. Available:

[http://fdp.gov.lv/files/uploaded/FDP\\_1\\_08\\_215\\_20190215\\_macroeconomic\\_forecasts\\_opinion\\_Ann2.xlsx](http://fdp.gov.lv/files/uploaded/FDP_1_08_215_20190215_macroeconomic_forecasts_opinion_Ann2.xlsx), accessed on 15.02.2019.

<sup>5</sup> Evaluation of the annual macroeconomic forecasts. Available:

[http://fdp.gov.lv/files/uploaded/FDP\\_1\\_08\\_215\\_20190215\\_macroeconomic\\_forecasts\\_opinion\\_Ann3.xlsx](http://fdp.gov.lv/files/uploaded/FDP_1_08_215_20190215_macroeconomic_forecasts_opinion_Ann3.xlsx), accessed on 15.02.2019.

In addition, the Council has introduced a new monitoring tool – the heatmap (available online: <http://fiscalcouncil.lv/cycle-heatmap>), to follow on changes of main indicators characterizing the economic cycle. From the analysis it is possible to observe a clear "heating" of the composite index since beginning of 2017, and especially in 2018Q2 and 2018Q3, which is characterized by tension in labour market, historically high capacity utilization in manufacturing industries, high demand in construction, industry and services, as well as above the long term average house price index and economic sentiment (see Annex<sup>6</sup>).

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<sup>6</sup> Heatmap and recognition of economic cycles. Available: [http://fdp.gov.lv/files/uploaded/FDP\\_1\\_08\\_215\\_20190215\\_macroeconomic\\_forecasts\\_opinion\\_Ann4.pdf](http://fdp.gov.lv/files/uploaded/FDP_1_08_215_20190215_macroeconomic_forecasts_opinion_Ann4.pdf), accessed on 15.02.2019.

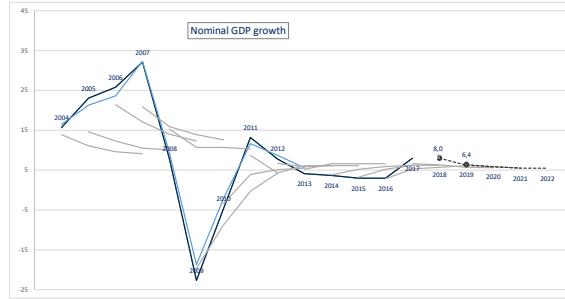
## Makroekonomiskie rādītāji / Macroeconomic indicators

Nr.	Rādītājs	Indicator	Mērvienība / Unit	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t	t+1	t+2	t+3	t+4	t+5	t+6	t+7
	Iekšzemes kopprodukts (IKP)	Gross domestic product (GDP) expenditure perspective	milj. / mio EUR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1	Reālais IKP	Real GDP	milj. / mio EUR	19 852	20 335	20 713	21 328	21 768	22 778	23 860	24 616	25 354	26 086	26 851	27 602	28 361	29 127	29 899
2	Nominālais IKP	Nominal GDP	milj. / mio EUR	21 886	22 787	23 618	24 320	25 038	27 033	29 424	31 293	33 130	34 950	36 861				
3	IKP pieaugums salīdzināmās cenās	Real GDP growth	%	4,0	2,4	1,9	3,0	2,1	4,6	4,8	3,2	3,0	2,9	2,9	2,8	2,8	2,7	2,7
4	IKP pieaugums faktiskajās cenās	Nominal GDP growth	%	7,8	4,1	3,6	3,0	2,9	8,0	8,8	6,4	5,9	5,5	5,5				
	IKP izdevumu aspeks: rādītāji salīdzināmās cc GDP expenditure perspective: real figures		milj. / mio EUR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
5	Privātais patēriņš	Private consumption	milj. / mio EUR	12 153	12 766	12 942	13 266	13 454	14 010	14 660	15 284	15 837	16 411	17 006				
6	Valdības patēriņš	Government consumption	milj. / mio EUR	3 404	3 460	3 525	3 590	3 731	3 885	4 039	4 183	4 307	4 436	4 568				
7	Bruto kapitāla veidošana	Gross capital formation	milj. / mio EUR	5 174	4 906	4 480	4 585	4 706	5 378	6 317	6 735	7 045	7 326	7 632				
8	..bruto pamatkapitāla veidošana	..gross fixed capital formation	milj. / mio EUR	4 935	4 637	4 640	4 617	4 231	4 785	5 559	5 985	6 345	6 666	7 002				
9	..krājumu pārmaiņas	..inventories	milj. / mio EUR	239	269	-160	-52	475	592	758	750	700	660	630				
10	Preču un pakalpojumu eksports	Exports of goods and services	milj. / mio EUR	11 839	11 967	12 682	13 077	13 653	14 505	14 863	15 344	15 979	16 611	17 259				
11	Preču un pakalpojumu imports	Imports of goods and services	milj. / mio EUR	12 718	12 764	12 916	13 191	13 775	14 999	16 019	16 930	17 815	18 698	19 614				
	IKP izdevumu aspeks: pieaugums salīdzināmājā GDP expenditure perspective: growth in real figures		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022					
12	Privātais patēriņš	Private consumption	%	3,2	5,0	1,4	2,5	1,4	4,1	4,6	4,3	3,6	3,6	3,6				
13	Valdības patēriņš	Government consumption	%	0,3	1,6	1,9	1,9	3,9	4,1	4,0	3,6	3,0	3,0	3,0				
14	Bruto kapitāla veidošana	Gross capital formation	%	-0,3	-5,2	-8,7	2,4	2,6	14,3	17,5	6,6	4,6	4,0	4,2				
15	..bruto pamatkapitāla veidošana	..gross fixed capital formation	%	14,4	-6,0	0,1	-0,5	-8,4	13,1	16,2	7,7	6,0	5,0	5,0				
16	..krājumu pārmaiņas	..change in inventories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	Preču un pakalpojumu eksports	Exports of goods and services	%	9,8	1,1	6,0	3,1	4,4	6,2	2,5	3,2	4,1	4,0	3,9				
18	Preču un pakalpojumu imports	Imports of goods and services	%	5,4	0,4	1,2	2,1	4,4	8,9	6,8	5,7	5,2	5,0	4,9				
	IKP izdevumu aspeks: rādītāji faktiskajās cenās GDP expenditure perspective: nominal figures		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022					
19	Privātais patēriņš	Private consumption	milj. / mio EUR	13 331	14 039	14 469	14 679	15 045	16 152	17 340	18 530	19 623	20 761	21 944				
20	Valdības patēriņš	Government consumption	milj. / mio EUR	3 799	4 022	4 136	4 358	4 514	4 853	5 237	5 594	5 912	6 229	6 563				
21	Bruto kapitāla veidošana	Gross capital formation	milj. / mio EUR	5 729	5 534	5 355	5 406	5 189	6 004	7 188	7 959	8 662	9 297	9 975				
22	..bruto pamatkapitāla veidošana	..gross fixed capital formation	milj. / mio EUR	5 551	5 291	5 337	5 384	4 915	5 651	6 716	7 398	8 008	8 575	9 182				
23	..krājumu pārmaiņas	..change in inventories	milj. / mio EUR	177	243	-18	-21	274	353	473	561	655	722	793				
24	Preču un pakalpojumu eksports	Exports of goods and services	milj. / mio EUR	13 418	13 741	14 346	14 695	15 017	16 516	17 500	18 536	19 881	21 309	22 848				
25	Preču un pakalpojumu imports	Imports of goods and services	milj. / mio EUR	14 391	14 550	14 687	14 817	14 728	16 491	17 841	19 327	20 948	22 646	24 468				
	Deflatori	Deflators		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
26	IKP deflators, gads pret gadu	GDP deflator, year on year	%	3,6	1,6	1,8	0,0	0,9	3,2	3,9	3,1	2,8	2,5	2,5				
27	Privātās patēriņš deflators	Private consumption deflator	%	3,3	0,3	1,7	-1,0	1,1	3,1	2,6	2,5	2,2	2,1	2,0				
28	Valdības patēriņš deflators	Government consumption deflator	%	2,4	4,2	1,0	3,5	-0,3	3,2	3,8	3,1	2,6	2,3	2,3				
29	Bruto kapitāla veidošanas deflators	Capital formation deflator	%	12,5	1,9	6,0	-1,4	-6,5	1,2	1,9	3,9	4,0	3,2	3,0				
30	..bruto pamatkapitāla veidošanas deflators	..gross fixed capital formation deflator	%	7,8	1,4	0,8	1,4	-0,4	1,7	2,3	2,3	2,1	1,9	1,9				
31	..krājumu pārmaiņu deflators	..change in inventories deflator	-	6,8	21,8	-112,4	491,7	-186,9	3,2	4,6	20,0	25,0	17,0	15,0				
32	Preču un pakalpojumu eksporta deflators	Exports of goods and services deflator	%	4,1	1,3	-1,5	-0,7	-2,1	3,5	3,4	2,6	3,0	3,1	3,2				
33	Preču un pakalpojumu importa deflators	Imports of goods and services deflator	%	7,1	0,7	-0,2	-1,2	-4,8	2,8	1,3	2,5	3,0	3,0	3,0				
	Devums reālajai IKP izaugsmei	Contribution to real GDP growth		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
34	Privātais patēriņš	Private consumption	%	1,9	3,1	0,9	1,6	0,9	2,6	2,9	2,6	2,2	2,3	2,3				
35	Valdības patēriņš	Government consumption	%	0,1	0,3	0,3	0,3	0,7	0,7	0,7	0,6	0,5	0,5	0,5				
36	Bruto kapitāla veidošana	Gross capital formation	%	-0,1	-1,3	-2,1	0,5	0,6	3,1	4,1	1,8	1,3	1,1	1,1				
37	..bruto pamatkapitāla veidošana	..gross fixed capital formation	%	3,3	-1,5	0,0	-0,1	-1,8	2,5	3,4	1,8	1,5	1,3	1,3				
38	..krājumu pārmaiņas	..change in inventories	%	-3,3	0,2	-2,1	0,6	2,4	0,5	0,7	0,0	-0,2	-0,2	-0,2				
39	Preču un pakalpojumu eksports	Exports of goods and services	%	5,5	0,6	3,5	1,9	2,7	3,9	1,6	2,0	2,6	2,5	2,5				
40	Preču un pakalpojumu imports	Imports of goods and services	%	-3,4	-0,2	-0,7	-1,3	-2,7	-5,6	-4,5	-3,8	-3,6	-3,5	-3,5				
	Patēriņa cenu indekss	Consumer price index		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
41	Patēriņa cenu indekss, gads pret gadu	Consumer price index, year on year	%	2,3	0,0	0,6	0,2	0,1	2,9	2,5	2,5	2,2	2,1	2,0				
	IKP ienākumi aspeks	GDP income perspective		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
42	Pārpalikums un jauktais kopienākums	Gross operating surplus	milj. / mio EUR	10999	11064	10956	10608	10464	11315	12199	12935	13728	14554	15421				
43	Darbinieku atalgojums	Compensation of employees	milj. / mio EUR	8 747	9 416	10 093	10 908	11 626	12 584	13 890	14 867	15 700	16 469	17 275				
44	..darba alga	..wages	milj. / mio EUR	7 255	7 797	8 401	9 091	9 649	10 446	11 527	12 338	13 029	13 667	14 336				
45	..darba devēju sociālās iemaksas	..social contributions	milj. / mio EUR	1 492	1 619	1 692	1 818	1 977	2 139	2 363	2 529	2 671	2 802	2 939				
46	Ražošanas un importa nodokļi	Taxes on products and imports	milj. / mio EUR	2 790	2 983	3 185	3 355	3 610	3 811	4 073	4 275	4 533	4 804	5 090				
47	Subsidijas	Subsidies	milj. / mio EUR	651	676	616	551	662	678	738	785	831	877	925				
	Iedzīvotāji un darba tirgus	Population and labour		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				

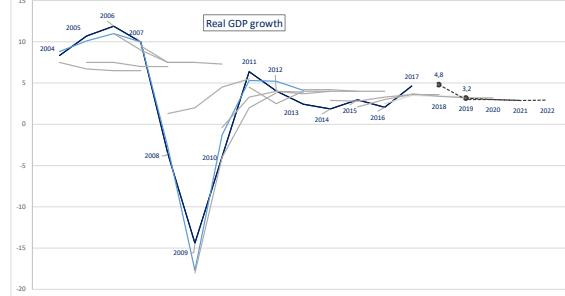
## Makroekonomiskie rādītāji / Macroeconomic indicators

Nr.	Rādītājs	Indicator	Mērvienība / Unit	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t	t+1	t+2	t+3	t+4	t+5	t+6	t+7
48	Iedzīvotāju kopskaita pieaugums	Total population growth	tūkst. / thsd. %	2 045	2 024	2 001	1 986	1 969	1 950	1 934	1 917	1 900	1 883	1 868				
49	Iedzīvotāju kopskaita pieaugums	Population growth	%	-1,0	-1,1	-0,8	-0,9	-1,0	-0,8	-0,9	-0,9	-0,9	-0,9	-0,8				
50	Iedzīvotāji darbspējas vecumā (15-74)	Working age population	tūkst. / thsd.	1 560	1 536	1 496	1 473	1 450	1 423	1 412	1 400	1 389	1 382	1 371				
51	Ekonomiski aktīvie iedzīvotāji	Economically active population	tūkst. / thsd.	1 031	1 014	992	994	989	980	984	984	980	977	969				
52	Nodarbināto skaits	Number of persons employed	tūkst. / thsd.	876	894	885	896	893	895	911	915	916	915	915				
53	Nodarbināto skaita pieaugums	Growth of number of persons employed	%	1,6	2,1	-1,0	1,3	-0,3	0,2	1,8	0,5	0,1	-0,1	-0,1				
54	Līdzdalības līmenis	Participation rate	%	66,1	66,0	66,3	67,5	68,2	68,9	69,7	70,3	70,6	70,7	70,7				
55	Bezdarba līmenis	Unemployment rate	%	15,0	11,9	10,8	9,9	9,6	8,7	7,4	7,0	6,5	6,3	5,6				
56	Bezdarba līmenis, kas neietekmē algu, %	NAWRU	%, y-o-y	14,2	13,2	12,0	10,8	9,7	8,8	8,1	7,5	7,0	6,6	6,2				
<b>Algas un produktivitāte</b>				<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>				
57	Vidējā bruto alga	Average gross wage	EUR	685	716	765	818	859	926	1 004	1 069	1 128	1 184	1 243				
58	Vidējās bruto algas pieaugums	Average gross wage growth	%	3,8	4,5	6,8	6,9	5,0	7,8	8,4	6,5	5,5	5,0	5,0				
59	Reāla produktivitātes pieaugums	Real productivity growth	%	2,4	0,3	2,9	1,7	2,4	4,5	2,9	2,7	2,9	3,0	3,0				
<b>Potenciālais IKP un izlažu starpības</b>				<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
60	Potenciālais IKP 2010. gada cenās	Potential GDP in the prices of 2010	milj. / mio EUR	19 697	20 184	20 733	21 329	21 968	22 662	23 454	24 275	25 100	25 904	26 732	27 534	28 333	29 155	30 000
61	Potenciāla IKP pieaugums	Potential GDP growth	%, y-o-y	1,4	2,5	2,7	2,9	3,0	3,2	3,5	3,5	3,4	3,2	3,2	3,0	2,9	2,9	2,9
62	Darbaspēka devums	Potential labour	%	-0,5	0,1	0,1	0,1	0,1	0,1	0,4	0,2	0,1	-0,1	-0,1				
63	Kapitāla devums	Potential capital stock	%	1,6	1,5	1,4	1,3	1,2	1,2	1,2	1,3	1,3	1,3	1,3				
64	Faktoru produktivitātes devums	Potential total factor productivity (TFP)	%	0,4	0,9	1,2	1,5	1,7	1,8	1,9	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0
65	Izlažu starpība	Output gap	%	0,8	0,7	-0,1	0,0	-0,9	0,5	1,7	1,4	1,0	0,7	0,4	0,2	0,1	-0,1	-0,3
66	Izlažu starpība	Output gap	milj. / mio EUR	156	151	-20	-1	-199	116	406	341	253	182	118	68	29	-27	-101

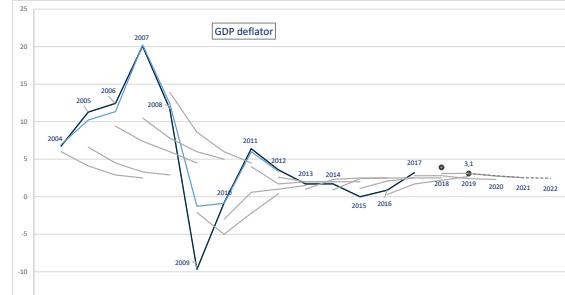
Year of forecast	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Nominal GDP growth	15.7	23.1	25.8	32.1	7.8	-22.7	-4.7	13.2	7.8	4.1	3.6	3.0	2.9	8.0					
Actual FM budget	15.7	23.1	25.8	32.1	7.8	22.7	-4.7	13.2	7.8	4.1	3.6	3.0	2.9	8.0					
Nominal GDP growth (Actual ESAD01)	16.5	21.3	23.6	32.3	9.3	-18.7	-2.2	11.7	8.7	5.6						8.8	6.4		
Nominal GDP growth (Actual ESAD05)																			
2018 Ministry of Finance	13.9	11.1	9.6	9.1															
2004 Nominal GDP growth	14.6	12.3	10.3	10.1															
2005 Nominal GDP growth	21.4		17.1	14.0	12.3														
2006 Nominal GDP growth	20.9		15.9	13.9	12.6														
2007 Nominal GDP growth	15.3		10.7	10.7	10.3														
2008 Nominal GDP growth			-19.7	-8.8	-0.3	4.2													
2009 Nominal GDP growth			-3.4	3.9	5.1	5.5													
2010 Nominal GDP growth			6.7	5.8	6.1	6.1													
2011 Nominal GDP growth			5.2	6.6	6.6	6.6													
2012 Nominal GDP growth			3.8	5.2	5.9	6.2													
2013 Nominal GDP growth			3.2	5.2	6.2	6.2													
2014 Nominal GDP growth			2.8	5.3	5.7	6.6													
2015 Nominal GDP growth			6.6	6.3	5.7	5.8													
2016 Nominal GDP growth			8.8	8.3	8.2	5.8													
2017 Nominal GDP growth			8.4	8.2	5.8	5.5													
2018 Nominal GDP growth			8.4	5.9	5.5	5.5													
2019 Nominal GDP growth																			



Year of forecast	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Real GDP growth (Actual FM budget)	8.3	10.7	11.9	10.0	-3.5	-14.4	-3.9	6.4	4.0	2.4	1.9	3.0	2.1	4.6					
Real GDP growth (Actual ESAD01)	8.3	10.7	11.9	10.0	-3.5	-14.4	-3.9	6.4	4.0	2.4	1.9	3.0	2.1	4.6					
Real GDP growth (Actual ESAD05)	8.8	10.1	11.0	10.0	-2.8	-17.7	-1.3	5.3	5.2	4.1					3.2				
2019 Ministry of Finance	7.5	6.7	6.6	6.6											4.8				
2004 Real GDP growth	7.8	7.5	7.0	7.0															
2005 Real GDP growth	9.0	7.5	7.5	7.5															
2006 Real GDP growth	9.5	7.5	7.5	7.3															
2007 Real GDP growth	1.3	2.0	4.5	5.5															
2008 Real GDP growth	-18.0	-4.0	2.0	3.8															
2009 Real GDP growth	-0.4	3.3	4.0	3.8															
2010 Real GDP growth	4.5	2.5	4.0	4.0															
2011 Real GDP growth	4.0	3.7	4.0	4.0															
2012 Real GDP growth	4.2	4.2	4.0	4.0															
2013 Real GDP growth	4.2	4.2	4.0	4.0															
2014 Real GDP growth	2.9	2.8	3.3	3.6															
2015 Real GDP growth	2.5	2.5	2.5	2.5															
2016 Real GDP growth	3.7	3.4	3.4	3.4															
2017 Real GDP growth	4.8	3.0	3.0	2.9															
2018 Real GDP growth	3.2	3.0	2.9	2.9															
2019 Real GDP growth																			



Year of forecast	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP deflator (Actual FM budget)	6.7	11.3	12.4	20.1	11.8	-9.7	-0.8	6.4	3.6	3.6	1.8	0.0	0.9	3.2					
GDP deflator (Actual ESAD01)	6.7	11.3	12.4	20.1	11.7	-9.7	-0.8	6.4	3.6	3.6	1.7	0.0	0.9	3.2					
GDP deflator (Actual ESAD05)	6.9	10.2	11.3	20.2	12.4	-13.0	-0.9	6.0	3.4						3.1				
2019 Ministry of Finance	6.0	4.1	2.9	2.5											3.9				
2004 GDP deflator	6.0	4.1	2.9	2.5															
2005 GDP deflator	6.6	4.5	3.3	2.9															
2006 GDP deflator	9.4	7.4	6.0	4.5															
2007 GDP deflator	10.5	8.0	6.0	6.5															
2008 GDP deflator	13.9	8.0	6.0	6.5															
2009 GDP deflator	-2.1	5.0	2.2	0.4															
2010 GDP deflator	-3.0	0.6	0.6	0.5															
2011 GDP deflator	4.0	1.7	2.0	2.0															
2012 GDP deflator	2.6	2.0	2.0	2.0															
2013 GDP deflator	1.0	2.3	2.5	2.6															
2014 GDP deflator	0.9	2.4	2.5	2.5															
2015 GDP deflator	1.1	2.1	2.5	2.5															
2016 GDP deflator	0.4	1.3	2.5	2.5															
2017 GDP deflator	0.8	2.4	2.5	2.5															
2018 GDP deflator	0.8	2.0	2.5	2.5															
2019 GDP deflator	0.0	1.6	2.0	2.9															
2020 GDP deflator	2.8	2.8	2.4	2.1															
2021 GDP deflator	2.5	2.5	2.2	2.1															
2022 GDP deflator	2.5	2.2	2.1	2.0															



Year of forecast	2004	2005	2006	2007	2008	200
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	Current year	One-year Ahead (Budget Year)	Two-year Ahead	Three-year Ahead
Nominal GDP growth	1.40	3.30	5.08	0.85
Real GDP growth	0.08	1.74	2.41	-1.09
GDP deflator	1.09	2.64	4.08	1.67
Inflation (cons. price index)	-0.01	0.29	0.50	0.74
	2018	2019	2020	2021

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
S 2004	7,5	6,2	6,2														
A 2004	7,5	7,5	6,7	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			-17,7	-1,3	5,3	5,0	4,0	4,1	4,2								
S 2014			-1,3	5,3	5,2	4,1	3,8	4,1									
A 2014			-2,9	5,0	4,8	4,2	2,6	2,9	3,6								
S 2015				5,0	4,8	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	2,0	3,2	3,5						3,0
S 2017						2,6	2,1	2,7	2,0	3,2	3,5						
A 2017							1,9	2,8	2,1	4,2	3,5						3,2
S 2018							1,9	3,0	2,2	4,5	3,3						3,3
A 2018								3,0	2,1	4,6	4,1						3,2

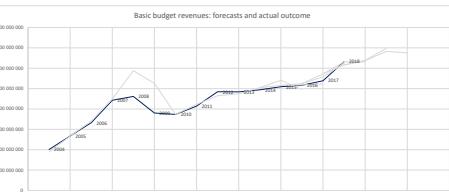
mean error					mean absolute error					root mean squared error					
CY (spring)	CY (autumn)	YA (spring)	YA (autumn)	2YA (autumn)	CY (spring)	CY (autumn)	YA (spring)	YA (autumn)	2YA (autumn)	CY (spring)	CY (autumn)	YA (spring)	YA (autumn)	2YA (autumn)	
004	2,3	0,8			2,3	0,8				5,29	0,64				
005	3,0	1,1	4,0	3,5	3	1,1	4	3,5		9,00	1,21	16,00	12,25		
006	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
007	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
008	-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
009	-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
010	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
011	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
012	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
013	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
014	-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
015	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
016	-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
017	1,3	0,4	1,4	1,8	1,3	1,3	0,4	1,4	1,8	1,3	1,69	0,16	1,96	3,24	1,69
018															
	0,336	0,136	-1,308	-0,738	-2,317	2,550	0,207	4,431	3,800	4,717	3,296	1,165	7,066	5,792	8,186

Eurostat 05.01.2018.

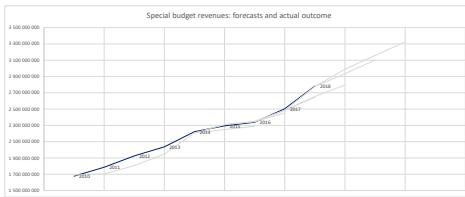
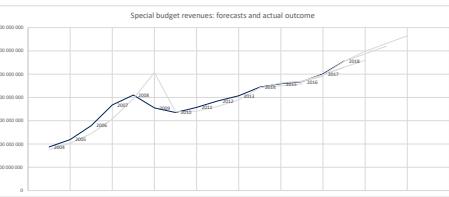
ESA 2010	8,4	8,3	10,7	11,9	10,0	-3,5	-14,4	-3,9	6,4	4,0	2,4	1,9	3,0	2,1	4,6
ESA 95	7,7	8,8	10,1	11,0	10,0	-2,8	-17,7	-1,3	5,3	5,2	4,1	N/A	N/A	N/A	N/A

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
<b>EC (spring)</b>	0,336	-1,308	N/A	2,550	4,431	N/A	3,296	7,066	N/A
<b>EC (autumn)</b>	0,136	-0,738	-2,317	0,707	3,800	4,717	1,165	5,792	8,186
<b>MoF (budget)</b>	0,078	-1,093	-2,476	1,740	3,478	4,811	2,406	5,671	7,558

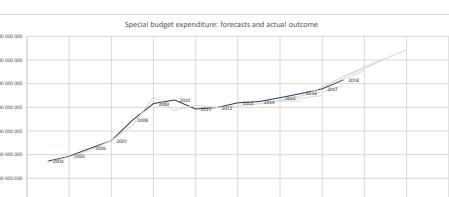
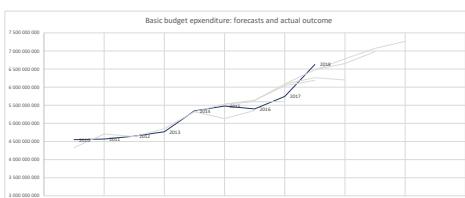
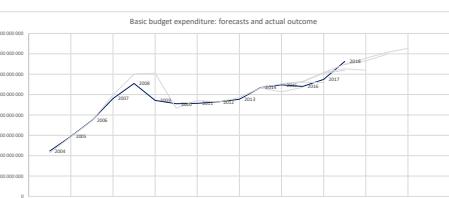
Reālā IKP pieauguma prognožu kļūda	Vidējā kļūda			Vidējā absolūtā kļūda			Vidējā kvadrātiskā kļūda (kvadrātsakne)		
	Tekošais gads	Nākamais gads	Divi gadi uz priekšu	Tekošais gads	Nākamais gads	Divi gadi uz priekšu	Tekošais gads	Nākamais gads	Divi gadi uz priekšu
<b>EK (pavasaris)</b>	0,336	-1,308	N/A	2,550	4,431	N/A	3,296	7,066	N/A
<b>EK (rudens)</b>	0,136	-0,738	-2,317	0,707	3,800	4,717	1,165	5,792	8,186
<b>FM (budžets)</b>	0,078	-1,093	-2,476	1,740	3,478	4,811	2,406	5,671	7,558



	Speciālā bankas ierīmējums / Special budget resources (sek. leri)	2018.	2019.	2020.	2021.
Ārtajās ekspenses	936 194 000	1 094 568 083	1 394 951 807	1 833 440 587	2 000 538 407
Budget Law, special budget	878 093 155	1 017 063 782	1 222 246 085	1 536 988 130	1 714 234 637
	1 017 063 782	1 222 246 085	1 536 988 130	1 714 234 637	2 000 538 407
lēstesnei, neudas plūšuma		1 338 988 130	1 974 234 637	2 538 846 131	1 691 220 434
lēstesnei, neudas plūšuma				1 704 031 280	1 805 834 128
lēstesnei, neudas plūšuma					1 948 196 083
lēstesnei, neudas plūšuma					2 206 700 000
lēstesnei, neudas plūšuma					2 209 900 000
lēstesnei, neudas plūšuma					2 347 200 000
lēstesnei, neudas plūšuma					2 480 100 000
lēstesnei, neudas plūšuma					2 777 100 000
lēstesnei, neudas plūšuma					2 989 500 000
lēstesnei, neudas plūšuma					3 158 100 000
lēstesnei, neudas plūšuma					3 324 600 000



Parameterdefinition / Spzif. budget, expenditures (each fiscal year)	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Amtl. kontrah. Basis buch	2 946 991 179	3 728 489 538	4 821 827 294	5 145 341 168	4 715 491 850	4 551 438 822	4 567 747 726	6 646 000 932	4 785 620 270	5 385 271 200	5 049 421 500	5 400 138 493	5 746 660 705	6 528 481 511				
Budget Buhe - Basis buch	2 236 710 195	2 925 725 149	3 720 849 082	4 676 232 664	6 020 941 913	6 049 481 700	4 382 799 951	4 708 690 950	4 614 430 774	4 813 989 679	5 322 950 000	5 334 000 000	5 637 000 000	6 462 200 000				
Ideben, neueres plombu																		
Ideben, neueres plombu	2 925 725 149																	
Ideben, neueres plombu		3 720 849 082																
Ideben, neueres plombu			4 676 232 664															
Ideben, neueres plombu				6 020 941 913														
Ideben, neueres plombu					6 049 481 700													
Ideben, neueres plombu						4 382 799 951												
Ideben, neueres plombu							4 708 690 950											
Ideben, neueres plombu								4 614 430 774										
Ideben, neueres plombu									4 813 989 679									
Ideben, neueres plombu										5 322 950 000								
Ideben, neueres plombu											5 334 000 000							
Ideben, neueres plombu												5 637 000 000						
Ideben, neueres plombu													6 462 200 000					
Ideben, neueres plombu														6 887 000 000				
Ideben, neueres plombu															6 832 000 000			
Ideben, neueres plombu																7 071 800 000		7 266 800 000

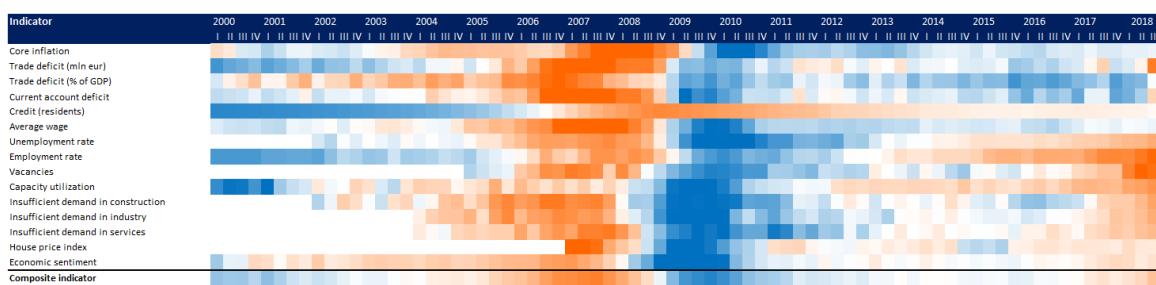


Eks korekce / CSA corrrection (million euro)												
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EKS corrections (notified in Oct 2017)	-250,5	-256,4	-440,6	-422,6	-273,7	-302,3	-91,6	105,0	75,5	109,7		
EKS bilance korekce	-345,4	-76,6	-10,0	-10,0	-10,0	-10,0	-10,0	-10,0	-10,0	-10,0	225,2	
EKS bilance korekce	-44,6	-234,2	-72	12	37,0	38	209,1					
EKS bilance korekce	-213,5	-44,5	31,2	2,6	81	147,5	-110,1					
EKS bilance korekce	-79,1	27,8	64,5	10,5	38,3	215,9	-26,1					
EKS bilance korekce	-100	74,5	100,7	54,6	156,6	-16,2	-81,1					
EKS bilance korekce	-34,1	89,9	-4,7	-250,5	-256,4	-440,7	-422,7	-273,7	-302,3	-136,5	45,0	42,1
EKS bilance korekce											116,4	66,2
EKS bilance korekce											16,2	82,1
EKS bilance korekce											35,6	330,0

## HEATMAP AND RECOGNITION OF ECONOMIC CYCLES

As the economy has grown at faster pace than previously forecasted in both 2017 and 2018, output gap has increased advising to perform restrictive fiscal policy. To understand the development of the economic cycles that would also help to lead the endorsement procedure of the macroeconomic forecast, the Council has constructed a composite indicator of several variables describing changes in cyclical factors. It is published in the Councils homepage – <http://fiscalcouncil.lv/cycle-heatmap> and first discussed at the Councils blog – <http://sekretariats.blogspot.com/2018/12/latvijas-ekonomikas-siltuma-karte.html>.

The composite indicator is calculated as the average of standardized variables. The methodology and steps of data calculation are presented at homepage, mentioned above. At the same time, this analysis is planned to be expanded further, along with other cyclical indicators, and the current choice of these variables is not necessarily the most representative of the economic cycles. We also welcome MoF to comment on variables they find important to be further included.



Annex 4 Chart 1 Economic heatmap.

**From the Heatmap presented above, it is possible to observe the "heating" of the composite index since the beginning of 2017, but especially in 2018Q2 and 2018Q3.** Previous signs of overheating were at the end of 2005 and early 2006, that time, as it is well known, it was a period before the global economic and financial crisis.

The heating phase of each cycle is characterized by different indicators, e.g. there was a rapidly rising inflation in 2006, which is currently not observed in Latvia. However, as in 2007, **the labour market has heated**, raising employment and activity level, but at the same time there is increasing number of job vacancies pointing to still high structural unemployment component and decreasing cyclical unemployment component. Also, **capacity utilization in manufacturing industries is historically at its highest level** and insufficient demand is no longer a constraint to business.

Even if the *U-turn* will be observed because of negative effects appearing in 2019 (as lower foreign demand, Brexit, tightening labour market, and reputation risks in banking sector), the economic growth is high leading to evidence of economic upswing. As the Fiscal Discipline Council has repeatedly stressed, in times of economic growth, the government needs to plan the fiscal balance of the budget **with a surplus**.