

**FISCAL COUNCIL OPINION
ON THE SUMMER FORECAST 2018
OF THE MINISTRY OF FINANCE**

September 2018

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Opinion

The State Budget Act requires the Fiscal Council to give its opinion on the summer macroeconomic and fiscal forecast of the Ministry of Finance, which serves as the basis for planning the state budget for the next year.

Foreign demand grew faster than expected last year, which allowed the growth forecast for the Estonian economy to be raised. Several factors have now appeared though that could slow the growth in foreign demand. The first is the increasing restrictions on foreign trade around the world, and the second is that this year several large developing states have experienced economic difficulties. In consequence the Ministry of Finance is justified in reducing its forecast for real growth in the economy.

The Fiscal Council finds that the summer forecast of the Ministry of Finance describes the outlook for economic growth and inflation in Estonia accurately enough and is in line with the forecasts of several other institutions.

Tax revenues will continue to grow rapidly next year too. Receipts of labour taxes may grow even faster than expected, though the risk is greater on the downside for VAT receipts. Overall, the Fiscal Council finds that the risks of tax receipts being higher or lower than forecast are in balance and the fiscal forecast can be considered an appropriate basis for drafting the state budget for next year.

The Fiscal Council considers the cyclical position of the Estonian economy to be better than that estimated by the Ministry of Finance, and this means there are slightly different opinions on the structural fiscal position. Rapid wage growth, low unemployment, a large number of vacancies, and a rise in the employment rate, which is already high, all indicate peak cyclical conditions. Businesses also indicate that the economic environment is much better than usual.

The summer forecast of the Ministry of Finance puts the fiscal position of the general government in a structural deficit of 0.2% of GDP in 2019. The Fiscal Council recommends that when the state budget for 2019 is drafted, the structural fiscal position of the general government should be at least 0.4 percentage point of GDP, or some 100 million euros, better than in the summer forecast.

There are two reasons for the recommendation of the Fiscal Council. The first is that the fiscal position should be improved by 0.2 percentage point to ensure that the target of structural balance set in the state budget strategy is met. We recommend that the fiscal position should then be improved by at least 0.2 percentage point as the current state of the economy means it is not wise to loosen the fiscal policy stance. The Ministry of Finance expects a structural surplus of 0.2% of GDP for 2018.

For this reason the Fiscal Council recommends that a state budget be passed for 2019 that sets the target for the general government of a small surplus in the structural fiscal position.

Chairman of Fiscal Council
Raul Eamets
Tallinn, 24 September 2018

Explanatory Report

Under the State Budget Act, the Fiscal Council must give an assessment of the macroeconomic and fiscal forecasts of the Ministry of Finance. The summer economic forecast of the Ministry of Finance is taken as the basis for the state budget for the following year, and the two documents are produced in close succession to each other. The Fiscal Council formulated its opinion on the 2018 summer fiscal forecast at a time when it was not yet clear how many of the revenue raising measures in the state budget strategy for 2019–2022 would come into force and what new decisions for the next year would be made in drafting the state budget.

Opinion on the summer forecast 2018 of the Ministry of Finance

Assessment of the macroeconomic forecast

The Estonian economy is very small and open and dependent on what happens in the global economy. The outlook for the global economy has been better than was expected when the past two forecasts were drawn up, and this has given grounds for revising the growth forecast. The circumstances have changed for this summer forecast, and the outlook for the global economy is now worse than it was in the spring assessment. The year 2017 was a very good one for growth throughout the world and in Estonia, and so it is to be expected that growth estimates will be lower in the forecasts issued this year (see Table 1).

Table 1. Estimates for GDP and CPI growth in Estonia in 2018–2019

	Real GDP growth (%)		CPI inflation (%)	
	2018	2019	2018	2019
Eesti Pank (June)	3.5	3.6	2.8	2.5
European Commission (July)*	3.5	2.7	2.9	2.7
Swedbank (August)	3.5	3.2	3.4	3.0
SEB (August)*	3.4	3.5	3.5	2.5
Consensus Forecasts (September)	3.6	3.3	3.3	2.8
<i>Average of other forecasts:</i>	3.5	3.3	3.2	2.8
Ministry of Finance (September)	3.6	3.0	3.3	2.8

* Inflation forecasts based on the harmonised consumer price index. These estimates are not used in calculating the average of the forecasts.

Sources: Consensus Forecasts, Eesti Pank, European Commission, Ministry of Finance, SEB, Swedbank

Comparing the forecasts shows that GDP real growth for 2018 is universally forecast to be around 3.5%. Opinions are also quite similar on a further slowdown in the growth rate in future. Equally, all the forecasters expect inflation to fall in 2019. The estimate of higher inflation for 2018 primarily reflects higher global prices for commodities. In summary the main indicators in the summer forecast of the Ministry of Finance for 2018–2019 are in line with other forecasts drawn up at the same time.

As real GDP growth is expected to be slower and inflation to be faster, the outlook for economic growth measured at current prices has not changed much. The outlook for growth remains better for both 2018 and 2019 than in the forecasts made a year and a half or even a year ago.

The outlook of the Ministry of Finance is longer and covers this year and the next four. The forecast for growth in the later years of the forecast reflects the opinion of the Ministry of Finance of the potential for growth in the Estonian economy, which is almost the same as it was in the spring forecast. It is the

opinion of the Ministry of Finance that the Estonian economy is currently running at above its potential level, but this difference will narrow in the years ahead and disappear by the end of the forecast horizon.

Although real GDP growth in the years ahead is put at 0.1–0.2 percentage point lower than in the spring forecast, forecast growth remains close to 3% after 2019 as well, falling to 2.7% by the end of the forecast horizon. At the same time, external price pressures have strengthened and so nominal GDP growth will be similar to what was forecast in spring (see Table 2). All other conditions being equal, this means that the outlook for tax revenues has not worsened.

Table 2. Key economic indicators for 2018–2022 in the macro forecast of the Ministry of Finance (%)

	Spring forecast 2018			Summer forecast 2018		
	2018	2019	Average 2020–2022	2018	2019	Average 2020–2022
Real GDP growth	4.0	3.2	2.9	3.6	3.0	2.8
Nominal GDP growth	7.6	6.3	5.5	7.8	6.3	5.6
Real private consumption growth	4.7	3.3	2.8	4.0	3.9	2.9
Nominal private consumption growth	7.8	5.8	5.1	7.3	6.8	5.2
Real investment growth	3.3	5.1	4.0	–1.0	6.2	4.1
Real growth in exports of goods & services	4.5	4.2	3.9	3.4	3.8	3.7
Nominal wage growth	7.0	5.7	5.6	7.0	6.0	5.2
Change in the number of employed	0.8	0.5	–0.2	1.2	0.8	–0.1
CPI inflation	2.9	2.3	2.1	3.3	2.8	2.1
GDP deflator	4.0	3.0	2.6	4.1	3.2	2.7

Source: Ministry of Finance

One reason for reviewing the forecast figures for growth is the changes in the outlook for future growth in foreign demand. The possible volatility and weakening of external demand in the near future is one of the main risks to economic growth. The trade barriers that the US and China have imposed on each other have deepened fears that a wider trade war will be ignited. The economies in several large developing countries like Turkey and Argentina have also felt tensions in recent months, which could also hurt the outlook for the external economy. Current forecasts show import demand growth in Estonia’s main trading partners at 3.5%–3.8% in the coming years, which is faster than has been seen in recent years. The forecast by the Ministry of Finance also includes a risk scenario in which yearly growth in exports slows to 3.2%–3.3%. If it is assumed that these figures reflect foreign demand, then this outlook is still a scenario that reflects good times.

An unexpected decline in foreign demand could coincide with a rise in labour costs brought on by labour shortages. The forecast of the Ministry of Finance is that wages will grow a little more slowly in the final years of the forecast horizon than the economy as a whole, indicating that some improvement in price competitiveness in export markets is expected. This assumption can also be found in other forecasts for the Estonian economy. It has been the case however for several years since the crisis that average wages have risen faster than forecast and so the profitability of companies has declined. If wages rise faster than productivity and foreign demand weakens unexpectedly and sharply, this could have a bad influence on domestic demand through the competitiveness of the exporting sector. The Estonian economy has been markedly more in balance since the crisis however, and the resilience of the economy to foreign shocks has improved appreciably.

Assessment of the fiscal forecast

Tax receipts in the state budget

In analysing the section of the summer economic forecast of the Ministry of Finance on the state finances, the Fiscal Council focuses above all on the forecast for tax receipts and the fiscal position in 2018 and 2019, as this is taken as the base for writing the state budget for 2019.

Although the macroeconomic forecast made it clear that the Ministry of Finance has slightly lowered its forecast for real GDP growth for this year and next, the forecast for nominal GDP growth, which is more strongly related to tax receipts, has not been lowered since spring for the years 2018–2019. Nominal growth in the payroll in the economy and in private consumption, which are the basis for labour and consumption taxes, has even risen a little for 2019 since the spring forecast. This means the more modest expectations of growth in foreign demand have not worsened the outlook for the tax revenues in the state budget (see Figure 1). Tax receipts in the state budget are some 33 million euros more for 2018 than was predicted in the spring economic forecast, and 78 million euros more for 2019. Receipts from excise have been lowered for both years, while those from labour taxes and VAT have been raised in line with the forecast for the tax base. Tax receipts from the first half of this year do not give sufficient information on what the dividend policy of private companies is likely to be in the next couple of years, and so the forecast for corporate income tax has also been adjusted downwards.

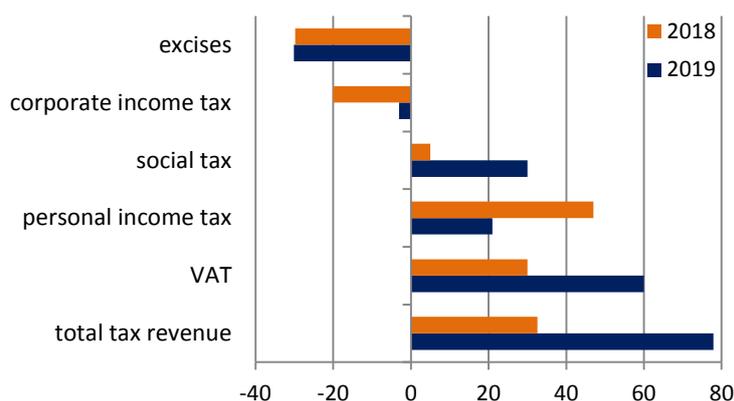


Figure 1. Changes from the spring forecast in the state budget forecast for tax revenues (million euros)¹

Source: Ministry of Finance

Previous experience has shown that the amount of revenue in the state budget may still be in line with the budget plan even if receipts of certain taxes are not what was forecast (see Box 1). Growth in employment and wages has been faster than expected for several years since the exit from the crisis, and this has seen labour tax revenues improve. This may continue in the years ahead. On top of this, several important changes to personal income tax came into force this year (see Box 2). It is not yet clear how the reform of personal income tax will affect the behaviour of taxpayers in 2019, meaning whether taxpayers will want to estimate their tax-free income for the current year as accurately as possible and reduce their rebate next year, or not. The average tax rate used in the fiscal forecast depends more than before on how the forecast growth in wages is divided between income groups. The Fiscal Council finds that the Ministry of Finance has slightly underestimated the average tax rate that will apply in 2019. The Fiscal Council finds that it is possible that receipts from labour taxes in 2019 may even be higher than expected.

¹ Figure 1 shows the tax revenues in the economic forecast by the Ministry of Finance for summer and spring 2018. The spring forecast did not include the new revenue measures passed in the state budget strategy for 2019–2022.

At the same time it is probable that less will be received in consumption taxes than expected. The rise in consumption taxes is affected a great deal by VAT. The fiscal forecast assumes that 8.5% more will be received in VAT in 2019 than this year. The growth in VAT revenues is forecast to be faster than the nominal growth in private consumption, investment or domestic demand. This would mean that the part of consumption and investment that are subject to VAT will grow faster than the average, as in the first half of 2018 when VAT receipts were boosted strongly by public sector investment and the construction of housing, and by the larger build-up of inventories than previously. The structure of domestic demand favours VAT receipts but will not necessarily continue to do so over a long time. The gap between the growth in wages and in saving and the structure of private consumption could lead to unexpected changes. It remains risky to forecast how goods subject to higher excise rates will be consumed. Lower receipts than forecast from excises would also reduce the revenues from VAT.

Overall the Fiscal Council finds that the risks of tax receipts being higher or lower than forecast are in balance, and the summer fiscal forecast of the Ministry of Finance is an appropriate basis for drafting the state budget for next year.

Setting the general government budget position

The nominal budget position for 2018 is stronger than in the state budget for 2018 or the spring forecast, and the summer forecast expects a nominal surplus of 0.8% of GDP (see Table 3). The decision in the state budget strategy to abandon the rise in alcohol excise in 2019 means the surplus will be 0.1 percentage point smaller. The Fiscal Council finds the moderate budget surplus expected for 2018 to be appropriate given the current position of the economic cycle. The summer forecast is the basis for drafting the state budget for 2019, and it expects a small nominal surplus for 2019 and a small structural deficit. Until the state budget is drafted though, it remains unclear which of the new income and spending measures, and which estimate of their impact, will be considered in planning the budget position for 2019.

Table 3. General government budgetary position (% of GDP)

	State Budget	Spring forecast 2018		Summer forecast 2018	
	2018	2018	2019	2018	2019
Nominal position (million euros)	-36	113	-45	200	73
Nominal position	-0.1	0.5	-0.2	0.8	0.3
Output gap	0.5	1.6	1.3	1.7	1.3
Cyclical component	0.2	0.7	0.6	0.7	0.6
One-off measures (million euros)	-30	-30	-21	-30	-21
Structural position	-0.25	-0.1	-0.7	0.2	-0.2

Source: Ministry of Finance

The revision of GDP data by Statistics Estonia in autumn 2018 made clear that the total output of the Estonian economy in 2014–2017 was larger than previously calculated, leading the Ministry of Finance to raise retrospectively its estimate for the potential growth of the Estonian economy over the same years. The biggest changes this has brought are for the output gap in 2016–2017, which now puts the economic cycle in a much better position than in the spring forecast of the ministry. The output gap for the coming years barely changed at all in the latest forecast update of the Ministry of Finance, and was 1.7% of GDP for 2018 and 1.3% for 2019.

In the methodology of the Ministry of Finance, this estimate of the output gap means the cyclical component of the fiscal position for 2018 is 0.7% of GDP, and that for 2019 is 0.6% of GDP (see Figure 2). The favourable position of the economic cycle indicates tax receipts will still be very good next year too. The Fiscal Council uses a different method to calculate the size of the cyclical component, using not only changes in GDP but also changes in the structure of GDP that can affect tax receipts, in what is called the composition effect. This tax-based method shows the impact of the economic cycle on the fiscal position to be even stronger this year and next, meaning that a slightly larger part of the good tax receipts is put down to favourable economic circumstances than in the estimate of the ministry. Good conditions in the economy are also indicated by the heatmap put together for the Estonian economy by the Fiscal Council (see Box 3), which reflects rapid growth in wages, low unemployment, the large number of vacancies, a continuing rise in the high rate of employment, and corporate opinion that economic conditions are clearly better than usual.

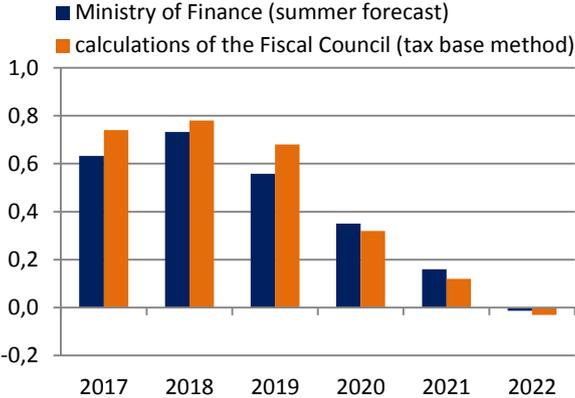


Figure 2. Estimates of the cyclical component of the budget (% of GDP)

Sources: Ministry of Finance, calculations of the Fiscal Council

In calculating the structural position, the nominal position is adjusted for the impact of the economic cycle, which is expressed in the size of the output gap, and one-off revenue and expenditure measures. As the one-off measures for 2018–2019 will be only 0.1% of GDP, the structural position is defined mainly by the estimate of the output gap. The macro forecast of the Ministry of Finance finds the positive output gap will narrow slowly over the coming years, until it closes entirely by the end of the forecast horizon.

The summer forecast of the Ministry of Finance expects a structural surplus of 0.2% of GDP for 2018. The estimate of the Fiscal Council using the same forecast assumptions and the tax-based method finds a structural position of 0.1% of GDP for 2018 (see Figure 3).

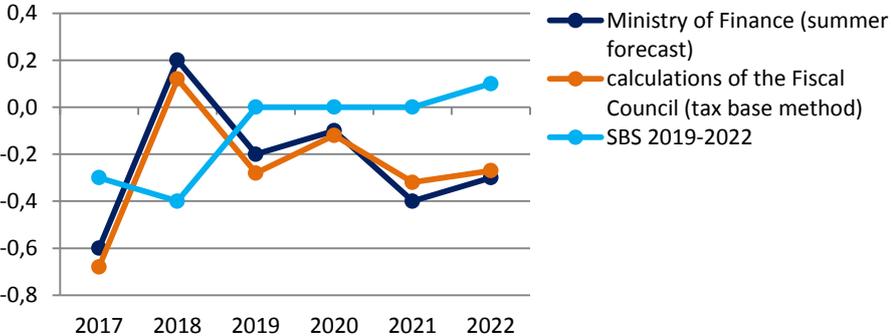


Figure 3. Estimates of the structural budget position (% of GDP)

Sources: Ministry of Finance, calculations of the Fiscal Council

The Ministry of Finance forecasts that the structural deficit will be 0.2% of GDP for 2019, and the tax-based method of the Fiscal Council puts it at 0.3% of GDP. The estimates of the Ministry of Finance and of the Fiscal Council based on the summer forecast put the structural fiscal position of the general government in deficit in 2020–2022 as well.

The fiscal rules in the state budget act allow a structural deficit to be planned only if a structural surplus of at least the same amount has previously been built up. The calculation for this starts from the fiscal position of 2014 (see Table 4). The Ministry of Finance estimates that the cumulative structural surplus was around 192 million euros by the end of 2017.

Table 4. The cumulative structural surplus as at the end of the year (million euros)

	2014	2015	2016	2017
Based on the fixed estimate	32	118	270	192
<i>Based on the latest estimate</i>	79	216	183	48

Sources: Ministry of Finance, calculations of the Fiscal Council²

The fiscal rules are designed so that the structural fiscal position for the end of each year is fixed in the next spring, and that estimate is not subsequently changed. Although the government applies the fixed estimate in planning its budget policy, the output gap and the resulting estimate of the structural position are constantly revised retrospectively. If the most recent estimate of the Ministry of Finance for the output gap and the structural fiscal position for 2014–2017 are used as the basis for calculating the cumulative surplus, that surplus is notably smaller. The smaller surplus for 2014–2017 than was previously calculated equally means that the actual state of the economy is better than was calculated when the state budget was written, and so fiscal policy has been used to revive the economy at a time when economic growth is already strong.

The budget strategy for 2019–2022 used additional revenue and expenditure measures to set a target for the general government budget position of structural balance in the years ahead. The Fiscal Council finds that the summer economic forecast does not give any grounds in the changed outlook for the Estonian economy for altering the budget targets set in spring, meaning the fiscal position should be strengthened when the state budget for 2019 is written.

Given all this, the Fiscal Council recommends that when the state budget for 2019 is drafted, the structural fiscal position of the general government should be at least 0.4 percentage point of GDP, or some 100 million euros, better than in the summer forecast. The first move should be to improve the fiscal position by 0.2 percentage point to ensure that the target of structural balance set in the state budget strategy is met. The council recommends that the fiscal position should then be improved by at least 0.2 percentage point as the current state of the economy means it is not wise to loosen the fiscal policy stance. The Ministry of Finance expects a structural surplus of 0.2% of GDP for 2018.

For this reason the Fiscal Council recommends that state budget be passed for 2019 that sets the target for the general government of a small surplus in the structural fiscal position. This would mean that the fiscal policy stance would not be loosened and that the cumulative surplus would be increased.

² Statistics Estonia corrected the data on revenue and expenditure for the general government for 2014–2017 on 21 September. Table 4 and Figure 3 use the data from before the correction.

Box 1. Forecasting tax revenues and the accuracy of forecasts

Each autumn a state budget is drawn up using the summer economic forecast of the Ministry of Finance as its base and setting out the revenues and expenditures of the general government. Around 70% of the revenues in the state budget are tax revenues, and the largest part of these are social tax at around 42%, VAT at 32%, and excises at 14%. The economic forecast is important as it shows the expected development of several macroeconomic indicators that affect tax receipts directly, such as employment and the average wage, which are important for social tax, or private consumption and investment, which are important for VAT. The forecast also needs to take account of tax changes that have been passed, though recent experience shows that it can be very difficult to predict what impact new measures will have. A further complication in forecasting is that it is not yet known in the autumn what the final tax receipts and economic indicators for the current year will be. Overestimating tax revenues may mean that painful cuts are required or that the budget position ends up worse than expected and possibly in breach of the budget rules. Underestimating tax receipts may mean that some activities are omitted from the budget even though funding would have been available for them, or perhaps that new taxes are introduced to improve the budget position that then turn out to be excessive.

The hardest part of the tax revenues in the state budget to forecast is the income tax paid by companies, as it is a very volatile form of tax revenue. The particular nature of the Estonian income tax system means that receipts from it are hard to predict by looking only at macro indicators for the economy. This tax plays only a small role in the tax revenues in the state budget, as social tax and VAT receipts have a much larger weight in building an accurate fiscal forecast.

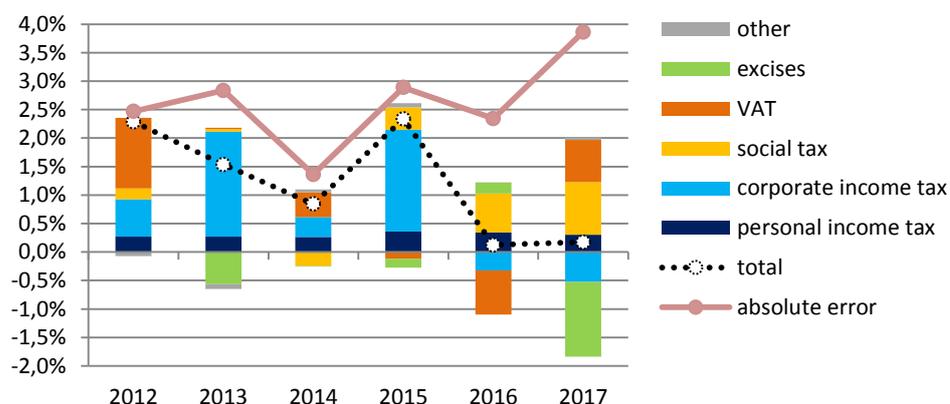


Figure 4. Difference between planned and actual tax receipts in the state budget (% of total planned tax receipts)³

Sources: Ministry of Finance, calculations of the Fiscal Council

Figure 4 shows that the forecasts by the Ministry of Finance for tax receipts in 2012–2017 were generally conservative, and tax receipts as a whole tended to be underestimated rather than overestimated, as illustrated by the dotted line. On average in these years, receipts were 101.2% of the amount expected in the state budget. This does not mean however that there were no substantial forecasting errors in individual tax types, nor no overestimation. The largest forecast error in absolute terms was that in 2017, where receipts from corporate income tax and excise were overestimated and those from VAT and labour taxes were underestimated.

³ Other taxes in the figure covers gambling taxes and customs duties. Personal income tax receipts do not include the part set aside for local governments.

This was the third year in a row that receipts from social tax were underestimated. The reason for this is that the growth in the payroll, which is the tax base for social tax, has been consistently underestimated, as employment and the average wage grew notably faster in 2015–2017 than the Ministry of Finance expected in its summer economic forecasts, and this led to social tax receipts being better than expected. The forecast error for VAT in 2016–2017 can largely be explained by general government investment, which was lower than expected in 2016 meaning lower tax receipts, but was larger than expected in 2017, meaning tax receipts were too.

Tax receipts do not depend only on developments in the economy and the tax base however. Tax receipts can be increased or reduced by new tax measures or changes in the efficiency of tax collection. Receipts of both social tax and VAT have been affected by such changes in recent years. The Tax Board estimates that in 2010–2013 uncollected taxes were almost 10% of the actual total tax receipts in the state budget, but in 2014 this gap narrowed sharply so that it was only 5.8% in 2015 and 4.9% in 2016. This gap was closed partly by the additional declarations for VAT and by the introduction of the employment register.

While the Tax Board became better at collecting tax revenues in these years, the structure of growth in the economy was tax-rich, meaning the main sources of growth were those that are taxed. This meant that the rule of thumb in forecasting, that GDP and tax revenues at current prices should grow at the same rate over a longer period, has not applied of late. Tax revenues grew faster than the economy as a whole until 2017, when faster growth returned to the economy. In consequence tax receipts grew as a share of GDP in earlier years, meaning the elasticity of taxes to GDP was greater than one (see Figure 5)⁴.

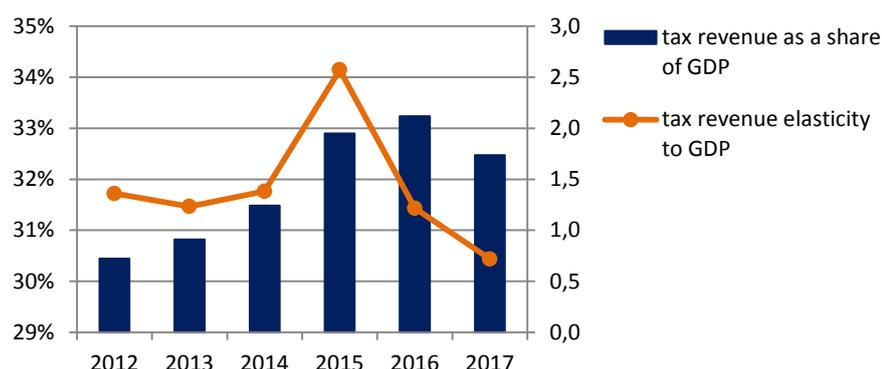


Figure 5. Tax revenues in the state budget as a share of GDP (left scale) and elasticity to GDP (right scale)

Sources: Statistics Estonia, calculations of the Fiscal Council

Comparing the growth in tax receipts to the growth in the economy is more of a cross-check than a main tool for forecasters. The actual forecasting generally observes each type of tax separately, together with the accurate macroeconomic indicators that affect receipts of that tax directly. As with the rule of thumb though, average growth in tax receipts should also be similar to the growth in the tax base, meaning elasticity is one for VAT and social tax, if no major tax changes occurred. Figure 6 compares the forecast growth in the tax bases of these two taxes when the state budget was drafted with their actual growth, and shows the elasticity of tax receipts to the tax base. In an effort to imitate the forecasting methodology of the Ministry of Finance, the tax base for VAT uses 3-4 components of private consumption and investment, and the base for social tax is the payroll in the economy. This helps illustrate whether the error in forecasting comes from estimates of the relation between tax receipts and

⁴ The calculations in Figure 5 are based on tax revenues received in the state budget together with personal income tax set aside for local governments.

the tax base, which covers the impact of new tax measures or measures taken by the Tax Board, or from the growth in the tax base and the broader expectations for the economic climate.

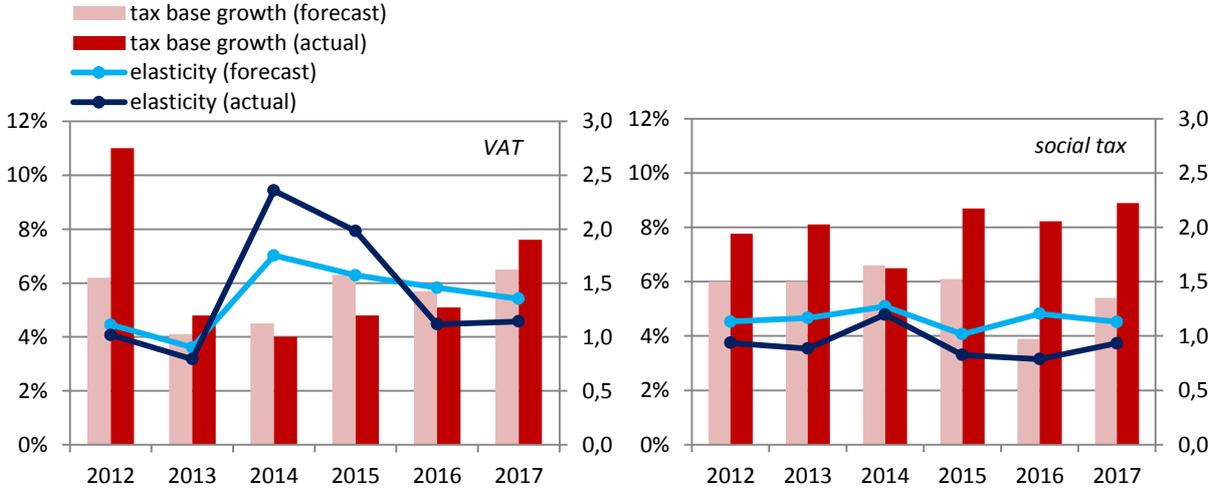


Figure 6. Forecast and actual growth in the tax base for VAT and social tax (left scale) and elasticity to the tax base (right scale)

Sources: Ministry of Finance, Statistics Estonia, calculations of the Fiscal Council

The elasticity of the tax receipts to tax base for VAT in 2014–2015 is notably larger than usual, and the differences between expected and actual elasticity at that time are also larger. This means that tax receipts in those years were much better than may have been expected from the growth in the tax base, while the tax base actually grew more slowly than was forecast. The main reason for this was the work of the Tax Board in combating VAT fraud. The relation between tax receipts and the tax base for social tax has been more stable and the value has been close to one. It is apparent that the payroll has grown faster almost every year than was assumed when the state budget was written in the autumn. The assumption of elasticity exceeding one has helped prevent larger forecast errors for social tax receipts, except in 2015–2017, when the differences between forecast and actual growth in the payroll were particularly large.

Box 2. Changes in tax policy that affect the fiscal position in 2019

The government of Jüri Ratas took office at the end of 2016 and has generally continued to shift the tax burden from labour to consumption. Several tax changes directly affect the outlook for tax revenues for 2019. The biggest package of tax changes was drawn up in 2017 and this has already had a substantial impact on the tax receipts of the government in 2018. The package had three main components.

The first was a sharp rise in excise on alcohol and other excise goods. This was intended not only to boost revenues, but also to change consumption behaviour, but it was difficult to find tax rates that would meet both goals, and the initial plan for a steep rise in excise was later partly abandoned (see Table 5).

Table 5. Changes to the planned excise rates for 2018–2020

	Summer forecast 2017		Summer forecast 2018	
	2018	2019	2018	2019
Strong alcohol	10%	10%	5%	10%
Beer	18%	10%	9%	10%
Light fermented beverages	18%	10%	9%	10%
Wine and strong fermented beverages	20%	20%	20%	20%
Tobacco	8%	10%	8%	8%
Natural gas used for heating	25%	25%	25%	25%
Petrol	10%	-	10%	-

Source: Ministry of Finance

The second component was a cut in income tax for individuals on low incomes. This was done through a general tax-free income threshold dependent on income, which starts at 500 euros for monthly incomes of up to 1200 euros, then falls as incomes rise to reach zero when monthly income is at 2100 euros. Taxpayers estimate their expected income and the tax-free income based on this, and can change their forecast during the year. The Tax Board uses these data to calculate the tax rate for the income tax of each individual throughout the year. It cannot yet be reliably concluded from the data for the first half of 2018 whether taxpayers will want to estimate their tax-free income for the current year as accurately as possible and reduce their rebate next year, or not. The average tax rate found from the taxes paid by all income earners now depends more than previously on the distribution of wage growth across income groups.

The third component of the package of tax changes was a cut in the income tax paid by companies from 20% to 14% for dividends taken out to a regular schedule. Regular is taken to mean in dividend policy that the profit taken out is less than or equal to the average distributed profit of the past three years. The average of the past three years will start to be calculated from 2018, and so it is forecast that more will be taken out in dividends than was taken in 2017. It was also decided to limit the tax-free loans that can be granted from profit and to impose advance income tax on the banks. The tax treatment of some fringe benefits was also changed.

The package as a whole was intended to boost the growth in tax revenues, especially in 2018. It was estimated when the state budget was drafted that the additional revenues in 2018 would be around 0.6% of GDP. In its opinion on the summer economic forecast of the Ministry of Finance for 2017, the Fiscal Council expressed the worry that the impact of such numerous tax changes would be hard to estimate and the risk of forecast error would increase. Preliminary estimates for 2018 show indeed that the tax revenue boosting effect of the entire package was about one third smaller than was forecast. In the first

half of the year it was only corporate income tax revenues that increased in line with expectations. Despite the rise in tax rates, revenues from alcohol and tobacco excise were the same in the first half of the year as in the previous year and revenues from all other excises rose by less than had been hoped. At the same time, the reform of personal income tax reduced government revenues by less than forecast to the extent that it almost cancelled out the overestimation of excise revenues. Part of the impact of changes in personal and corporate income tax has been carried over to 2019.

To ensure that the general government budget remained in structural balance, the government had planned additional revenue earning measures in its state budget strategy for 2019–2022 on top of the tax changes already described. The biggest impact, of 0.15–0.3% of GDP, would be from taking more in dividends in 2019–2022 from state-owned companies than previously planned. Leaving aside 2019, on which there is more information, the Fiscal Council considers it possible that the profit of state-owned companies like Eesti Energia will not be large enough for them to pay substantially larger dividends than previously and still to make the investment they need.

There were also other measures on the list published in spring, but when this opinion was written the Fiscal Council did not have sufficient information on whether these would actually be introduced or not.

Box 3. A macroeconomic heatmap for Estonia

To assess the compliance with the rules on structural balance and the output gap in the macroeconomic forecast, the Fiscal Council needs to analyse the economic cycle in Estonia. Alongside the technical calculation of the output gap the Fiscal Council monitors several economic indicators that are simpler to measure and that give an indication of the cyclical position of the economy. The end result of this analysis can be presented in the form of a heatmap (see Figure 7), where the darker shade of blue indicates that the economy is cooling, while the darker orange indicates the economy is at risk of overheating⁵.

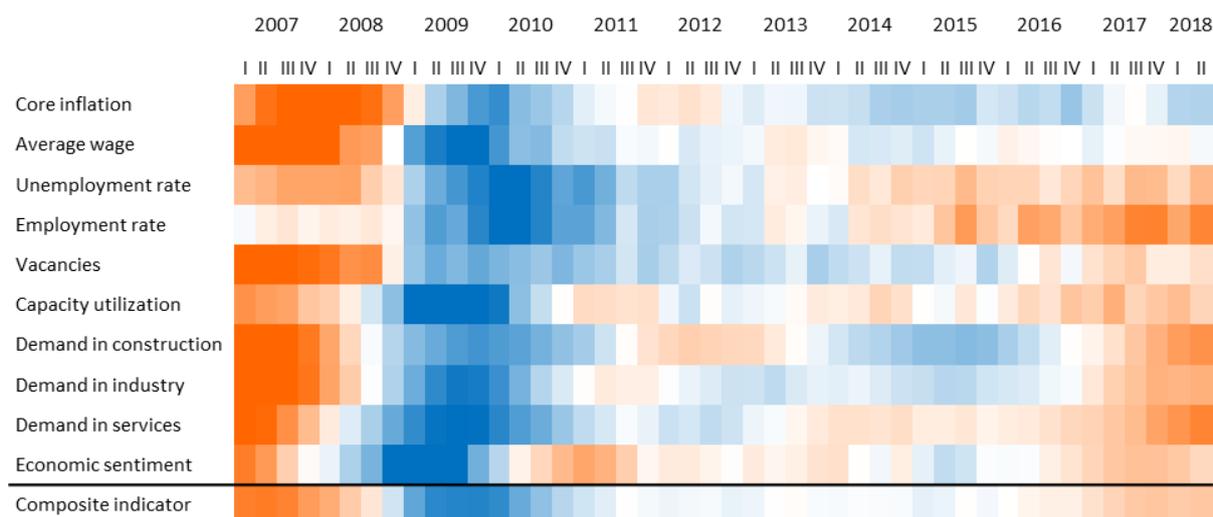


Figure 7. Macroeconomic heatmap for Estonia (Q1 2007 – Q2 2018)

Sources: Eurostat, Estonian Institute of Economic Research, Statistics Estonia, calc. of the Fiscal Council

The row under the line on the heatmap shows a composite indicator, made up as an average of all the economic indicators (see also Figure 8). The composite indicator of the heatmap using data for the second quarter of 2018, the most recent available, shows that the good conditions in the economy achieved in 2017 have been maintained in the first half of 2018 because of the strength of the labour market and demand. The collection of broader economic indicators points to an even better cyclical position for the economy than the technical assessments of the output gap do.

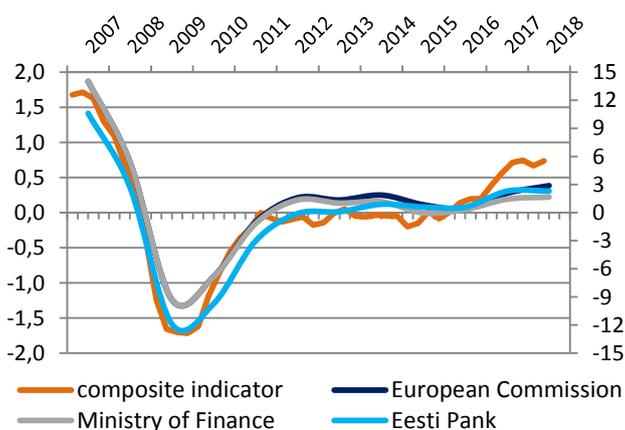


Figure 8. The composite indicator (left scale) and estimates of the output gap in % of GDP (right scale)

Sources: Eesti Pank, European Commission, Ministry of Finance, calculations of the Fiscal Council

⁵ For more on the design of the heatmap, see the [opinion of the Fiscal Council published in spring 2018](#).