MINISTRY OF FINANCE

Economic Survey

Autumn 2019

Publications of the Ministry of Finance – 2019:50

Economic Prospects

Publications of the Ministry of Finance 2019:50

Economic Survey

Autumn 2019

Ministry of Finance, Helsinki 2019

Ministry of Finance

ISBN PDF: 978-952-367-032-7

Layout: Government Administration Unit, Publications

Helsinki 2019

Description sheet

Published by	Ministry of Finance		7 October 2019
Authors	Economics Department		
Title of publication	Economic Survey, Autumn 2019		
Series and publication number	Publications of the Ministry of Finance 2019:50		
Subject	Economic Prospects		
ISBN PDF	978-952-367-032-7	**ISSN (PDF)**	1797-9714
Website address (URN)	http://urn.fi/URN:ISBN:978-952-367-032-7		
Pages	108	**Language**	English
Keywords	Public finance, economic development		

Abstract

The short-term outlook for the Finnish economy remains positive despite worrying economic news received from elsewhere in the world. Economic growth will be sustained by domestic demand over the coming years. Growth of private investments and consumption will slow down as the uncertainties in the external environment are reflected in the expectations of Finnish companies and consumers. Public consumption and investments will contribute markedly to GDP growth, especially in 2020.

General government expenditure has remained higher than general government revenue throughout the current economic upturn. Finland's general government finances suffer from a structural deficit, which is expected to grow over the next few years. General government finances will be weakened by a slowdown in economic growth, higher expenditure resulting from an ageing population and the spending increases envisaged in the Government Programme.

Finland's GDP will grow by 1.5% in 2019. Exports will grow only slowly as the outlook for European economies remains uncertain. Housing construction will decrease and with the global economy slowing down, a slowdown in production investments is also expected. Boosted by rising earnings and a high employment rate, private consumption will continue to grow.

Finland's GDP will grow by 1.0% in 2020 and by 0.9% in 2021. Growth in private consumption will slow down as the household savings rate rises. Investments to GDP ratio will decrease. The trade tensions between major economies will have an impact on world trade and indirectly also on Finnish exports.

A slowdown in economic growth and a rise in nominal wages will gradually weaken employment growth. Further decline in the working-age population will push the employment rate to 73.4% by 2021. Unemployment will fall slowly and will stand at 6.2% in 2021.

Publisher	Ministry of Finance
Publication sales/ Distributed by	Online version: julkaisut.valtioneuvosto.fi Publication sales: julkaisutilaukset.valtioneuvosto.fi

Kuvailulehti

Julkaisija	Valtiovarainministeriö		7.10.2019
Tekijät	Kansantalousosasto		
Julkaisun nimi	Economic Survey, Autumn 2019 (Taloudellinen katsaus, syksy 2019)		
Julkaisusarjan nimi ja numero	Valtiovarainministeriön julkaisuja 2019:50		
Teema	Talousnäkymät		
ISBN PDF	978-952-367-032-7	**ISSN PDF**	1797-9714
URN-osoite	http://urn.fi/URN:ISBN:978-952-367-032-7		
Sivumäärä	108	**Kieli**	Englanti
Asiasanat	Julkinen talous, taloudellinen kehitys		

Tiivistelmä

Talouskasvu näyttää vielä lähiaikoina myönteiseltä huolimatta kansainvälisen talouden heikoista uutisista. Kotimainen kysyntä ylläpitää talouskasvua tulevina vuosina. Yksityisten investointien ja kulutuksen kasvu hidastuu epävarman ulkoisen ympäristön heijastuessa suomalaisten yritysten ja kuluttajien odotuksiin. Julkisen kulutuksen ja investointien merkitys BKT:n kasvulle korostuu varsinkin ensi vuonna.

Julkisen talouden menot ovat pysyneet koko korkeasuhdanteen ajan tuloja suurempina. Julkisessa taloudessa on rakenteellinen alijäämä, joka ennusteen mukaan kasvaa lähivuosina. Julkista taloutta heikentävät vaimeneva talouskasvu, väestön ikääntymisestä johtuva menojen kasvu sekä hallitusohjelman mukaiset menonlisäykset.

Vuonna 2019 Suomen BKT kasvaa 1,5 %. Viennin kasvu on vaisua Euroopan talousnäkymien säilyessä epävarmoina. Asuinrakennusinvestoinnit supistuvat, mutta myös tuotannollisten investointien kasvu hidastuu kansainvälisen talouden suhdanteen heikentyessä. Yksityisen kulutuksen kasvu jatkuu ansiotason nousun sekä korkean työllisyyden tukemana.

BKT kasvaa 1,0 % v. 2020 ja 0,9 % v. 2021. Yksityinen kulutuksen kasvu hidastuu kotitalouksien säästämisasteen noustessa. Investointien osuus BKT:sta laskee. Keskeisten talouksien väliset kauppajännitteet heijastuvat maailmankauppaan ja vaikuttavat välillisesti Suomen vientiin.

Talouskasvun hidastuminen ja nimellispalkkojen nousu alkavat asteittain heikentää työllisten kasvua. Työllisyysaste nousee 73,4 prosenttiin vuoteen 2021 mennessä työikäisen väestön edelleen vähentyessä. Työttömyysaste laskee hitaasti 6,2 prosenttiin v. 2021.

Kustantaja	Valtiovarainministeriö
Julkaisun myynti/ jakaja	Sähköinen versio: julkaisut.valtioneuvosto.fi Julkaisumyynti: julkaisutilaukset.valtioneuvosto.fi

Presentationsblad

Utgivare	Finansministeriet		7.10.2019
Författare	Ekonomiska avdelningen		
Publikationens titel	Economic Survey, Autumn 2019 (Ekonomisk översikt, hösten 2019)		
Publikationsseriens namn och nummer	Finansministeriets publikationer 2019:50		
Tema	Ekonomiska utsikter		
ISBN PDF	978-952-367-032-7	**ISSN PDF**	1797-9714
URN-adress	http://urn.fi/URN:ISBN:978-952-367-032-7		
Sidantal	108	**Språk**	Engelska
Nyckelord	Offentlig ekonomi, ekonomisk utveckling		

Sammanfattning

Den ekonomiska tillväxten verkar bli fortsatt positiv den närmaste tiden trots dåliga nyheter angående den globala ekonomin. Den inhemska efterfrågan upprätthåller den ekonomiska tillväxten under kommande år. De privata investeringarnas och konsumtionens tillväxt mattas av när osäkra yttre omständigheter reflekteras i de finländska företagens och konsumenternas förväntningar. Den offentliga konsumtionens och investeringarnas betydelse för tillväxten i BNP betonas i synnerhet i nästa år.

Utgifterna inom den offentliga ekonomin har varit större än inkomsterna under hela högkonjunkturen. Den offentliga ekonomin uppvisar ett strukturellt underskott som enligt prognosen kommer att öka ytterligare under de närmaste åren. De offentliga finanserna försämras av den allt mer dämpade ekonomiska tillväxten, de ökade utgifterna till följd av att befolkningen åldras samt utgiftsökningarna i enlighet med regeringsprogrammet.

År 2019 ökar Finlands BNP med 1,5 procent. Exporttillväxten är dämpad eftersom de ekonomiska utsikterna för Europa är fortsatt osäkra. Bostadsinvesteringarna minskar, men också de produktionsmässiga investeringarnas tillväxt mattas av när det globala konjunkturläget försämras. Den privata konsumtionen fortsätter att öka med stöd av den stigande inkomstnivån och den höga sysselsättningsnivån.

BNP ökar med 1,0 procent 2020 och 0,9 procent 2021. Den privata konsumtionens tillväxt mattas av när hushållens sparkvot stiger. Investeringarnas andel av BNP minskar. Handelsspänningarna mellan de viktigaste ekonomierna avspeglas i världshandeln och inverkar indirekt på Finlands export.

Den avtagande ekonomiska tillväxten och ökningen av de nominella lönerna bidrar stegvis till att ökningen av antalet sysselsatta mattas av. Sysselsättningsgraden stiger till 73,4 procent före 2021 då befolkningen i arbetsför ålder minskar ytterligare. Arbetslöshetsgraden sjunker långsamt till 6,2 procent 2021.

Förläggare	Finansministeriet
Beställningar/ distribution	Elektronisk version: julkaisut.valtioneuvosto.fi Beställningar: julkaisutilaukset.valtioneuvosto.fi

The source for all data on materialised developments is Statistics Finland unless otherwise indicated.

SYMBOLS AND CONVENTIONS USED

-	nil
0	less than half the final digit shown
..	not available
.	not pertinent
**	forecast
CPB	CPB Netherlands Bureau for Economic Policy Analysis
HWWI	Hamburgisches WeltWirtschafts Institut
IMF	International Monetary Fund
MoF	Ministry of Finance

Each of the figures presented in the tables has been rounded separately.

ECONOMIC SURVEY AUTUMN 2019

This Economic Survey offers projections of economic developments in 2019–2021. In addition to short-term prospects, it includes a medium-term economic outlook extending to 2023.

The forecast and trend projections in the survey are prepared independently by the Ministry of Finance Economics Department based on the Act on the implementation of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union and on multi-annual budgetary frameworks (869/2012).

The forecasts are based on national accounts data for 2018 published by Statistics Finland in September 2019 and on other public statistical sources available by 20 September 2019. The decisions made by the Government in its budget negotiation on 17 September 2019 are taken into account.

Helsinki September 2019

Ministry of Finance Economics Department

Mikko Spolander
Director General

Jukka Railavo
Senior Financial Advisor
Head of Macro Forecasting

Marja Paavonen
Senior Financial Advisor
Head of Public Finace

Contents

Economic Survey Autumn 2019 ... 7

Preface ... 11

Summary ... 14

1 Economic outlook ... 25
- 1.1 Global economy ... 25
- 1.2 Foreign trade ... 31
  - 1.2.1 Exports and imports ... 31
  - 1.2.2 Prices and current account ... 33
- 1.3 Domestic demand ... 34
  - 1.3.1 Private consumption ... 34
  - 1.3.2 Public consumption ... 36
  - 1.3.3 Private investment ... 38
  - 1.3.4 Public investment ... 41
- 1.4 Domestic production ... 42
  - 1.4.1 Total output ... 42
  - 1.4.2 Secondary production ... 45
  - 1.4.3 Services ... 49
- 1.5 Labour force ... 51
- 1.6 Incomes, costs and prices ... 54
  - 1.6.1 Wages and salaries ... 54
  - 1.6.2 Consumer prices ... 55

2 Public finances 58
2.1 General government finances 58
2.1.1 Estimates of fiscal policy impact 66
2.1.2 General government debt 75
2.2 Central government 77
2.3 Local government 91
2.4 Social security funds 96
2.4.1 Employment pension schemes 96
2.4.2 Other social security funds 97
2.5 Long-term sustainability of public finances 99

Supplementary statistics 104

Boxes

Business cycle fluctuations and recession forecasting models 22
Finland and the fiscal policy rules of the EU 64
Fiscal stance in 2019–2023 and direct budgetary measures envisaged in the Government Programme in the forecast for general government finances 67
How large is the government spending multiplier? 71
The 2020 Budget and central government spending limits 82

Preface

This document presents the latest official forecast for Finland's general government finances. The forecast can be considered official because the macroeconomic forecast prepared by the Ministry of Finance provides the economic outlook for the 2020 Budget and the General Government Fiscal Plan for the parliamentary term.

According to the forecast, economic growth in Finland will slow down from about 2.5% experienced in recent years to just below one per cent in the next few years. Global economy is stagnating, companies' export outlook has weakened substantially and export growth is slowing down. The uncertainties affecting the operating environment have dampened the mood among companies, causing investments to fall. Households are spending less on housing but their consumption levels have remained high because the employment rate and earnings are still on the increase and inflation remains under control.

The basic economic outlook is not bleak but characteristic of a maturing business cycle. The economy will continue to expand, though at a slower rate and the slowdown will be slightly steeper than what was forecast in early summer. After the upturn, and sooner than in the past, the Finnish economy will settle at a growth rate that is determined by its structures and the resources available.

A recession is not envisaged in the basic economic outlook. The forecast is, however, characterised by a great deal of uncertainty about the future direction of the global economy. There is a substantial risk that the economy will slow down more rapidly than forecast.

The basic economic outlook is built on an assumption that the temporary factors and other tensions affecting the global economy and world trade will ease in 2020. There should already be signs of this towards the end of 2019. It is worrying that most of the signs received during the summer months have been indications of continuing instability, especially in Europe.

Indicators are also pointing downwards in Finland but the broad picture given by them suggests that there will be a gradual economic slowdown rather than a sudden fall.

Balancing of Finland's general government finances by 2023 is one of the key objectives set out in the Government Programme. The prerequisite for this is that the number of employed persons will be 60,000 higher than forecast and the employment rate (percentage of employed persons of the population aged 15–64) will reach 75% by the end of 2023.

The target will not be achieved with the measures already agreed. According to the forecast, in 2023, the employment rate will be slightly over 73% and the general government deficit will amount to 1.4% of the GDP. The combined central and local government deficit will total nearly EUR 5.5 billion.

This means that general government debt will increase, boosting demand in the economy over the coming years. The expansionary fiscal policy stance may well prove to be the right approach if the risk of a slower-than-expected growth is realised and the downturn or recession is deeper than forecast.

This also means that general government finances can only be balanced if the employment rate rises and reforms improving economic productivity and the productivity of general government and service production are introduced. In fact, general government finances should already show a substantial surplus so that statutory public benefits can be financed and services provided in the coming decades. For this reason, consolidation of general government finances should be the key aim guiding the preparations of all major reforms with a long-term effect.

Sustainable general government finances require a significantly higher employment rate. The employment rate will only increase at a higher-than-expected rate if the economy grows at a higher-than-expected rate.

When the Finnish economy recovered, demand for labour increased and there was a rapid rise in the employment rate. We cannot expect a similar boost to the employment in the current situation where the economy is slowing down towards the average long-term growth rate.

The Finnish economy can only grow at a faster-than-expected rate in the coming years if the uncertainties affecting the global economy disappear and if there is more optimism in Finland and in the world.

However, a higher employment rate in particular would require measures that boost the productivity and cost-competitiveness of Finnish industries and increase the supply of labour. Identifying and implementing effective measures is the task of economic policy decision-makers.

Finnish export companies can only increase their output and employ more people if they are able to beat their competitors in the world market. For this reason, the cost of Finnish-based production should not grow faster than costs in the countries competing with us. The domestic cost increases in the coming years will to a large part be determined in the negotiations on collective agreements over the next few months.

In order to ensure that companies have enough skilled workforce and the growth is not stymied by supply limitations and lead to a cost spiral, Finland needs reforms that reduce the mismatch between labour supply and demand, lower structural unemployment and activate more people outside the labour force to seek work.

There are many ways to boost growth and employment. The Government has already made decisions on a number of measures in its negotiations on the 2020 Budget and the General Government Fiscal Plan. It has also pledged to identify additional measures in cooperation with social partners.

Let’s hope that effective measures are found. The deadline is the autumn 2020 government budget session.

Summary

Economic outlook for 2019–2021

The short-term outlook for the Finnish economy remains positive despite worrying economic news received from elsewhere in the world. Economic growth will be sustained by domestic demand over the coming years. Growth of private investments and consumption will slow down as the uncertainties in the external environment are reflected in the expectations of Finnish companies and consumers. The public consumption and investment contribute considerably to GDP growth, especially in 2020.

In the medium term (2022–2023), due to structural factors affecting the economy, economic growth will slow down to less than one per cent. With the economy slowing down, the employment rate will improve only slightly.

General government expenditure has remained higher than general government revenue throughout the current economic upturn. Finland's general government finances suffer from a structural deficit, which is expected to grow over the next few years. General government finances will be weakened by a slowdown in economic growth, higher expenditure resulting from an ageing population and the spending increases envisaged in the Government Programme.

World trade growth will slow down substantially

World trade growth will slow down this year as a result of the uncertainties arising from trade conflicts. However, growth will pick up in 2020 and will be largely driven by the euro area and emerging economies. World trade growth will be at its slowest this year but will accelerate from next year onwards.

The economic outlook in the euro area is dampened by a rapid slowdown in the German economy this year. However, the outlook is expected to improve in 2020. The recovery will be supported by the demand for services, which has remained relatively strong. Supported by strong domestic demand and a high employment rate, the US economy has grown rapidly this year. The Federal Reserve eased its monetary policy in August in response to a slowdown in the inflation rate and in the economy in general.

Brexit is the key factor impacting the economic outlook in the United Kingdom. Prolonged uncertainty has led to a decline in investment activities. In the baseline scenario, the United Kingdom will leave the EU in an organised manner in accordance with a jointly negotiated agreement.

Crude oil prices have remained relatively low despite the tensions in the Persian Gulf and the prices are expected to increase moderately over the outlook period. The interest rate environment of short-term market rates and government loans has changed beyond recognition this year. Market rates have become increasingly negative and more and more countries are in a situation where they are paying negative interest on their long-term loans. A slight rise in interest rates is, however, expected towards the end of the outlook period.

Economic growth is sustained by domestic demand

Finland's GDP is expected to grow by 1.5% in 2019. Growth in the demand for Finnish exports will slow down sharply in 2019. The economic outlook for Germany, one of Finland's main export markets, is weak. Even though there has been no significant weakening of the outlook for export industries, the exports of goods will grow only modestly (except for the maritime industry).

Private investments are expected to go into decline during 2019. Housing construction will decrease and with the global economy slowing down, a slowdown in production investments is also expected.

Growth in private consumption will remain brisk in 2019 because real household disposable income will increase by almost 2%. In 2019, private consumption will be boosted by higher earnings and improved employment

The number of employed persons will increase by 0.9% in 2019. However, the growth for this year is largely the result of improvements in the last quarter of 2018 and there has been no further rise over the first months of this year. The employment rate is expected to reach 72.5% on average.

Unemployment has continued to decline, albeit at a slow rate. Driven by a growth in employment, unemployment will continue to fall in 2019. The projected unemployment rate for 2019 is 6.5%.

Agreement-based pay increases will be higher in 2019 and the wage drifts coming on top of them are expected growth faster than in 2018. As a result, nominal earnings will rise by 2.7%. As the employment rate is rising, the total wage bill is expected to grow by 3.7% this year.

The projected inflation rate for 2019 is 1.1%. Driven by rising earnings, prices of services are expected to increase more rapidly than in 2018. However, prices of goods will have a negative impact on inflation and as a result, baseline inflation will stay at around one per cent.

In 2020, economic growth will slow down to 1.0%. In line with export demand, exports will continue to grow at a moderate rate. The trade tensions between major economies will have an impact on world trade and indirectly also on Finnish exports.

Finland's foreign trade surplus will reach EUR 1.5 billion towards the end of the outlook period. However, there will be no reduction in the deficit in factor incomes and current transfers, which means that the current account deficit will persist.

Growth in the building construction, which is sensitive to cyclical fluctuations, is mainly sustained by growth in industrial buildings and public service building investment. There have been slight delays in some of the large projects planned for the coming years. There will be a substantial increase in public investments and most of them will be channelled to non-residential building construction, which will to some extent compensate for the decline in private construction investments. Growth in investments will remain modest in the outlook period and the investments to GDP ratio will decrease.

There will be a slowdown in private consumption growth in the outlook period as the household savings rate will slowly decline towards normal levels. Supported by rising earnings and a moderate acceleration of the inflation rate, real incomes will continue to grow at a steady rate. Faster growth in public consumption will increase domestic demand growth contribution.

A slowdown in economic growth and a rise in nominal wages will gradually weaken employment growth. A situation where unemployment is falling to the levels experienced during the cyclical peak before the financial crisis will tighten the labour market, which in turn will create more pressures for wage increases.

Finland's GDP will grow by 0.9% in 2021. The long-term outlook for production investments is fairly bright. A large number of billion-class projects are planned in Finland.

As a whole, inflationary pressures are expected to grow only slowly in the later years of the outlook period. Higher indirect taxes will boost the inflation rate by 0.1 percentage points in 2020 and by 0.3 percentage points in 2021. The rise in earnings is expected to gradually have a broader impact on prices and consumer demand will grow steadily.

As unemployment is falling and the mismatch between the supply of and the demand for labour force is increasing, the rate of growth in earnings is expected to approach the annual rate of three per cent, the average for the past 19 years. A further decline in the working-age population will push the employment rate to 73.4% in 2021.

Structural deficit in public finances will persist

An economic upturn and the measures consolidating Finland's general government finances have improved the general government budgetary position over the past few years but have failed to eliminate the deficit. General government expenditure has remained higher than general government revenue throughout the economic upturn.

The projection is that the imbalance between general government revenue and expenditure will increase over the next few years. The general government debt-to-GDP ratio will remain close to 60% until the turn of the decade but will start growing after that. General government finances will be weakened by a slowdown in economic growth, higher expenditure resulting from an ageing population and the spending increases envisaged in the Government Programme.

Low interest rates will ease pressures on the general government debt ratio in the coming years but they will not help in the balancing of the general government finances. Falling interest rates will mean lower interest expenses for central and local government. However, this development will also mean less interest income for employment pension institutions and slow down the growth of the property income recognised in the national accounts.

Only the measures envisaged in the Government Programme and included in the General Government Fiscal Plan are considered in the fiscal forecast. So far, a total of EUR 1.4 billion in one-off spending increases in future-oriented investmenst have been included in the General Government Fiscal Plan, while it is envisaged in the Government Programme that a maximum of EUR 3 billion in one-off spending increases can be introduced between 2020 and 2022. This means that the full implementation of the one-off spending increases will constitute a downside risk in general government budgetary position.

Risks inherent in the economic growth

The forecast mostly involves downside risks and the risks have increased over the last few months. The deepening of the trade conflict is the key risk overshadowing the global economic outlook and the risk is heightened by the possibility that the parties will weaken their exchange rates to gain a competitive advantage. A downturn in Germany would postpone economic recovery in Europe. A hard Brexit would temporarily disrupt goods trade and it would also weaken the economic outlook of many other EU countries.

A quicker-than-expected solution to the trade conflict between China and the United States would be the most significant positive risk in the baseline scenario of the global economy.

The most serious short-term risk in the projection is the steeper-than-forecast decline in housing construction. The role of large projects as a risk factor in the forecast is highlighted in the long run. Without decisions on large projects, the growth in investments would be substantially weaker.

Table 1. Key forecast figures

	2018	2016	2017	2018	2019**	2020**	2021**
	EUR bn	change in volume, %					
GDP at market prices	234	2.6	3.1	1.7	1.5	1.0	0.9
Imports	92	5.8	4.1	5.0	1.8	2.3	2.0
Total supply	**325**	**3.5**	**3.3**	**2.6**	**1.6**	**1.4**	**1.2**
Exports	90	3.7	8.8	2.2	2.4	2.4	2.1
Consumption	178	2.1	0.7	1.7	1.6	1.5	1.1
private	125	2.4	1.0	1.8	1.7	1.4	1.5
public	53	1.4	0.2	1.5	1.4	1.7	0.1
Investment	55	8.2	4.1	3.4	0.4	-0.3	0.3
private	46	7.8	4.8	3.0	0.2	-1.0	0.6
public	10	8.9	2.4	4.5	1.3	3.0	-1.1
Total demand	**326**	**3.5**	**3.4**	**2.5**	**1.9**	**1.7**	**1.5**
domestic demand	235	3.4	1.6	2.7	1.7	1.4	1.3

Table 2. Other key forecast figures

	2016	2017	2018	2019**	2020**	2021**
GDP, EUR bn	217	226	234	242	249	257
Services, change in volume, %	1.6	2.4	1.8	1.2	1.0	1.1
Industry, change in volume, %	4.1	8.4	0.1	3.0	1.8	1.4
Labour productivity, change, %	2.0	2.8	-0.9	0.7	0.6	0.8
Employed labour force, change, %	0.4	1.1	2.6	1.0	0.5	0.3
Employment rate, %	68.7	69.6	71.7	72.5	73.0	73.4
Unemployment rate, %	8.8	8.6	7.4	6.5	6.3	6.2
Consumer price index, change, %	0.4	0.7	1.1	1.1	1.4	1.7
Index of wage and salary earnings, change, %	0.9	0.2	1.7	2.7	3.1	2.9
Current account, EUR bn	-1.6	-1.6	-3.7	-3.0	-3.2	-3.1
Current account, relative to GDP, %	-0.7	-0.7	-1.6	-1.2	-1.3	-1.2
Short-term interest rates (3-month Euribor), %	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3
Long-term interest rates (10-year govt. bonds), %	0.4	0.5	0.7	0.0	-0.2	-0.1
General government expenditure, relative to GDP, %	55.6	53.7	53.1	52.7	53.1	53.0
Tax ratio, relative to GDP, %	43.8	43.0	42.3	41.9	42.2	42.1
General government net lending, relative to GDP, %	-1.7	-0.7	-0.8	-1.0	-1.4	-1.5
Central government net lending, relative to GDP, %	-2.6	-1.8	-1.2	-0.9	-1.2	-1.1
General government gross debt, relative to GDP, %	62.6	60.8	58.9	58.8	58.8	59.7
Central government debt, relative to GDP, %	47.1	46.8	44.8	44.4	43.9	44.3

Medium-term outlook 2022–2023

Finland's gross domestic product grew by 1.7% last year. It is projected that this year, growth will slow down to one and a half per cent. In 2020 and 2021, growth will continue at a moderate rate, at around one per cent. In the medium term, between 2022 and 2023, economic growth is expected to fall below one per cent.[1] In historical terms, the growth expected for the medium term is slow, which is a result of structural factors affecting the economy.

The growth in labour input boosts potential output growth in 2019 and, to some extent, also in 2020. After this, there will be a gradual reduction in labour input because working-age population continues to fall. High structural unemployment is also a factor limiting the growth in labour input.

Growth in total factor productivity has picked up in recent years even though in historical terms, it will continue to grow at a modest rate. The weak growth can be explained by the structural changes in the Finnish economy. The output of high-productivity sectors has declined and services have become more predominant in the overall structure of the economy. Total factor productivity trend growth is expected to be slightly below one per cent in the medium term, which can be compared with an average annual growth of more than two per cent in the early years of the 2000s. The predicted total factor productivity trend growth is nevertheless well above the average of the past ten years.

In addition to labour input and total factor productivity, the production conditions of the economy are also influenced by the capital stock. The low level of investment, which continued for a few years (a result of weak economic growth), slowed down capital stock growth and thus weakened the future growth potential of the economy. The fact that investment has picked up has, however, slightly improved the situation and by increasing the capital stock, investment will in the medium-term boost potential output by about 0.5% each year.

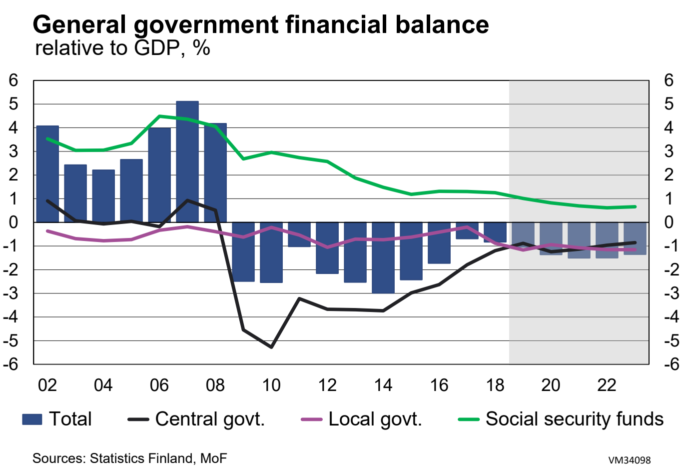
1 The medium-term economic outlook can be estimated on the basis of the potential output, which is considered to define the growth prerequisites for the economy. In its assessments of potential output, the Ministry of Finance uses the production function method jointly developed by the European Commission and EU Member States, in which potential output growth is divided into projections of potential labour input, capital and total factor productivity. Potential output and output gap are latent variables, the assessment of which involves uncertainties, especially during a strong economic cycle and under conditions of rapid changes in the production structure.

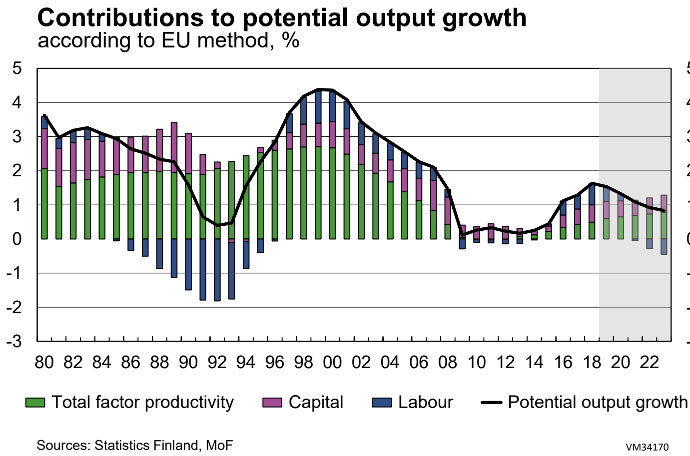
The output gap is expected to be 0.3% positive relative to potential output in 2019. Finland's gross domestic product will grow at a slightly slower rate than potential output in the period 2020–2021, when the positive output gap is expected to start closing. In the medium term, the positive output gap is expected to close as the period of high economic growth will gradually come to an end. It is, however, extremely difficult to estimate when the next economic downturn will come and the medium-term projection contains no assumption of the next recession.

Table 3. **Key forecast figures for the medium term**

	2017	2018	2019**	2020**	2021**	2022**	2023**
GDP at market prices, change in volume, %	3.1	1.7	1.5	1.0	0.9	0.9	0.7
GDP, EUR bn	226	234	242	249	257	264	271
Consumer price index, change, %	0.7	1.1	1.1	1.4	1.7	1.7	1.7
Unemployment rate, %	8.6	7.4	6.5	6.3	6.2	6.3	6.5
Employment rate, %	69.6	71.7	72.5	73.0	73.4	73.4	73.1
General government net lending, relative to GDP, %	-0.7	-0.8	-1.0	-1.4	-1.5	-1.5	-1.4
Central government	-1.8	-1.2	-0.9	-1.2	-1.1	-1.0	-0.9
Local government	-0.2	-0.9	-1.2	-0.9	-1.1	-1.2	-1.2
Social security funds	1.3	1.3	1.0	0.8	0.7	0.6	0.7
Structural balance, relative to GDP, %	-0.8	-1.0	-1.3	-1.4	-1.6	-1.6	-1.4
General government gross debt, relative to GDP, %	60.8	58.9	58.8	58.8	59.7	60.6	61.6
Central government debt, relative to GDP, %	46.8	44.8	44.4	43.9	44.3	44.5	44.9
Output gap, % of potential output[1]	0.2	0.3	0.3	0.1	0.2	0.1	0.0

[1] Estimated according the method developed jointly by the EU Commission and Member States





BUSINESS CYCLE FLUCTUATIONS AND RECESSION FORECASTING MODELS

There is a wide variety of tools available for monitoring economic activities and for assessing future changes in them. In addition to the models used to forecast gross domestic product (GDP) growth, models focusing on forecasting of recession periods have also been developed in the re-search literature since Estrella and Hardouvelis (1991). Using these models, the likelihood of a recession period during a specific time span can be forecast.

There are a number ways to determine whether the economy is in a recession or in an upswing. The Business Cycle Dating Committee of the National Bureau of Economic Research (NBER), defines recession as a phase in a business cycle in which "a significant decline in economic activity spreads across the economy and can last from a few months to more than a year".[1] As Finland does not have any similar committee, recession periods can be defined on the basis of e.g. real GDP growth. A recession is defined as a period in a business cycle where real GDP has fallen over two consecutive quarters. However, relying on a GDP-based definition has a number of problems, which include the changes in the cyclical chronology resulting from the updating of the information and the publication delay, which means that the information is not available real time.

The purpose of econometric nowcasting methods is to combine information contained in more than one variable, so that the state of the economy can be assessed on a real-time basis. In their article, Juvonen et al. (2019) give an overview of the development of short-term modelling and forecasting methods and the way in which they are applied

1 The assessment is based on such factors as real GDP, industrial output, real income, employment and commerce statis-tics. For a more detailed description of the definition used by NBER, visit https://www.nber.org/cycles/recessions.html

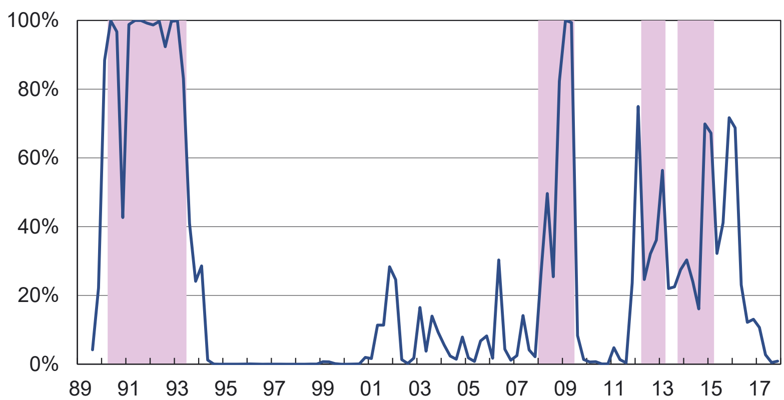
in Finland. These methods can also be employed to produce business cycle indices (see for example Lanne and Nyberg 2009; Fredriksson et al. 2019), which can be used in the definition of cyclical turning points.

Cyclical chronology is described as a binary variable, the value of which changes when the econ-omy is in a recession or in a normal state. Because of this classification, binary time series mod-els have been widely used in the econometric literature to forecast recession periods. In their discussion paper, Pönkä and Stenborg (2019) use probit models to assess the forecastability of recession periods in Finland, employing commonly applied variables discussed in research literature[2]. The yield curve and especially the interest rate spread between ten-year and three-month government bonds are often mentioned in international research literature as variables producing accurate recession forecasts. It has also been noted that such factors as consumer confidence, stock market yields, housing prices and changes in a range of different credit variables can serve as reliable cyclical indicators.

The results of the study show that individual variables, such as interest rate spread and changes in real housing prices in the capital region could be used to forecast recession periods between 1988 and 2017. However, none of the models based on single variables could forecast each reces-sion period and e.g. the term spread has become less useful after Finland joined the euro area. The best in-sample fit was produced by a combination of variables in which the interest rate spread, unemployment expectations among consumers, annual stock market yield and the real housing prices in the capital region were used as explanatory variables.

Probit-model based in-sample recession probabilities in Finland in the period 1989-2017

recession periods highlighted

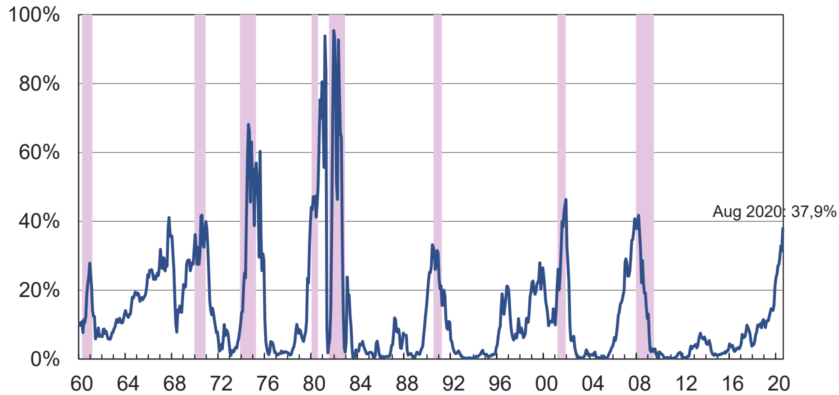


Source: Pönkä & Stenborg (2019), model 33

2 The authors are responsible for the contents of the publication and the contents do not necessarily reflect the views of the Ministry of Finance.

There has been a great deal of attention on the yield curve recently because in the United States, the interest rate spread has turned negative on maturities generally considered as recession indicators. The attention has been prompted by the fact that the difference between ten-year and three-month yields has become negative before every recession in the United States over the past 50 years. According to the recession model based on the yield curve of the Federal Reserve Bank of New York, the likelihood of a US recession over the next 12 months stood at almost 38% at the start of September 2019.[3] Using the model based on interest rate spreads, the likelihood of a recession in Finland is also more than 20% over the next 12 months, though it should be noted that the model has been significantly less reliable in Finland than in the United States.

Probability of US recession predicted by treasure spread
twelve months ahead (month averages)



Source: Federal Reserve Bank of New York

References:

Estrella, A. and Hardouvelis, G.A. (1991), "The term structure as a predictor of real economic activity", Journal of Finance 46: pp. 555-576.
Fredriksson, A., Nyberg, H., & Sainio, J. (2019). "Coincident Economic Index for the Finnish Economy". Käsikirjoitus, Turun yliopisto.
Juvonen, P., Anttonen, J., Fornaro, P., Nissilä, W., Nyberg, H., Pönkä (2019), "Aikasarjamallit apuna Suomen talouden seurannassa," Kansantaloudellinen aikakauskirja 115 (3/2019).
Lanne, M. ja Nyberg, H. (2009). "Suomen kansantalouden suhdanneindeksi", Kansantaloudellinen aikakauskirja 105: pp. 422-432.
Pönkä, H. and Stenborg, M. (2019), "Forecasting the state of the Finnish business cycle", Publications of the Ministry of Finance – 2019:13

3 https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf

1 Economic outlook

1.1 Global economy

Uncertain outlook for global economy before recovery

The economic cycle, the trade conflict between China and the United States and the uncertainty arising from Brexit will slow down global economic growth this year. However, growth will pick up in 2020 and will be largely driven by the euro area and emerging economies. World trade growth will be at its slowest this year but it too will accelerate from next year onwards.

Boosted by strong private consumption, the US economy has grown rapidly this year. The economic outlook is, however, overshadowed by the trade conflict with China. The latest figures on new industrial orders indicate that growth is slowing down. The Federal Reserve eased its monetary policy in August in response to a slowdown in the inflation rate and in the economy in general. The economy will grow by 2.2% this year. As the output gap is closing, the growth will slow down to 2.0% in 2020 and to 1.9% in 2021.

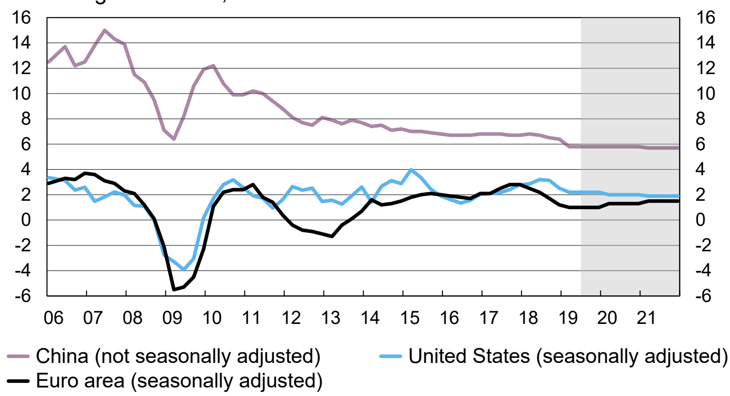
The economic outlook in the euro area is dampened by a rapid slowdown in the German economy this year and the uncertainty around Brexit. Leading indicators suggest that growth will slow down in the coming months. The outlook is, however, expected to improve next year. The recovery will be supported by the demand for services, which has remained relatively strong. Largely driven by Germany, growth in the euro area will slow down to 1.0% this year but will accelerate to 1.3% in 2020 and to 1.5% in 2021.

Brexit is the main issue shaping the economic outlook for the United Kingdom. Brisk growth in domestic demand during the first quarter of this year slowed down during the second quarter. Leading indicators suggest that there will be a sharp weakening of the economic outlook. Prolonged uncertainty has led to a decline in investment activities. In the baseline scenario, the United Kingdom will leave the EU in an organised manner in accordance with a jointly negotiated agreement. Economic growth will slow down to 0.8% this year and will remain around one per cent during the outlook period.

Swedish economic growth has slowed down, mainly as a result of cyclical factors. Growth is weakened by domestic demand items but a weak krona is boosting net exports. The purchasing managers' index for manufacturing is at a fairly high level. Consumer confidence has remained weak since the end of last year but there are now signs of a recovery. After a weak second quarter of 2019, growth will accelerate to 1.2% this year, to 1.7% in 2020 and to 1.8% in 2021.

The Russian economy contracted in the first quarter of this year and the outlook remains uncertain. Economic activity is slowing down on a broad front. Potential growth is slow, while low labour productivity and low capacity utilisation rate indicate that sluggish growth will continue over the next few years. The economy will grow by 1.3% this year and at a rate of 1.2% in the next few years.

Gross domestic product
change in volume, %

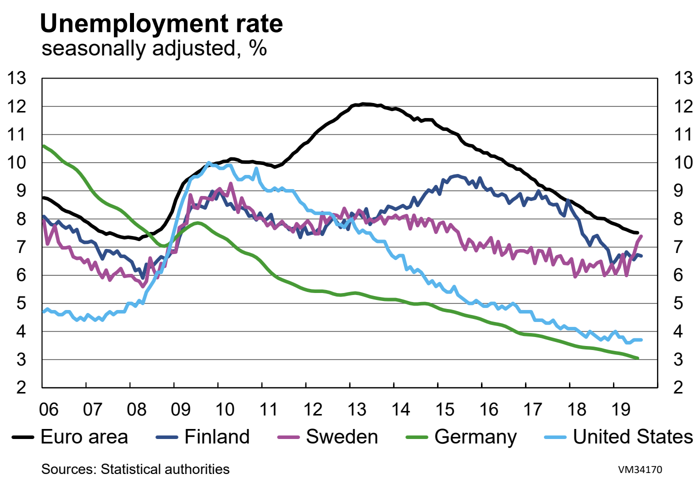


Sources: Statistical authorities, MoF

VM34170

The Chinese economy is slowing down and the outlook is weakened by the trade conflict with the United States. In 2018, economic growth was slowest since 1990. Purchasing managers' indices for manufacturing suggest that the outlook for growth will remain uncertain. The substantial debts accumulated by companies controlled by local government is a cause for concern and highlight the need for stronger regulation of the financial markets. Economic growth will remain around six per cent in the outlook period. Weakening of yuan, the Chinese currency, from the start of August has been seen as a move escalating the trade conflict.

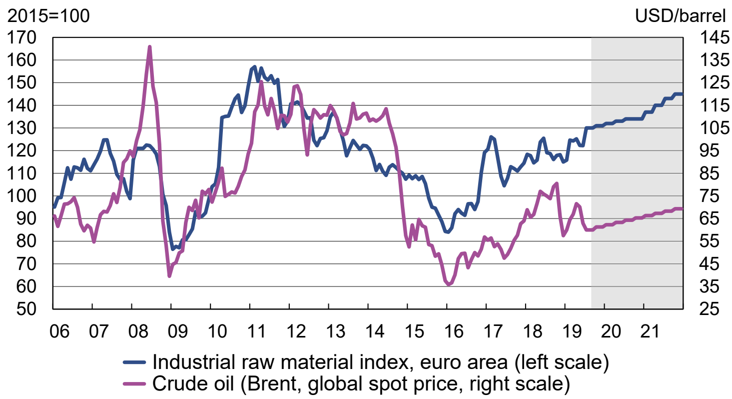
The growth prospects for the Japanese economy are overshadowed by the weak outlook for the country's industries, falling consumer confidence and sizeable structural problems facing the economy. The rise in the value added tax, which will be introduced in October this year, may have a negative impact on economic activity and the Japanese government is taking fiscal policy measures to counter them. The economy will grow at a rate of slightly below one per cent in the outlook period.



Crude oil prices have remained relatively low despite the tensions in the Persian Gulf. The reasons for this include the slowdown in the global economy, weak demand for oil and rapid growth of shale oil production in the United States. Crude oil prices will grow at a moderate rate in the outlook period. A rapid rise in nickel prices in recent months is an exception to the stagnation of industrial raw material prices.

The interest rate environment of short-term market rates and government loans has changed substantially this year. Market rates have become increasingly negative and more and more long-term sovereign bond yields have become negative. Uncertainties in the global economy and a slowdown in the inflation rate are two reasons for this development. A slight rise in interest rates is, however, expected towards the end of the outlook period.

Raw material prices



Sources: Hamburgisches WeltWirtschafts Institut, Macrobond, MoF

VM34170

World trade growth will slow down this year

The trade conflict between China and the United States and the general slowdown in the global economy have caused world trade growth to decrease this year. However, world trade is expected to pick up in the next few years. The negotiations between China and the United States as well as the postponement of the latest increases in customs duties by the United States are encouraging signs. The trade policy measures are intended as temporary. Furthermore, driven by more buoyant global economic growth, world trade will also recover in the outlook period.

Risk are increasingly skewed to the downside

The baseline scenario presented above involves substantial risks, which are mostly skewed to the downside. These risks have also increased over the last few months. Escalation of the trade conflict is the key risk overshadowing the global economic outlook and it is accentuated by the possibility of weakening of exchange rates to gain a competitive advantage. The risk of a hard Brexit has also increased over the last few months. A hard Brexit would temporarily disrupt goods trade and it would also weaken the economic outlook of many other EU countries. Re-escalation of geopolitical tensions in the Persian Gulf could lead to higher crude oil prices.

A quicker-than-expected solution to the trade conflict between China and the United States would be the most significant positive risk in the baseline scenario of the global economy.

Table 4. Gross domestic product

	2016	2017	2018	2019**	2020**	2021**
	change in volume, %					
World (PPP)	3.2	3.6	3.6	2.9	3.1	3.2
Euro area	1.8	2.6	1.9	1.0	1.3	1.6
EU	1.7	2.4	1.9	1.1	1.3	1.4
Germany	1.9	2.5	1.5	0.5	1.4	1.6
France	1.2	2.4	1.7	1.2	1.3	1.3
Sweden	1.3	2.4	2.5	1.2	1.7	1.8
United Kingdom	1.8	1.8	1.4	0.8	0.9	0.8
United States	1.6	2.4	2.9	2.2	2.0	1.9
Japan	1.0	1.9	0.8	0.8	0.7	0.7
China	6.7	6.8	6.6	5.8	5.8	5.7
India[1]	6.7	6.9	7.4	5.8	6.4	6.8
Russia	-0.2	1.6	2.3	1.3	1.2	1.2

[1] Fiscal year
Sources: Eurostat, statistical authorities, IMF, World Bank, MoF

Table 5. Background assumptions

	2016	2017	2018	2019**	2020**	2021**
World trade growth, %	1.5	5.1	3.7	1.0	2.1	2.8
USD/EUR	1.10	1.15	1.18	1.12	1.10	1.10
Industrial raw material price index, EA, € (2015=100)	96.5	114.5	118.5	127.0	133.0	141.0
Crude oil (Brent), $/barrel	45.2	54.8	71.6	63.3	63.8	67.8
3-month Euribor, %	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3
Government bonds (10-year), %	0.4	0.5	0.7	0.0	-0.2	-0.1
Export market share (2010=100)[1]	90.0	93.0	92.0	93.0	93.0	93.0
Import prices, %	-2.4	3.8	3.4	1.8	2.3	1.8

1 Ratio of export growth to world trade growth
Sources: Statistical authorities, CPB, HWWI, Reuters, MoF

1.2 Foreign trade

Slower growth in world trade and the global economy will be reflected in Finnish export growth during the outlook period. Export demand will slow down in 2019, which is due to a more moderate economic growth in the euro area and other key export markets. The outlook for foreign trade has weakened even though from the next year onwards, export demand will pick up again.

1.2.1 Exports and imports

Outlook for exports has weakened

The demand for Finnish exports will only grow by 1.3% in 2019, primarily due to a weaker outlook in Europe. In Finland's major export markets, the German economy has slowed down during the early part of the year and the outlook for the rest of 2019 is fairly weak. In Sweden, new industrial orders were also on the decline during the first months of the year. Europe accounts for a large proportion of Finland's exports, which means that the demand for Finnish exports will grow more slowly than world trade this year. Moreover, world trade will only grow by 1.0% in 2019. The economies of the United States, Europe and the emerging countries will grow at a slower rate.

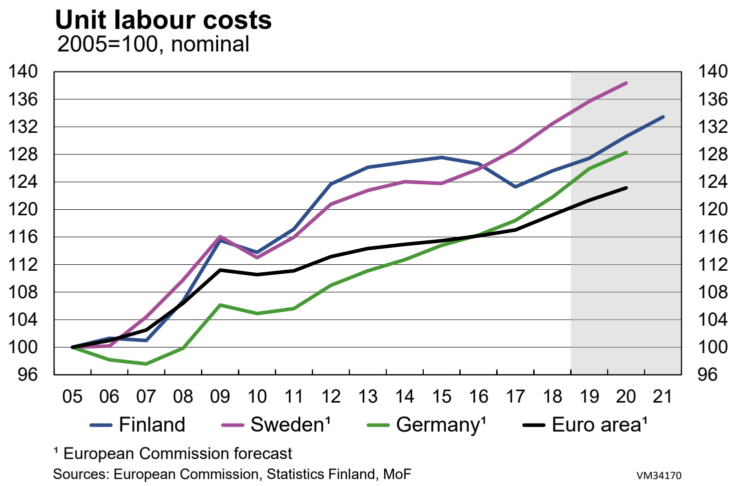
Even though the outlook for exports and the global economy is now more subdued, there will not be any substantial weakening in the outlook for Finland's export industries in the early part of the outlook period. Exports will grow in 2019, mainly as a result of ship deliveries. Growth of goods exports in other industrial sectors will be modest. Exports of services will grow at a slightly faster rate.
The volume of exports grew by 4.2% in the first half of 2019. Exports of services accounted for most of the growth but goods exports also increased. The volume of exports is projected to grow by 2.4% in 2019.

Table 6. Foreign trade

	2016	2017	2018	2019**	2020**	2021**
	change in volume, %					
Exports of goods and services	3.7	8.8	2.2	2.4	2.4	2.1
Imports of goods and services	5.8	4.1	5.0	1.8	2.3	2.0
	change in price, %					
Exports of goods and services	-2.4	3.3	4.0	2.0	2.0	1.8
Imports of goods and services	-2.4	3.8	3.4	1.8	2.3	1.8

World trade and the demand for Finnish exports are expected to pick up in 2020 and 2021. The demand for Finnish exports will grow by 2.3% in 2020 and by 2.5% in 2021. The brighter outlook for export demand is mainly due to a more rapid economic growth in Finland's key export markets in Europe. However, exports will grow at a moderate rate in line with export demand and there will be no growth in Finland's share of world exports.

Functioning of the international trade system is one of the uncertainties affecting Finland's exports. The trade tensions between major economies will have an impact on world trade and indirectly also on Finnish exports. Increases in unit labour costs may have a negative impact on exports during the outlook period if costs in our competitors rise more slowly than in Finland.



The volume of imports grew by 1.2% in the first half of 2019. Imports of goods fell, while at the same time there was an increase in the imports of services. During the outlook period, imports will be sustained by domestic consumer demand even though imports will grow at a substantially slower rate in 2019 than in the past few years. Imports will grow by 1.8% in 2019. Faster rise in investments in machinery and equipment during the outlook period will also be reflected in imports, which will pick up from 2020 onwards.

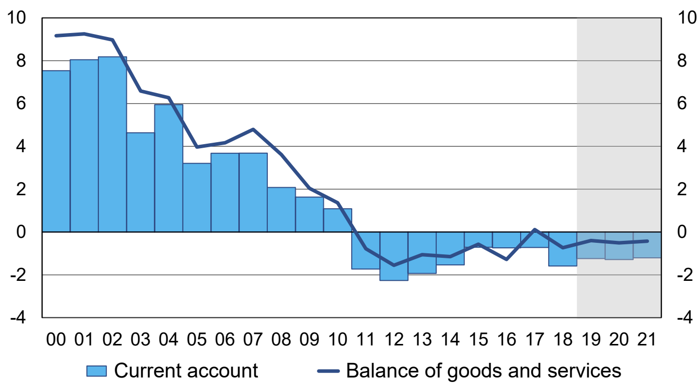
1.2.2 Prices and current account

Current account deficit will persist

Import prices rose during the first half of 2019 even though oil prices declined from the previous year. Price rises in industrial raw materials and oil will lead to increases in import prices during the outlook period. The rises in the prices of imported goods will peak in 2020 and the rate of growth will slow down slightly in 2021.

Terms of trade weakened during the first half of the year as prices of export goods rose only slightly. Export prices will grow moderately during the outlook period even though in 2019, prices of exports will rise at a slightly faster rate than import prices. This is largely due to changes in the prices of oil and other raw materials. In 2020, export prices will rise more slowly than import prices and a moderate weakening of the terms of trade is expected. At the end of the outlook period, there will be no substantial weakening of the terms of trade as the export prices of both goods and services will follow import prices.

Current account
relative to GDP, %



Sources: Statistics Finland, MoF VM34170

The value of both exports and imports will increase in the outlook period, a result of higher volumes and higher prices. In 2019, the value of exports will grow faster than the value of imports, which will narrow the current account deficit. In 2020, the value of imports will grow slightly faster than the value of exports and after that exports and imports will grow at the same rate. Finland's foreign trade surplus will reach EUR 1.7 billion at the end of the outlook period while at the same time, the service account deficit will persist, amounting to about EUR 2.5 billion despite rapid growth in service exports. Furthermore, there will be no reduction in the deficit in factor incomes and current transfers, which means that the current account will remain in the deficit. Primary income account will remain slightly in the surplus in the outlook period.

Table 7. Current account

	2016	2017	2018	2019**	2020**	2021**
	EUR bn					
Balance of goods and services	-2.8	0.3	-1.7	-1.0	-1.3	-1.1
Factor incomes and income transfers, net	1.2	-1.9	-2.0	-2.0	-1.9	-2.0
Current account	-1.6	-1.6	-3.7	-3.0	-3.2	-3.1
Current account, relative to GDP, %	-0.7	-0.7	-1.6	-1.2	-1.3	-1.2

1.3 Domestic demand

1.3.1 Private consumption

Slower growth in household consumption

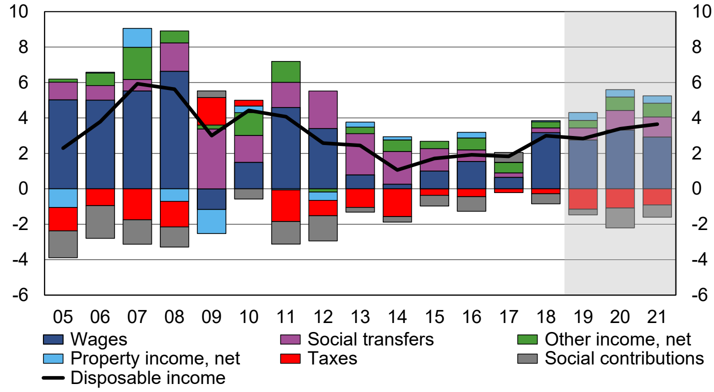
Growth in private consumption will slow down moderately in the outlook period even though real household disposable income will continue to grow at a steady rate. According to Statistics Finland, private consumption grew more rapidly in 2018 and the household net savings rate remained negative. Increase in consumption is sustained by strong demand for services, whereas growth in consumer durables will be weaker than in other consumption categories. Sales of new cars have been particularly sluggish during the first half of the year.

In 2019, private consumption will be boosted by higher earnings and a higher employment rate. Wage bill growth will continue, which will sustain a rapid increase in household disposable income compared with the last few years.

In 2020, wage bill growth will be sustained by rising earnings despite a slower growth in employment. The wage bill and household disposable income will continue to grow at a rapid rate. Reinstatement of the public sector holiday bonuses in 2020 will temporarily accelerate the growth in earnings. Accelerating inflation will slow down the growth in real disposable income. Growth in household disposal income will be supported by rising earnings and an increase in pension income, which will amount to more than three per cent.

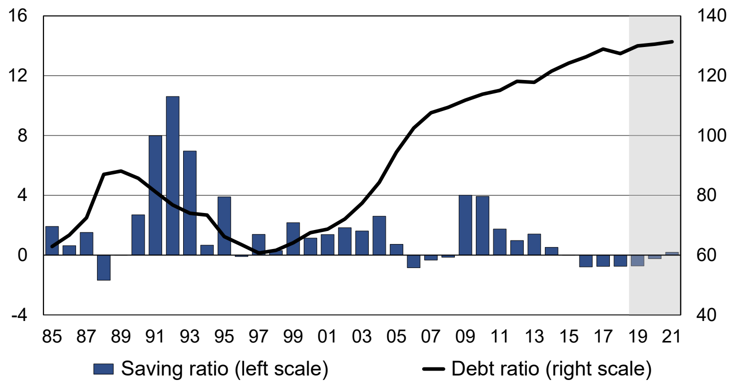
Earnings will continue to grow at a rapid rate in 2021. Wage bill growth will, however, slow down slightly in line with employment growth. However, inflation will accelerate only moderately and growth in real disposable income will continue to sustain household purchasing power towards the end of the outlook period.

Household disposable income
change and growth impact, %



Sources: Statistics Finland, MoF VM34170

Household savings and debt
% of disposable income



Sources: Statistics Finland, MoF VM34170

1.3.2 Public consumption

The largest items in public consumption expenditure are personnel expenses, and goods and services purchased. Local government consumption accounts for approximately two thirds and central government for less than one third of public consumption, while consumption by social security funds makes up the remainder.

Public consumption expenditure increased last year and the rise in local government consumption expenditure was particularly rapid compared with the preceding years. According to the quarterly statistics of national accounts, growth in public consumption expenditure accelerated during the first half of 2019. Price of consumption is boosted by the agreed pay rises and the expiry of the holiday bonus cuts. The volume of public consumption expenditure is also expected to increase. Higher demand for health and social services is one factor boosting local government consumption.

Public consumption expenditure will continue to grow throughout the outlook period. The Finnish population is ageing, which means that there is a growing need for services, while at the same time, the spending increases planned by Prime Minister Rinne's Government will boost the growth in public consumption expenditure. Under the Programme of Prime Minister Rinne's Government, public consumption expenditure will be increased in a front-loaded manner between 2020 and 2023. Permanent spending increases will boost consumption by EUR 800 million at 2023 levels. One-off spending increases will also add to public consumption expenditure between 2020 and 2022.

Existing public sector wage agreements will expire in spring 2020. It is assumed that the pay increases in the public sector will be in line with the overall wage rises of slightly less than three per cent.

Table 8. Consumption

	2018	2016	2017	2018	2019**	2020**	2021**
	share, %	change in volume, %					
Private consumption	100.0	2.4	1.0	1.8	1.7	1.4	1.5
Households	95.2	2.4	1.1	1.9	1.7	1.5	1.6
Durables	7.9	4.9	4.0	5.3	1.5	1.9	1.3
Semi-durables	7.6	1.3	2.2	3.4	2.4	2.3	2.1
Non-durable goods	27.4	1.5	-0.2	0.7	1.5	1.3	1.1
Services	52.3	2.3	1.8	1.8	2.4	1.3	1.6
Consumption by non-profit institutions	4.3	2.1	-1.4	0.5	1.5	0.5	0.5
Public consumption		1.4	0.2	1.5	1.4	1.7	0.1
Total		**2.1**	**0.7**	**1.7**	**1.6**	**1.5**	**1.1**
Individual consumption expenditure in general government		0.9	0.5	6.2	2.5	1.5	0.5
Total individual consumption expenditure		1.9	1.2	1.8	1.1	1.4	1.5
Households´ disposable income		1.9	1.8	3.0	2.8	3.4	3.6
Private consumption deflator		0.3	0.7	1.1	1.1	1.4	1.6
Households´ real disposable income		1.7	1.1	1.9	1.7	2.0	2.0
		%					
Consumption as proportion of GDP (at current prices)		78.0	76.0	75.4	75.3	75.7	75.9
Household savings ratio		-0.8	-0.8	-0.8	-0.7	-0.2	0.2
Household debt ratio[1]		126.3	128.9	127.4	130.0	130.5	131.3

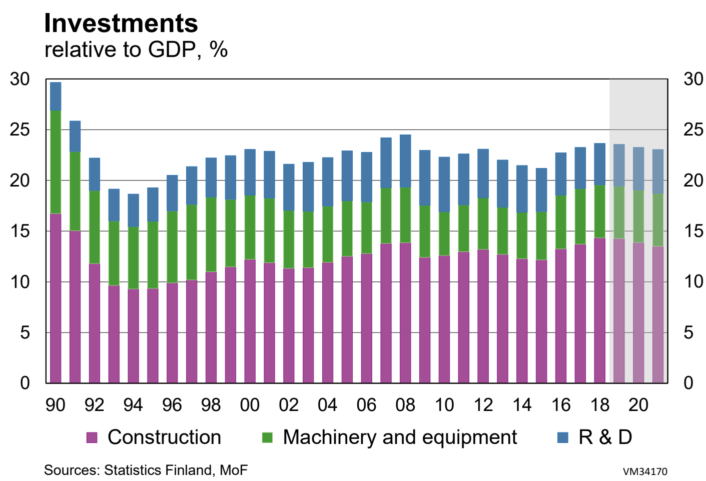
[1] Household debt at end-year in relation to disposable income.

1.3.3 Private investment

Sluggish growth in private investments

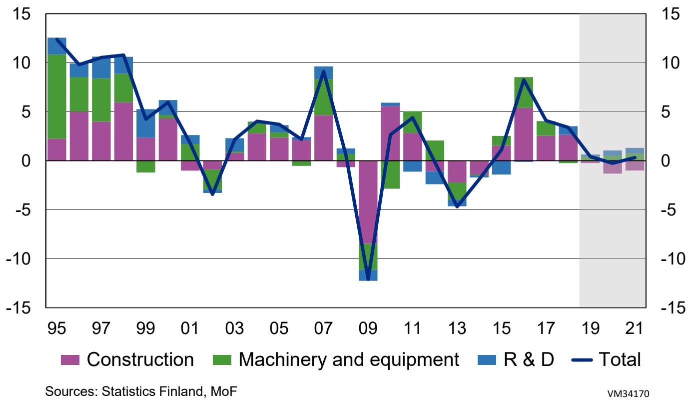
The slowdown in global economic growth will have a delayed impact on investments. The most recent surveys, carried out in spring 2019, still indicate that there will be further growth in industrial production investments. However, housing investments, which are driven by domestic demand, are returning to normal levels (about 30,000 annual starts) over the next few years. Growth in non-residential building investments, which are sensitive to cyclical fluctuations, are mainly sustained by the construction of industrial buildings and public-service buildings. There have been slight delays in some of the large projects planned for the coming years. Positive news have also been received. These concern the environmental permits of a number of forest industry projects.

As a whole, investments will grow more slowly in the outlook period that what was estimated in the previous projection. It is now projected that at the end of the outlook period, private investments will be below 2018 levels. At the same time, they will account for a smaller proportion of a growing GDP. In 2021, the figure will be 18.8% or about 0.5 percentage points below this year's levels.



Housing construction has been at exceptionally high levels in the past two years, and housing starts have totalled about 45,000 per year. However, the number of new building permits has declined as forecast. During the first half of this year, the decrease was more than 20% year on year. At the same time, new housing starts only declined by about 7% compared with the same period in 2018. The number of new housing starts is projected to decline to 38,000 this year and the downward trend is expected to continue in 2020 and 2021. Housing investments will nevertheless remain at a fairly high level and no collapse is expected. Renovation construction investments are expected to grow steadily, at an annual rate of between one and two per cent, throughout the outlook period.

Investments
change in volume and growth impact, %

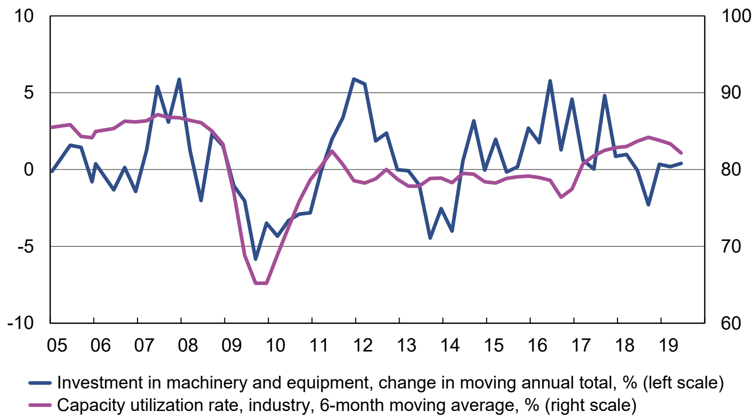


Sources: Statistics Finland, MoF

The long-term outlook for production investments is fairly bright. A large number of billion-class projects are planned in Finland. This is an exceptional situation because never before have so many such projects been under way simultaneously. However, all these projects will be multi-stage processes (for example, they require a large number of different permits), which means that it is not yet known when they will be built. An economic downturn may also prompt companies to put off the final investment decisions or cancel the projects altogether.

It is estimated that the investment demand created by the large projects during the outlook period will amount to about one billion euros. The large projects with commencement originally planned for the period 2019-2021 total about EUR 7 billion. These projects will give a boost to industrial construction and at a later stage, they will also stimulate warehouse construction. Likewise, a substantial increase in machinery and equipment investments is expected during the outlook period.

Investment and capacity utilization rate



Source: Statistics Finland, Confederation of Finnish Industries VM34170

Public investments are the main factor boosting non-residential building construction and civil engineering construction. More building permits for care institutions and assembly buildings have been granted, which means that more starts in these building categories can be expected.

Research and development expenditure is expected to increase this year even though the forecast has been slightly lowered from the previous one. This is because in 2018, public R&D expenditure grew more than indicated by the preliminary figures. Private R&D expenditure is also expected to increase during the outlook period.

The future-oriented investments envisaged in the Government Fiscal Plan are included in the projection. Most of these investments will be carried out by central government. The assumption is that these investments will replace some of the other private-sector investments.

The most serious short-term risk in the projection is the steeper-than-forecast decline in housing construction. The role of large projects as a risk factor in the forecast is highlighted in the long term. Without decisions on large projects, the growth in investments would be substantially weaker. However, if the project starts totalled more than the forecast one billion euros, the projection would be too cautious.

Table 9. Fixed investment by type of capital asset

	2018	2016	2017	2018	2019**	2020**	2021**
	share, %	change in volume, %					
Buildings	51.2	8.7	5.9	5.3	-0.9	-3.4	-2.1
Residential buildings	30.9	8.9	5.2	5.5	-2.4	-4.4	-2.9
Non-residential buildings	20.3	8.4	7.1	4.8	1.5	-1.9	-0.9
Civil engineering construction	9.3	12.6	-3.1	0.5	2.0	4.5	0.4
Machinery and equipment	22.1	14.0	6.4	-1.1	2.0	2.4	3.3
R&D-investments1	17.3	-0.6	0.1	5.0	1.1	3.0	3.2
Total	**100.0**	**8.2**	**4.1**	**3.4**	**0.4**	**-0.3**	**0.3**
Private	82.2	7.8	4.8	3.0	0.2	-1.0	0.6
Public	17.8	8.9	2.4	4.5	1.3	3.0	-1.1
		%					
Investment to GDP ratio (at current prices)							
Fixed investment		22.7	23.2	23.7	23.5	23.2	23.0
Private		18.6	19.2	19.4	19.3	19.0	18.8
Public		4.1	4.1	4.2	4.2	4.3	4.2

[1]Includes cultivated assets and intellectual property products

1.3.4 Public investment

Public investments account for almost 20% of all investments. Local government investments account for more than half of the total, while central government investments account for the rest. The proportion of social security funds is very small. Almost 30% of the public investments are civil engineering investments, and other building investments account for a same proportion of the total. Research and development investments account for slightly more than 25% and machinery and equipment investments for slightly over 10% of the total.

Driven by local government investments, public investments are expected to grow by one per cent this year. Infrastructure investments and busy construction of hospitals and other health and social services buildings are two of the factors sustaining the growth. At the same time, there will be a sharp fall in central government investments as the key projects of Prime Minister Sipilä's Government have come to an end. A substantial growth in public investments is expected from next year, a consequence of the higher investment expenditure envisaged in the Programme of Prime Minister Rinne's Government. The largest single increase is the EUR 300 million rise in basic transport infrastructure maintenance. Public investments will continue to grow in 2021, though at a slower rate than in 2020. Sizeable hospital investments, reduction in the maintenance backlog and the major investment projects in growth centres are some of the factors keeping investments at high level in the coming years.

1.4 Domestic production

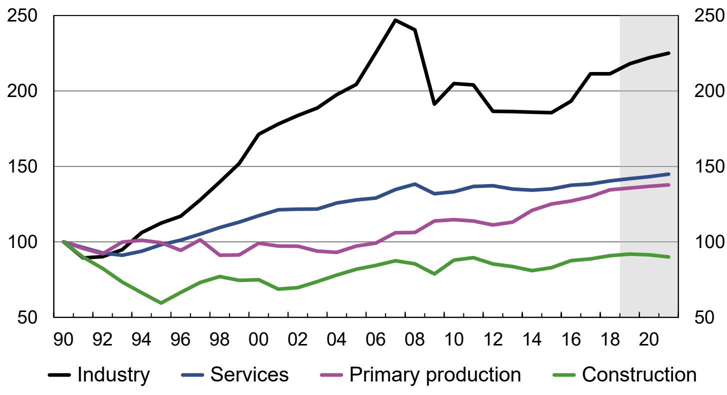
1.4.1 Total output

Barring major surprises, economic growth will be sustained by domestic demand

Economic growth accelerated during the first half of the year. Gross value added in the economy was 1.2% higher in January-June than a year earlier. Even though service production was the sector giving the strongest boost to economic growth value added in secondary production was also higher year on year. At the same time, primary production contracted. Except for financial and insurance activities, service production was boosted by private and public services on a wide front. Demand for them has remained strong, both in Finland and internationally. There was continuous growth in the building construction sector in secondary production but in industries, the situation was twofold. In metal and chemical industries, output was boosted by new orders, while in forest industries, there was an equally sharp fall in value added. However, stocks also increased during the early part of the year, which means that not all of the output has been delivered yet.

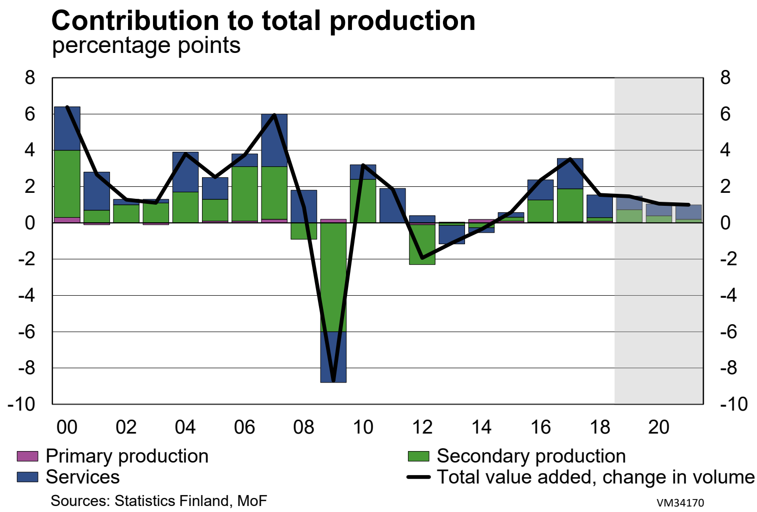
Productivity of the economy is weak. Labour productivity per hours worked contracted last year and the weak trend has improved only marginally during the first half of 2019. Productivity growth in industries remained sluggish and the productivity improvements in the service sector will not compensate for this. Especially in industries, total factor productivity has grown more slowly than in many other countries. Labour productivity in Finland only reached the pre-financial crisis levels in 2017. It is still above the euro area average but the gap has narrowed considerably compared with the situation before the financial crisis. This can largely be explained by the structural changes in Finland's electronics industry.

Production
1990=100



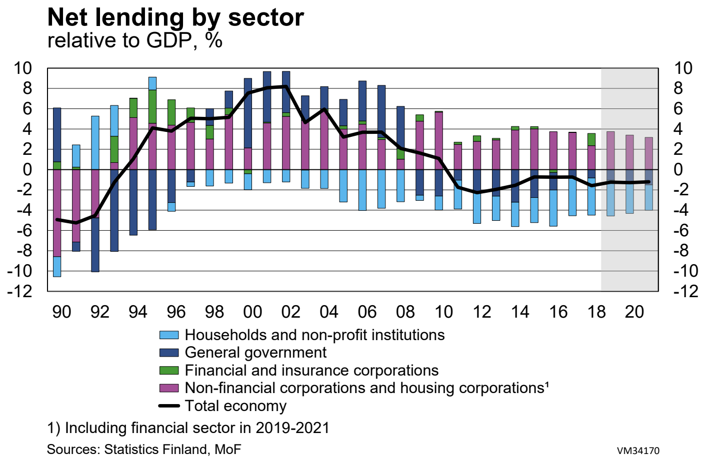
Sources: Statistics Finland, MoF

Despite the negative news received from the world, the short-term domestic economic outlook is still positive. The order stock remain strong in many industrial sectors, building construction starts have been at 2018 levels and many service companies expect stronger sales. At the same time, however, there are also more indications of a slowdown: industrial orders did not increase during the early part of the year, the number of building permits has decreased for several months and in many private sector branches, weak demand is a more common problem than at the end of 2018. In fact, most industrial, construction and service-sector companies are facing obstacles to growth.



Despite obstacles to growth, the Finnish economy will still grow on a broad basis this year. The growth is sustained by a higher demand for Finnish exports (despite a slowdown in world trade), progress of a large number of building construction and renovation projects already under way, and higher demand for services in Finland and internationally. Although the period of fastest growth appears to be over, the business tendency surveys carried out by the Confederation of Finnish Industries indicate that the positive trend will continue at least for the next six months. The forecast's background assumptions concerning continuing growth of world trade and global economy also support export-oriented industrial production and therefore, indirectly, business services. Growing imports of Finland's most important trading area, Europe, are good news for Finnish industries manufacturing investment and intermediate products. Due to broad-based and positive growth during the first half of 2019, gross value added for the economy will grow by 1½% this year. The growth will slow down in 2020 and 2021, but total output will still increase by around one per cent in both years.

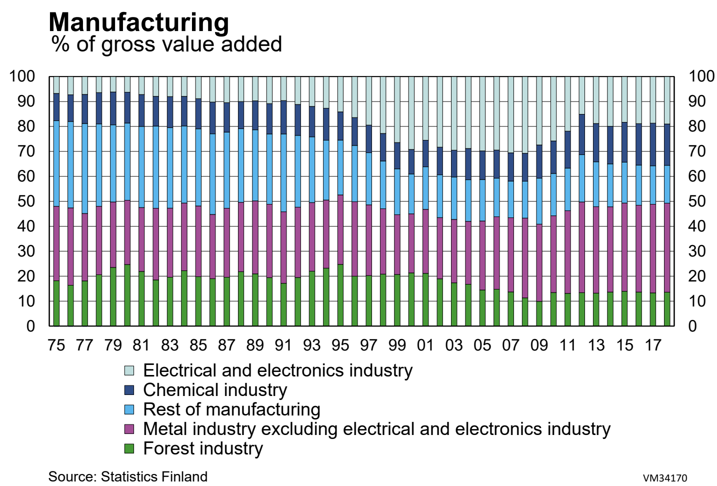
The forecast described above involves a large number of risks. Simultaneous escalation of a large number of uncertainties may slow down the growth by weakening international demand and, consequently, export-oriented industrial production in particular. At the same time, however, capacity increases in industries and services arising from the realisation of investment plans may lead to faster than expected growth.



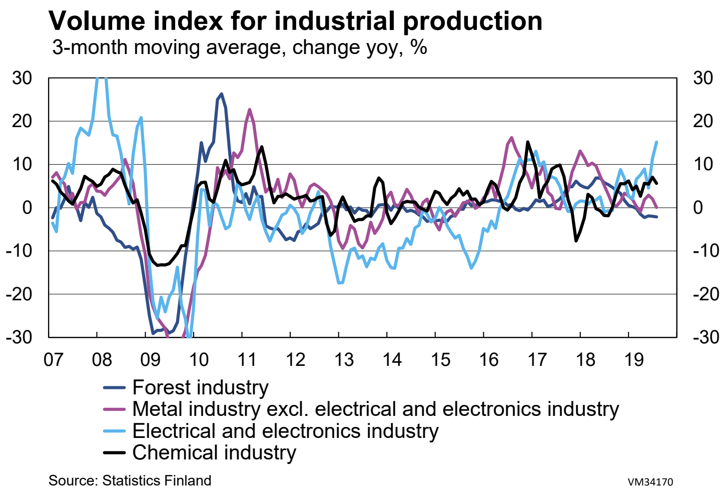
1.4.2 Secondary production

Growing uncertainty and higher trade barriers are slowing down industrial output growth

The current industrial upturn is on a shaky basis. Last year, industrial value added showed no growth as both the forest and chemical industries posted lower output figures. There was a substantial year-on-year increase in output during the early part of 2019 and the growth was again on a broad basis. The chemical industry boosted its turnover in both Finland and the export markets, while exports sales accounted for most of the growth in the electrical and electronics industry. The volume of forest industry output declined as prices increased at a significantly faster rate than the value of production.



Raw materials and investment goods for exports account for most of Finland's industrial production and the demand for these items is sustained by an upswing in the global economy and trade and higher capacity utilisation. At the same time, however, the cost competitiveness of Finnish companies declined in terms of nominal unit labour costs last year and the trend continued during the first half of 2019. In fact, the value of new industrial orders only grew by one per cent in the first months of the year. Nevertheless, the order stock remains at average levels in many sectors. The highest number of orders has been won by the chemical industry, but more orders are also reported by the metal industry. Thus, the output expectations for the coming six months are still fairly positive.

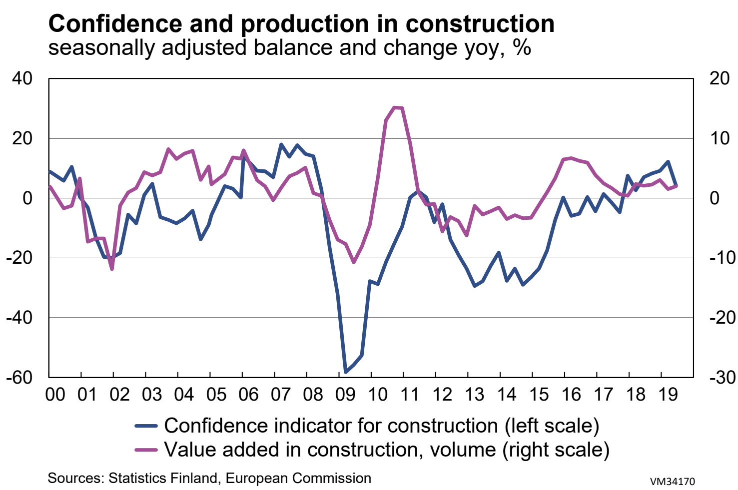


According to business tendency surveys, companies in the forest, chemical, food and metal industries still expect the growth to continue in the coming months. Textile and clothing and printing industries are the sectors with the weakest output expectations. In the forest industry, the output is pushed up by increased demand for pulp, paperboard and sawn timber. Investments in the sector also help to strengthen the output basis of the forest industry. Orders for transport equipment in particular will uphold production in the metal industry for years to come. As a whole, industrial output will increase by about three per cent this year, a result of positive growth prospects, the new orders received in the first half of the year and the growth already experienced.

In the next few years, growth in export demand will be modest as world trade continues to grow and imports are expected to increase in 2020 and 2021, especially in the European market, which is important for Finnish companies. Increases in production capacity and measures taken by companies to improve the competitiveness of their products will provide Finnish industries with a stronger output basis in the years ahead. According to the projection, Finland's cost-competitiveness relative to the euro area may weaken. Industrial value added will grow by about two per cent next year but only by 1½% in 2021. Despite the growth, the volume of industrial output in 2021 will remain ten per cent lower than in the peak year of 2007.

The level of construction activity will fall from an high level

Construction continued to boost total output growth during the early part of the year. After a four-year period of continuous growth, valued added in the construction sector is 15% above the initial level. Growth has been strongest in building construction but civil engineering and renovation construction have also expanded. During the first half of this year, output in the construction sector still increased by over one per cent, which was mainly the result of strong growth in civil engineering, public-sector construction, and agricultural and industrial construction.



There were fewer construction starts in the first half of 2019 year on year but on average, the projects were larger and the order stock of the sector higher. Migration is boosting demand for housing in growth centres. In fact, levels of new construction are higher in growth centres than outside them and as a result, growth is unevenly distributed across the regions. The need for renovation construction is high, particularly in residential and public buildings.

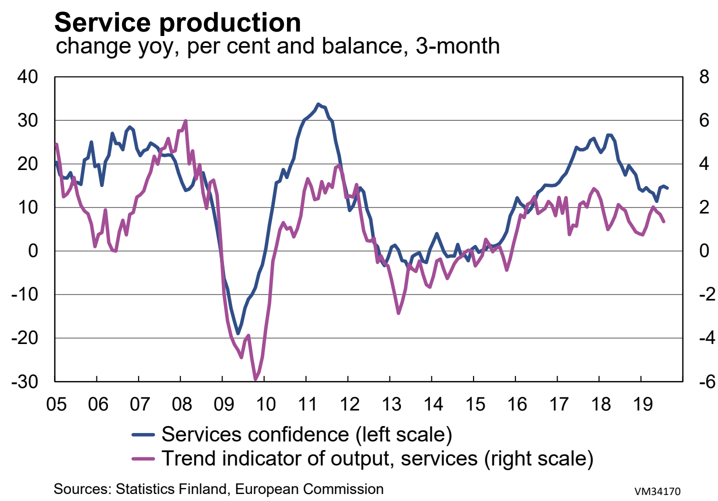
Many large buildings will be completed this year and some of them are one-off projects, which means that there will not be similar new construction projects to replace them in the near future. The number of building permits has also declined, albeit from a high level, especially in housing construction and the construction of commercial and office buildings. The construction business is also the sector with the most serious shortage of skilled labour. According to the employment outlook by occupation published by the Ministry of Economic Affairs and Employment, there is a particularly severe shortage of supervisors. Supported by building projects in progress, construction will increase by one per cent this year.

Construction will remain buoyant in growth centres in 2020 and 2021, but judging from the number of new building permits, new starts will no longer increase at the same rate as in the past few years. This means that construction will decline. Sharpest falls are expected in the construction of blocks of flats and commercial buildings. Construction will be sustained by public-sector inputs. In 2020 and 2021, the focus will be on a small number of regional construction projects and renovation construction, which means that construction value added will decrease at an average annual rate of one per cent. Despite the fall, in 2021, the level will still be substantially higher than before the financial crisis and the previous low point reached in 2014.

1.4.3 Services

Services will support economic growth

Economic growth has been boosted by service production. Value added in services increased by 1½% during the first half of the year. The growth was broadly based because except for the trade and financial and insurance activities, both private and public services posted increases. There was particularly strong growth in business service sectors. Service companies were able to increase their sales both in Finland and internationally.



The cyclical position of private services remains positive. Sales are on the increase and the growth is generally expected to continue for the next six months. In service sectors, weak demand and shortage of skilled personnel are slowing down growth and more than half of all companies taking part in business tendency surveys have experienced obstacles to growth. There is a particularly severe shortage of cleaners and doctors. The information and communication services as well as the real estate business are the sectors best-placed for growth. Sales in the retail and wholesale sector are also expected to grow. At the same time, expectations in the transport branch are weaker than in other sectors even though water transport in particular has grown strongly during the first half of the year. The increase of value added in services this year will be slightly more than one per cent year on year.

In the future, services will be supported by the demand for end and intermediate products of industries and other service sectors, which means that services remain well-placed for growth. Consumer-driven services will benefit from increases in purchasing power. However, the fall in construction will reduce the need for services in the sector though at the same time, central government spending increases will boost public-sector service production. There will be a slight slowdown in service production growth in 2020 and in 2021 and the average annual growth will be about one per cent.

Table 10. Production by industry

	2018	2016	2017	2018	2019**	2020**	2021**
	share, %[1]	change in volume, %					
Industry	21.0	4.1	8.4	0.1	3.0	1.8	1.4
Construction	7.3	5.7	1.0	2.4	0.9	-0.5	-1.6
Agriculture and forestry	2.8	1.5	2.1	3.3	0.9	0.7	0.7
Industry and construction	28.4	4.5	6.5	0.7	2.4	1.2	0.7
Services	68.8	1.6	2.4	1.8	1.2	1.0	1.1
Total production at basic prices	100.0	2.4	3.5	1.5	1.5	1.0	1.0
GDP at market prices		2.6	3.1	1.7	1.5	1.0	0.9
Labour productivity in the whole economy		2.0	2.8	-0.9	0.7	0.6	0.8

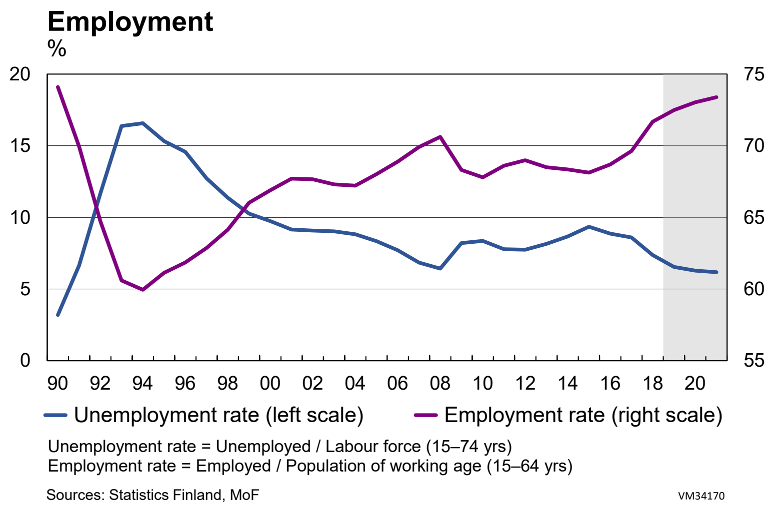
1) Share of total value added at current prices.

1.5 Labour force

Employment growth is slowing down

Employment has grown steadily for the past few years but the rise stopped in the first half of 2019. In July, seasonally adjusted employment rate stood at 72.4% or exactly at the same level as at the start of the year.

Demand for labour has remained fairly brisk during the first half of the year. According to Statistics Finland, there were an average of 50,900 job vacancies in the second quarter of 2019 or slightly more than a year before. According to the confidence indicators of the European Commission, the employment expectations of Finnish companies remained at high level in June. However, when measured with the vacancy rate (the percentage of job vacancies of all jobs), Finland is only at average level among EU countries.



Moreover, there was no further decline in unemployment during the first half of the year and the seasonally adjusted unemployment rate has remained around 6.6% since January.

The number of employed persons will increase by 0.9% in 2019, even though most of this growth was already achieved during the last quarter of 2018. The employment rate for the whole of 2019 is expected to reach 72.5%.

Driven by growth in employment, unemployment will decline further in 2019, albeit at a substantially lower pace than last year. The projected unemployment rate for 2019 is 6.5%.

With a slowdown in economic growth and a rise in nominal wages, there will be no further increase in the demand for labour in 2020 and 2021. As unemployment is falling to the low levels of previous cyclical peak before the financial crisis, the labour market is tightening, which in turn will create more pressures for wage increases and give rise to labour bottlenecks in the Finnish economy.

Growth in the number of employed persons will slow down to 0.5% in 2020 and to 0.3% in 2021. A further decline in the working-age population will push the employment rate to 73.4% in 2021. However, the projected economic growth will not be enough to raise the employment rate to 75% unless the Government takes extensive measures in addition to those that have already been introduced.

With continuous growth in employment, there will still be a slight fall in unemployment in 2020 but an economic slowdown and a faster rise in labour costs mean that no further decrease in unemployment below the six-per cent mark can be expected in 2021.

There has been a further fall in the number of long-term unemployed and structurally unemployed in the early months of 2019, which has contributed to the decline in the unemployment rate. According to the employment service statistics of the Ministry of Economic Affairs and Employment, the number of structurally unemployed persons totalled 151,000 in July or 15,000 fewer than a year before. Despite a fall in long-term unemployment, the number of long-term unemployed in the age category 20-54 is still substantially higher than during the previous cyclical peak in 2008.

A tighter labour market has already led to labour bottlenecks in a number of professions. According to the business tendency survey published by the Confederation of Finnish Industries and the employment outlook by occupation published by the Ministry of Economic Affairs and Employment, employers have a shortage of construction professionals as well as health and social services experts. There is also a shortage of real estate service professionals and cleaners in growth centres. Raising the employment rate to 75% would require measures to eliminate the mismatch between labour supply and demand, such as additional training places for sectors suffering from labour shortages and more conversion training for the unemployed.

Table 11. Labour market

	2016	2017	2018	2019**	2020**	2021**
	annual average, 1,000 persons					
Population of working age (15–74 yrs)	4109	4114	4124	4130	4131	4123
change	7	5	10	6	1	-8
Population of working age (15–64 yrs)	3463	3451	3439	3431	3423	3416
change	-13	-12	-12	-8	-8	-7
Employed (15–74 yrs)	2447	2474	2539	2563	2575	2583
of which 15–64 yrs	2379	2403	2465	2487	2500	2507
Unemployed (15–74 yrs)	238	233	202	179	173	170
	%					
Employment rate (15–64 yrs)	68.7	69.6	71.7	72.5	73.0	73.4
Unemployment rate (15–74 yrs)	8.8	8.6	7.4	6.5	6.3	6.2
	1,000 persons per annum					
Immigration, net	16	17	16	15	15	15

1.6 Incomes, costs and prices

1.6.1 Wages and salaries

In 2018, nominal earnings rose by 1.7%, as measured by the index of wage and salary earnings. Boosted by employment growth, the total wage bill increased by 4.1% last year.

The pay increases based on collective agreements will be higher in 2019 and the wage drifts coming on top of them are expected to grow faster than last year. As a result, nominal earnings will rise by 2.7%. With a rising employment rate, the total wage bill is expected to grow by 3.7% this year.

As unemployment is falling and the occurrence of labor shortages is increasing, the rate of growth in earnings is expected to rise towards the annual rate of three per cent, the average for the past 19 years. Reinstatement of the holiday bonuses in the public sector will also temporarily boost earnings in 2020, and as a result, nominal earnings are expected to grow by 3.1% and the total wage bill by 3.6%. In 2021, nominal earnings will grow by 2.9% and the total wage bill by 3.2%.

Table 12. Disposable income

	2018	2016	2017	2018	2019**	2020**	2021**
	share, %	change, %					
Compensation of employees	47.0	1.7	0.7	3.5	3.0	3.6	3.2
Wages and salaries	38.9	1.4	2.4	4.1	3.7	3.6	3.2
Employers' contributions to social security schemes	8.1	2.5	-6.2	0.4	-0.6	3.3	3.2
Property and entrepreneurial income, net	23.4	2.7	11.0	6.0	3.6	3.9	3.5
Taxes on production and imports minus subsidies	13.2	5.9	1.6	5.1	2.9	2.0	2.2
National income	100.0	2.6	3.5	4.4	3.1	3.4	3.1
Disposable income		3.7	2.7	3.6	4.1	3.0	2.9
Gross national income, EUR bn		219	226	235	242	250	257

Table 13. Index of wage and salary earnings and labour costs per unit of output

	2016	2017	2018	2019**	2020**	2021**
	change, %					
Index of negotiated wage rates	0.6	-0.3	1.2	2.0	2.3	2.1
Wage drift, etc.	0.3	0.5	0.5	0.7	0.8	0.8
Index of wage and salary earnings	**0.9**	**0.2**	**1.7**	**2.7**	**3.1**	**2.9**
Real earnings[1]	0.5	-0.5	0.6	1.6	1.6	1.2
Average earnings[2]	0.7	0.7	1.5	2.9	3.2	3.0
Labour costs per unit of output whole economy[3]	-0.7	-2.7	1.9	1.4	2.5	2.2

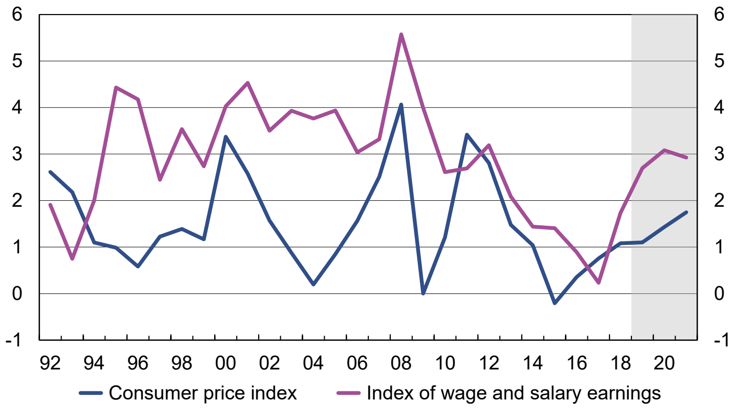
1) The index of wage and salary earnings divided by the consumer price index.
2) Computed by dividing the national wage bill by the number of hours worked by wage and salary earners. The figures are affected by structural changes in the economy.
3) Compensation of employees divided by gross value added in volume at basic prices.

1.6.2 Consumer prices

The consumer price index rose by 1.2% during the first half of 2019 year on year but in July, inflation slowed down to 0.8%. There are a number of factors behind the slowdown. Service prices were still rising at a rate of about two per cent during the first months of 2019 but the rate slowed down in July. Fall in hotel room prices was one reason for this development and there was also a sharp decrease in the prices of fruits and vegetables in July year on year. Inflation in the euro area slowed down to 1.0% in July, which was the slowest rate since November 2016. Energy prices in particular are making a smaller contribution to inflation in the euro area, a result of the impact of the comparison period and a fall in euro-denominated crude oil prices.

Projected inflation rate for 2019 is 1.1%, which means that as a whole, consumer prices are expected to rise at the same rate as last year. Driven by rising earnings, service prices are expected to increase more rapidly than in 2018. However, as in 2018, prices in goods will have a negative impact on inflation and as a result, baseline inflation will remain at around one per cent. Boosted by tax increases, prices of food (including alcohol and tobacco products) will rise but at a slower rate than in 2018. Increases in energy prices are also expected to remain lower than last year even though electricity prices, which have been higher than in 2018, have sustained domestic energy inflation.

Consumer price index and index of wage and salary earnings
change yoy, %



Sources: Statistics Finland, MoF VM34170

As a whole, inflation is expected to accelerate moderately in 2020 and 2021. The rise in earnings is expected to gradually have a broader impact on prices and consumer demand will grow at a moderate rate. Euro area market rates are expected to remain low during the outlook period. Measured with the national consumer price index, the inflation rate for 2020 and 2021 is expected to be at 1.4% and 1.7%, respectively. Tightening of indirect taxation envisaged in the Government Programme is expected to boost inflation by about 0.1 percentage points in 2020 and slightly less than 0.3 percentage points in 2021.

According to the estimates by Eurosystem experts published in June, inflation in the euro area is expected to slow down to 1.3% in 2019 from 1.8% in 2018. After that, inflation is expected to accelerate to 1.4% in 2020 and to 1.6% in 2021. Thus, inflation in Finland is expected to remain at average euro area levels in the outlook period.

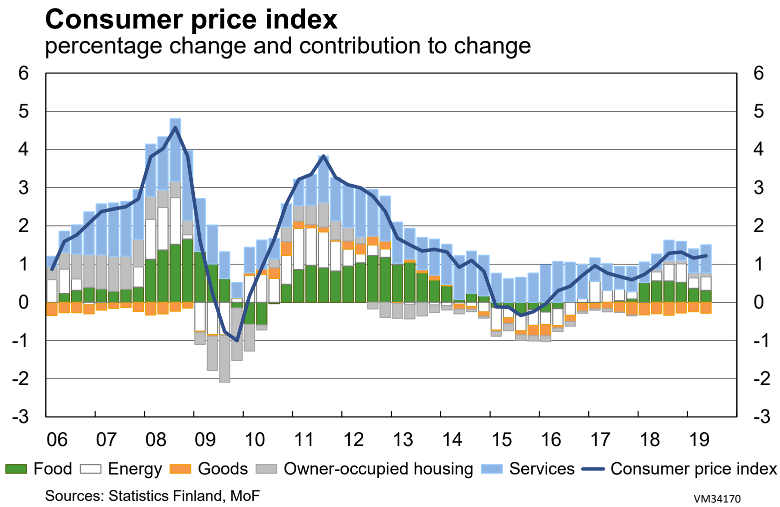


Table 14. Price indices

	2016	2017	2018	2019**	2020**	2021**
	change, %					
Export prices[1]	-2.4	3.3	4.0	2.0	2.0	1.8
Import prices[1]	-2.4	3.8	3.4	1.8	2.3	1.8
Consumer price index	0.4	0.7	1.1	1.1	1.4	1.7
Harmonised index of consumer prices	0.4	0.8	1.2	1.2	1.5	1.8
Basic price index for domestic supply, including taxes	-1.2	4.9	4.7	0.9	1.9	2.2
Building cost index	0.5	0.3	2.2	1.3	2.0	2.2

[1] As calculated in the National Accounts

2 Public finances

2.1 General government finances

The steady growth of the Finnish economy over the past few years has improved the general government finances. As the upturn is slowing down, general government deficit will no longer improve at the same rate. The deficit will start growing this year and the trend will continue over the next few years. Even though the Finnish economy will grow more or less at its potential rate during the outlook period, expenditure is increasing faster than the revenue. There is a structural imbalance between expenditure and revenue in general government finances.

General government debt-to-GDP ratio has fallen below the 60% limit but the ratio will start growing again during the early years of 2020s. Last year the debt to GDP ratio stood at 58.9%. During the economic upturn, the debt ratio only decreased by four percentage points whereas between 2009 and 2015 it had increased by more than 30 percentage points. The fiscal buffers for the next downturn are thin.

The economic upturn has helped to conceal the structural problems facing Finland's general government finances. Ageing of the population has already increased pension expenditure and it will also push up care and nursing expenditure in the coming years. The sustainability gap in general government finances remains unsolved.

Last year, central government was the general government [1] sector with the highest deficit. The deficit will still contract this year, a result of moderate spending growth, but it will start growing again next year. Expenditure in the next few years will be boosted by the permanent and one-off spending increases planned by Prime Minister Rinne's Government. The Government has, however, decided to introduce tax increases, which will mitigate the impact of the higher spending on general government finances. Central government deficit will be around one per cent of the GDP.

Slow growth in tax revenue combined with higher consumption expenditure weakened the local government budgetary position last year. Local government deficit will grow again this year because consumption expenditure has continued to grow at a rapid rate. Local government budgetary position is burdened by the increasing need for services arising for an ageing population and investments, which will remain at high level.

The employment pension institutions, which are part of the social security funds, have posted substantial surpluses. The surplus of the employment pension institutions will narrow to slightly more than 0.5% of GDP over the next few years. Pension expenditure is increasing rapidly and the growth in property income is slowed down by low interest rates. However, steady economic growth is generating more pension contribution income. Other social security funds have a slight surplus. A further fall in unemployment expenditure is expected and the unemployment insurance contribution will be lowered at the start of 2020. Lowering the contribution will reduce the surplus of the social security funds close to balance.

There was a further decline in the expenditure rate (expenditure to GDP ratio) in 2018. The rate has fallen by more than four percentage points since 2014. Next year, the expenditure rate will be increased by the measures envisaged in the Programme of Prime Minister Rinne's Government. Moreover, unemployment expenditure will no longer decrease at the same rate as in the past few years. The expenditure rate will be around 53% at the end of the outlook period. The tax rate (taxes and tax-like payments relative to GDP) has decreased as a result of tax cuts and the

1 Finland's general government finances comprise central government, local government and the social security funds, which are further divided into earnings-related pension funds handling statutory pension insurance schemes, and other social security funds.

Competitiveness Pact. In the next few years, the tax rate will be increased by the tax rises envisaged in the Programme of Prime Minister Rinne's Government.

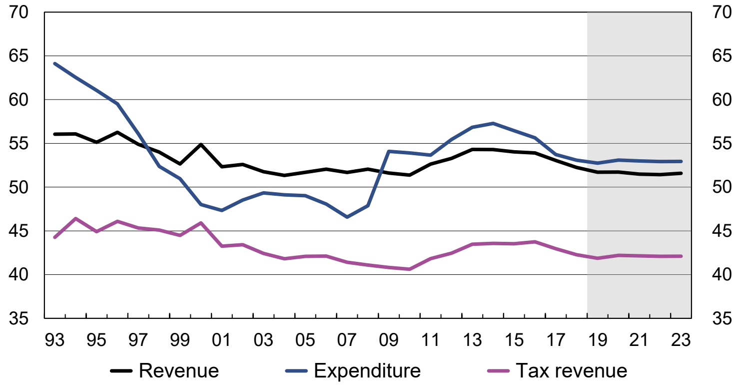
Finland is in compliance with the deficit and public debt criteria defined in the Treaty on the Functioning of the European Union. However, Finland may soon be in breach of the preventive arm of the Stability and Growth Pact. Compliance with EU rules is described in more detail in Finland's stability programme (Appendix 5 to the General Government Fiscal Plan of autumn 2019), draft budgetary plan and in the box on page 64.

There are both internal and external risks concerning Finland's general government finances. The internal risks concern the implementation of the Government Programme. If all the one-off spending increases envisaged in the Government Programme (EUR 3 billion) are implemented, there will be an additional pressure of EUR 1.7 billion on general government finances between 2020 and 2022. Only the increases already decided and included in the General Government Fiscal Plan are considered in the projection. Furthermore, supplementary budget provisions and the unallocated reserve within central government spending limits are not considered in the projection. These will be included in the projection for general government finances as decisions are made on the use of the reserves and they are allocated to specific measures.

The projection for local government finances for 2020 and 2021 is a pressure calculation and thus it does not include the measures taken by municipalities and joint municipal authorities to consolidate their finances. Any such measures would have a positive impact on general government finances.

The external risks affecting general government finances are closely connected with overall economic developments. If economic growth is slower than forecast, the rise in tax revenue will remain weaker than predicted and such expenditure items as cyclical unemployment spending will increase faster than expected. The impacts of economic growth rates differing from the forecasts on tax revenue depend on the factors behind the difference. The degree to which the forecast error concerning overall economic growth depends on domestic demand rather than on changes arising from external demand determines the level of the impact. The second risk arises from the substantial growth in general government contingent liabilities after the 2008 financial crisis. Extensive realisation of the liabilities would lead to higher public spending and would make the impacts of a higher debt to GDP ratio more severe during a downturn.

General government revenue, tax revenue and expenditure
relative to GDP, %



Sources: Statistics Finland, MoF
VM34098

Table 15. General government finance[1)]

	2016	2017	2018	2019**	2020**	2021**
	EUR billion					
Current taxes	35.6	37.2	37.4	38.9	40.6	41.8
Taxes on production and imports	31.1	31.6	33.1	33.5	34.2	35.1
Social security contributions	27.9	27.3	28.0	28.3	29.6	30.5
Taxes and contributions, total[2]	95.1	97.0	99.1	101.4	105.2	108.1
Other revenue[3]	22.6	23.7	24.1	24.5	24.5	24.7
of which interest receipts	1.8	1.7	1.7	1.7	1.6	1.6
Total revenue	**117.2**	**119.8**	**122.5**	**125.2**	**129.0**	**132.1**
Consumption expenditure	51.5	51.5	53.1	55.2	57.9	59.7
Subsidies	2.7	2.7	2.7	2.8	3.0	2.8
Social security benefits and allowances	42.2	42.6	43.1	43.8	45.1	46.5
Other current transfers	5.6	5.2	5.6	5.5	5.7	6.0
Subsidies and current transfers, total	50.6	50.6	51.4	52.2	53.8	55.3
Capital expenditure[4]	9.5	9.6	10.2	10.5	10.9	11.2
Other expenditure	9.4	9.7	9.7	9.8	9.8	9.8
of which interest expenses	2.3	2.2	2.1	2.0	1.8	1.7
Total expenditure	**121.0**	**121.3**	**124.4**	**127.7**	**132.4**	**136.0**
Net lending (+) / net borrowing (-)	**-3.8**	**-1.6**	**-1.9**	**-2.5**	**-3.4**	**-3.9**
Central government	-5.7	-4.0	-2.8	-2.1	-3.1	-2.9
Local government	-0.9	-0.5	-2.1	-2.8	-2.3	-2.8
Employment pension schemes	2.4	2.2	2.2	2.0	1.8	1.6
Other social security funds	0.5	0.7	0.7	0.4	0.2	0.2
Primary balance[5]	-3.1	-1.0	-1.5	-2.2	-3.2	-3.7

1) As calculated in the National Accounts
2) Incl. capital taxes
3) Incl. capital transfers and consumption of fixed capital
4) Gross fixed capital formation and capital transfers
5) Net lending before net interest expenses

Table 16. Main economic indicators in general government

	2016	2017	2018	2019**	2020**	2021**
	relative to GDP, %					
Taxes and social security contributions	43.8	43.0	42.3	41.9	42.2	42.1
General government expenditure[1]	55.6	53.7	53.1	52.7	53.1	53.0
Net lending	-1.7	-0.7	-0.8	-1.0	-1.4	-1.5
Central government	-2.6	-1.8	-1.2	-0.9	-1.2	-1.1
Local government	-0.4	-0.2	-0.9	-1.2	-0.9	-1.1
Employment pension institutions	1.1	1.0	1.0	0.8	0.7	0.6
Other social security funds	0.2	0.3	0.3	0.2	0.1	0.1
Primary balance[2]	-1.4	-0.4	-0.7	-0.9	-1.3	-1.5
General government debt	62.6	60.8	58.9	58.8	58.8	59.7
Central government debt	47.1	46.8	44.8	44.4	43.9	44.3
General government employment, 1,000 persons	616	619	633	633	636	635
Central government	132	132	135	135	133	132
Local government	472	476	485	485	490	490
Social security funds	11	12	13	13	13	13

1) EU-harmonized definition
2) Net lending before net intrest expenses

Table 17. Fiscal balance and debt ratios in some EU economies

	2017	2018	2019**	2017	2018	2019**
	Fiscal balance			Debt		
	relative to GDP, %					
*Finland	-0.7	-0.8	-1.0	60.8	58.9	58.8
Finland	-0.8	-0.7	-0.4	61.3	58.9	58.3
United Kingdom	-1.9	-1.5	-1.5	87.1	86.8	85.1
Sweden	1.4	0.9	0.4	40.8	38.8	34.4
Denmark	1.5	0.5	0.6	35.5	34.1	33.1
Ireland	-0.3	0.0	-0.1	68.5	64.8	61.3
Spain	-3.1	-2.5	-2.3	98.1	97.1	96.3
The Neatherlands	1.2	1.5	1.4	57.0	52.4	49.1
Luxembourg	1.4	2.4	1.4	23.0	21.4	20.7
Portugal	-3.0	-0.5	-0.4	124.8	121.5	119.5
Austria	-0.8	0.1	0.3	78.2	73.8	69.7
Germany	1.0	1.7	1.0	64.6	60.9	58.4
France	-2.8	-2.5	-3.1	98.4	98.4	99.0
Belgium	-0.8	-0.7	-1.3	103.4	102.0	101.3
Italy	-2.4	-2.1	-2.5	131.4	132.2	133.7
Greece	0.7	1.1	0.5	176.2	181.1	174.9

Sources: EU Commission Spring Forecast 2019; *Finland: Ministry of Finance, Autumn 2019

FINLAND AND THE FISCAL POLICY RULES OF THE EU

Limits for general government debt and deficits are set in the Treaty on the Functioning of the European Union. Finland's general government deficit has for many years been within the 3% reference value set in the Treaty. According to the Ministry of Finance forecast, the deficit will also remain within the limit in the next few years. General government debt exceeded the 60% reference value between 2015 and 2017 but since then it has decreased. The Ministry Finance forecasts that the general government debt to GDP ratio will fall further until 2020. After that, the ratio will start growing and will again break the 60% limit.

When Finland is in compliance with the Treaty requirements concerning general government deficit and debt, it must observe the obligations set out in the preventive arm of the Stability and Growth Pact in its fiscal policy. The preventive arm contains the rules for achieving the medium term objective (MTO) set by each Member State for its structural balance or progress towards it. Under the medium term objective set by Finland for its own fiscal policy, structural balance should be -0.5% of GDP. The required annual adjustment is determined in the country-specific recommendations approved by the Council and compliance with the adjustment path is assessed on the basis of two pillars: change in structural balance and the expenditure benchmark.

Structural balance describes the general government budgetary position after the impact of the cyclical factors on public spending and revenue has been eliminated from the nominal budgetary position. Changes in the structural balance describe how the fiscal policy stance changes. When the structural balance strengthens, fiscal policy will become contractionary, and when the structural balance weakens, more expansionary fiscal policy can be expected. Calculating the structural balance requires an assessment of the cyclical situation and an estimate of the output gap. The output gap tells how much the GDP deviates from its potential level. Potential output is an unobservable variable and for this reason, estimating it involves a great deal of uncertainty. Thus, there may be substantial differences between output gap estimates. It is clear that this uncertainty is also reflected in the estimates of the general government budgetary position and makes it more difficult to use the estimates as a fiscal policy tool.

The purpose of the expenditure benchmark is to ensure that the targeted change in structural balance can be used as an effective instrument in the preparation of the Budget. The purpose of the expenditure benchmark is to limit the growth in general government expenditure to the average long-term growth of potential output. If the medium term objective for structural balance has not been achieved, a tighter expenditure benchmark will be applied. The expenditure benchmark contains a rule for net basic general government expenditure, which means public expenditure minus interest expenses, cyclical changes in unemployment expenditure and expenditure on EU-funded programmes. As there may be substantial annual fluctuation in public investments, public investments deviating from their four-year average are deducted when the expenditure benchmark is calculated. Finally, the net expenditure is calculated by deducting the impact of discretionary measures concerning general government revenue. Thus, the expenditure benchmark does not put any limit on additional expenditure funded by such means as tax increases.

According to the estimate produced by the European Commission, Finland was in compliance with the Stability and Growth Pact in 2018. This was because of the allowances granted for the period 2017-2019 under the flexibility clauses. In 2017, Finland was granted allowances for three years concerning the structural balance target on the basis of the implementation of structural reforms (pension reform and the Competitiveness Pact) and public investments[1]. Finland was also granted allowances on the grounds of the influx of immigrants between 2015 and 2018.

According to the spring assessment of the European Commission, Finland will be in compliance with the Stability and Growth Pact in 2019 and with most its provisions in 2020. The spring assessment was based on the Commission's spring forecast and the stability programme submitted by Finland in spring. In the programme, the period 2020-2022 was assessed on the basis of a no-policy-change scenario. The European Commission will produce its next assessment of the Member States' fiscal policies on the basis of the preliminary budget plans submitted in October. In the same connection, Finland will submit an updated stability programme, which is based on the Programme of the new Government. Compliance with the fiscal policy rules of the EU will be assessed in the stability programme against the background of the latest Ministry of Finance forecast.

1 The investment-based allowance was withdrawn in 2018 as the preliminary figures showed that public investments had contracted in 2017.

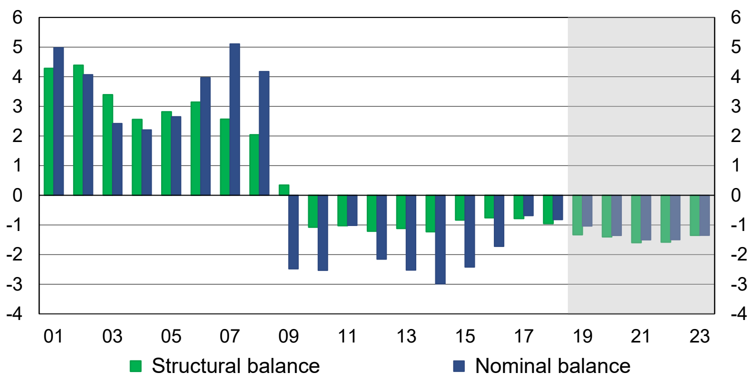
2.1.1 Estimates of fiscal policy impact

When examined on the basis of specific revenue and expenditure transactions, fiscal policy will be slightly more contractionary at general government level in 2019 than in 2018. The previous Government introduced measures to consolidate central government finances totalling about EUR 0.6 billion, which include index freezes. Adjustment measures introduced at local government level also have a slightly contractionary impact on fiscal policy. At the same time, the tax cuts introduced by the Government have an expansionary effect on fiscal policy.

The fiscal policy stance can also be examined on the basis of the changes in structural deficit estimated using the calculation method jointly agreed by the EU Member States. Examining the fiscal policy stance on this basis does not necessarily give a picture that is fully identical with the results of a review based on specific revenue and expenditure transactions. For example, the growth in age-related expenditure will widen the structural deficit in the outlook period even if no new decisions on spending increases were made. The fiscal policy stance for the period 2019-2023 is examined in more detail in the box below.

The structural deficit is expected to grow in 2019, which means that on this basis, fiscal policy can be considered as expansionary. A growth in age-related expenditure will widen the structural deficit. The structural deficit will remain more or less unchanged in 2020. There will be a gradual widening of the structural deficit after this as the spending increases weakening general government finances will come to effect and the ageing of the population is increasing public spending.

General government nominal and structural balance
relative to GDP, %



Based on the European Commission's production function approach

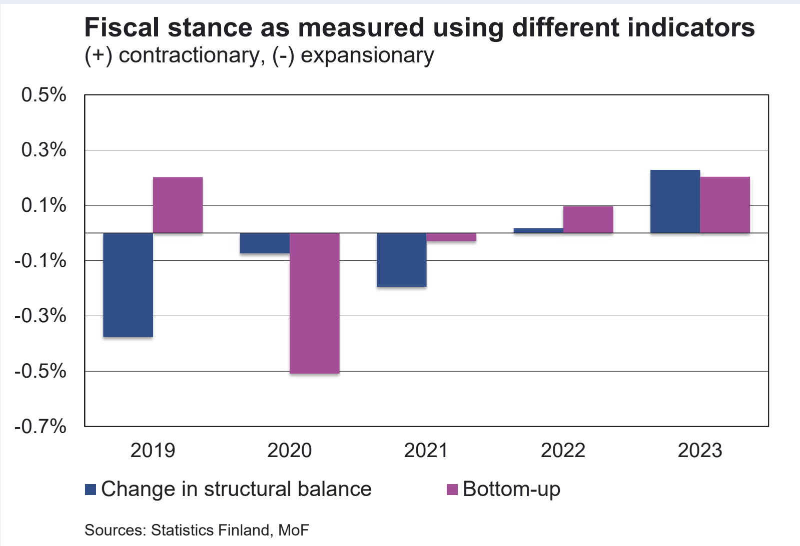
Sources: Statistics Finland, MoF

FISCAL STANCE IN 2019–2023 AND DIRECT BUDGETARY MEASURES ENVISAGED IN THE GOVERNMENT PROGRAMME IN THE FORECAST FOR GENERAL GOVERNMENT FINANCES

The fiscal stance for the period 2019–2023 and the direct budgetary measures planned by the Government of Prime Minister Rinne are examined in more detail in this box. The review is on the basis of two different indicators: structural budgetary balance[1] and 'bottom-up' [2]indicator summing up discretionary measures. The estimates produced by the indicators may significantly differ from each other. For this reason, the fiscal policy stance must be examined on the basis of more than one indicator. The indicators used in the review and their advantages and weaknesses are detailed in the Ministry of Finance's discussion paper. [3]

Fiscal stance

Figure 1. Fiscal stance 2019–2023



1 The concept 'structural budgetary balance' is mainly used in EU in the monitoring of Member States' fiscal policy stance. In this indicator, the impacts of cyclical, one-off and temporary factors are eliminated from the general government budgetary balance after which the yearly change in the budgetary position can be attributed to discretionary fiscal policy.

2 The 'bottom-up' indicator sums up the discretionary policy measures, which provide an overall picture of the actual fiscal policy. The measures included in this indicator contain the key measures envisaged in the Government Programme, such as permanent and one-off spending increases as well as tax decisions. The indicator also contains the changes in social security contributions and a number of discretionary measures introduced during the previous Government term that extend to the current parliamentary term. The measures are detailed in chapter 8.1 of the autumn 2019 General Government Fiscal Plan.

3 Assessing the discretionary fiscal effort - presenting alternative indicators – https://vm.fi/julkaisu?pubid=22601

Based on the 'bottom-up' indicator, fiscal policy will be slightly contractionary this year. The key projects of the previous Government have ended this year and a number of consolidation measures introduced in the previous Government term have taken effect during 2019. At the same time, Prime Minister Rinne's Government increased central government spending in the second supplementary budget of the year in June 2019. However, when examined against the background of changes in the structural deficit, fiscal policy will be expansionary in 2019. Thus, the indicators give a divided picture of the fiscal policy stance for the current year. One explanation for the differences may be that there has been a rapid increase in local government expenditure during 2019 and as a result, the local government budgetary position is expected to weaken this year. This is shown as stimulus in the structural budgetary position but is not shown in the 'from down to top' indicator.

According to the 'bottom-up' indicator, expansionary fiscal policy can be expected for 2020. A number of permanent and one-off spending increases introduced by Prime Minister Rinne's Government will take effect at the start of next year. The unemployment insurance contribution will be lowered, while at the same time, indirect taxes will be increased. The change in the structural budgetary balance indicates that fiscal policy will be more or less neutral.

According to both indicators, fiscal policy will be more or less neutral in 2021 and 2022. The rest of the Government decisions boosting spending and increasing taxes will take effect in those years. One-off spending increases will no longer have any effect in 2023 when fiscal policy will be slightly contractionary.

It should be noted that especially the real-time measurements of the structural balance involve uncertainty when estimates of the output gap and projections of the general government budgetary balance are made. The views about the fiscal policy stance may also change as a more detailed picture of business cycles and general government budgetary position emerges.

Measures envisaged in the Programme of Prime Minister Rinne's Government

As envisaged in its Programme, the Government has introduced permanent spending increases and expenditure reallocations in the Budget proposal for 2020 and the General Government Fiscal Plan for the period 2020–2023. The decisions will increase net general government expenditure by EUR 1.3 billion at 2023 levels, compared to the technical spending limits of spring 2019. The tax criteria changes introduced by the Government will increase net tax revenue by about EUR 0.8 billion at 2023 levels.

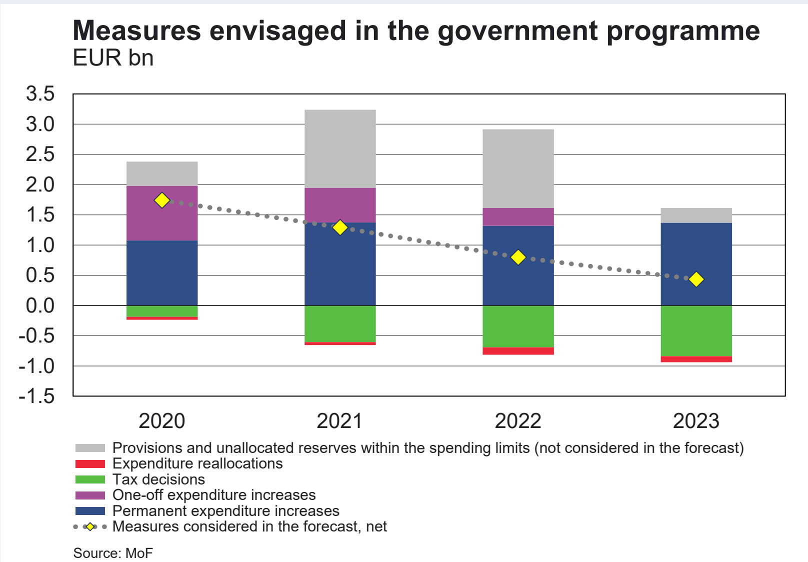
The Government has also decided to introduce one-off spending increases for the period 2020–2022, totalling EUR 1.8 billion. Future-oriented investments and investments from the National Housing Fund account for most of the one-off expenditure increases. The Government intends to fund most of the one-off spending increases by selling state property. The income generated from property sales is not shown in net lending recognised in the national accounts, which means that the one-off expenditure increases will weaken general government budgetary position.

The Government has not yet allocated all expenditure envisaged for its future-oriented investment programme. Still unallocated EUR 1.7 billion has been left as a reserve in the central government spending limits for 2021 and 2022. The Government plans to make decisions on the implementation of the programme in its autumn 2020 budget session as part of the review of employment measures and spending increases agreed in the Government Programme.

A supplementary budget provision within the central government spending limits is also envisaged in the Government Programme. The provision will amount to EUR 0.3 billion annually in the period 2020-2022 and EUR 0.1 billion in 2023. The Government has also decided to include an unallocated reserve in the central government spending limits for unanticipated expenditure needs. The unallocated reserve will amount to about EUR 0.1 billion in 2020 and EUR 0.15 billion annually in the period 2021–2023.

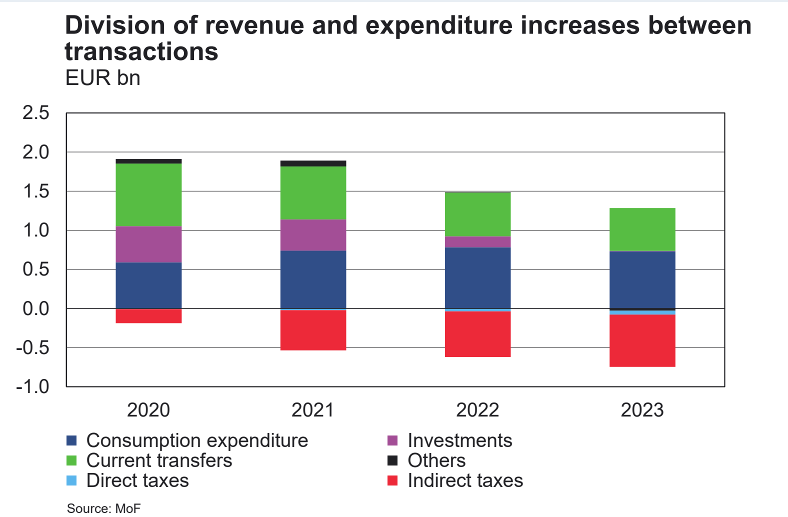
The provisions and reserves included in the central government spending limits have not yet been considered in the forecast. The provisions for the one-off spending increases envisaged in the Government Programme, the supplementary budget provisions and the unallocated reserve will only be considered in the forecast for general government finances when decisions on their use are made and they are allocated to specific measures.

Figure 2. Discretionary Government measures 2020–2023, cumulative, EUR billion



Most of the measures included in the forecast are considered as consumption expenditures and current transfers in the financial transactions of the national accounts. Current transfers consist of social benefits and transfers to the private sector. Most of the tax increases concern indirect taxes.

Figure 3. **Division of the Government's discretionary measures between transactions of the national accounts 2020–2023**



HOW LARGE IS THE GOVERNMENT SPENDING MULTIPLIER?

Government spending, public consumption and investments, accounts for 25-30 percent of GDP. Through government spending, goods and services are provided for the public. In addition, government spending functions as a counter-cyclical policy instrument. This box examines the impact of government spending and the effectiveness of fiscal policy.

In macroeconomics, the effectiveness of fiscal policy is measured by means of fiscal multiplier. The multiplier gives the ratio of GDP growth to government spending growth in euros. If the multiplier is higher than 1, the volume of GDP is growing by more than public demand. In that case, fiscal policy is expansionary. If the multiplier is lower than 1, the government spending is crowding out value added generated by the private sector.

Direct and indirect effects of government spending

Public demand is part of GDP, implying that increases in government spending mechanically contributes to economic growth. If fiscal policy only had direct impacts, fiscal policy multiplier would be 1: the value of GDP increases by the same amount as government spending. The effectiveness of fiscal policy is, however, ultimately determined by its indirect impacts. They arise when firms and households react to changes in public demand.

The crowding-out effect – how much government spending reduces or substitutes private output – lowers the fiscal multiplier. When government increases, the demand for goods and labour required for the public sector output increases. This causes prices and wages to rise in the whole economy and as a result, private companies may have fewer incentives to create jobs, to invest and to increase production. If no free capacity in the economy exists and price levels fully adjust to higher public demand, increase in general government expenditure will extensively crowd out private economic activity.

The crowding-out effect may also amplify because government spending need eventually be financed through tax increases or spending cuts. If the private sector anticipates the tightening of the future fiscal policy, the positive impact of government spending attenuates. Higher taxation may also create negative incentives due to its distortionary effects, resulting in a lower level of investments, a lower employment rate and weaker economic growth.

The fiscal multiplier is, instead, greater, if public consumption and investment are able to increase productivity of the economy. However, these type of effects typically materialise in the long run. In the short run, instead, a larger fiscal policy multiplier is generated by mechanisms that boost aggregate demand. In that case, the increase in public spending will generate additional income for households, which will be channelled to consumption. Higher income leads to increased aggregate demand and consumption. Consequently, the value added generated in the economy will be higher than the increase in general government expenditure and the fiscal policy multiplier will be higher than 1.

The multiplier effect described above arises from the underlying economic mechanisms or free capacity – the slack – in the economy. Households may ignore the higher price level or the expected future contractionary fiscal policy and spend a higher proportion of the income generated by rising public demand. The crowding-out effect is also weaker if the economy adjusts only sluggishly to the new level of public demand. This slow adjustment may be a result of factors such as priced and wage stickiness or spare production capacity, the latter arising from the business cycle. In that case, the economy may grow without pressures on higher prices and wager or labour supply bottlenecks.

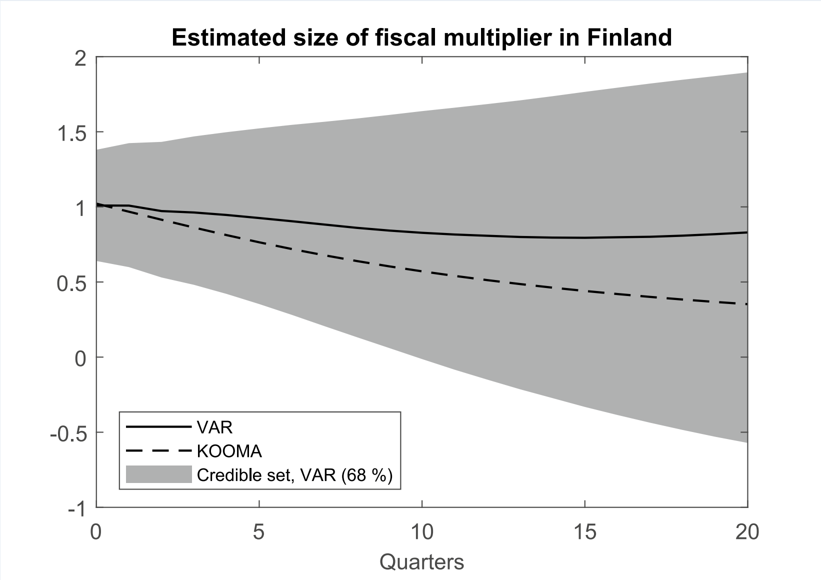
Estimates of the size of fiscal multiplier

It is evident that all direct and indirect impacts described above are relevant to the effectiveness of fiscal policy. There is an extensive economics research literature that analyses the macroeconomic impact of general government expenditure, i.e., measuring the aggregate impact of direct and indirect mechanisms (see for example, Ramey, 2019). As a rule, the issue can be approached from two perspectives: on a theoretical or empirical basis.

In the theoretical approach, which is usually founded on dynamic stochastic general equilibrium (DSGE) models, the essential economic structures – how firms and households make their decisions – are defined. The model is then calibrated or estimated to the economic data. Consequently, the fiscal multiplier produced in the analysis depends on which components of the economy are taken into consideration. In the large-scale policy models such as the KOOMA model of the Ministry of Finance, the economy is modelled in great detail. As a result, both the crowding-out effect as well as demand-based mechanisms are taken into account.

The second way to examine fiscal policy is based on the more extensive use of economic data so that no assumptions about the economic mechanisms are made a priori. The problem with empirical research is that general government expenditure is often used as a policy instrument, for example, spending can be increased during a recession. However, the fiscal policy multiplier must be computed based on events that have changed government spending unexpectedly irrespective the state of the economy. Using structural vector autoregressive (SVAR) models, such events can be isolated from time series as unanticipated shocks.[1]

1 Unanticipated changes in fiscal policy can also be identified by the use of external information on government spending (see Ramey, 2019).



The graph above shows two estimates of the fiscal multiplier for the Finnish economy using two different approaches. The multiplier has been calculated using the dynamic stochastic general equilibrium model KOOMA of the Ministry of Finance (dashed line) and an empirical SVAR model (solid line).[2]

The multiplier is cumulative (Mountford and Uhlig 2009). In other words, it shows the increase of GDP relative to government spending growth over a time horizon. The results suggest that there are no significant differences in the estimated fiscal multiplier between the two approaches. The estimate for the multiplier from both the theoretical and empirical model is slightly below 1. When the time period becomes longer, the multiplier decreases. However, the credible set reflecting the estimation uncertainty is wide, and the multiplier is not statistically significantly lower or higher than 1.

The fiscal policy multipliers computed above for the Finnish economy are close to the estimates for the United States and European countries found in the research literature. The range of the estimate varies between 0.6 and 1.4 (Ramey, 2019). How the multiplier is estimated has no significant impact on the results. The multipliers produced by the large-scale policy models (Coenen et al., 2012) are very similar to those produced by

2 The Bayesian VAR model is estimated on Finnish data using quarterly time series from 1990 onwards. Government spending shock has been identified using the strategy of Blanchard and Perotti (2002).

empirical models, in which the government spending shock has been identified through different strategies.[3]

Effectiveness of the fiscal policy depends on economic mechanisms and business cycles. Even though there is disagreement in macroeconomics about the mechanisms behind the multiplier and thus about the effectiveness of fiscal policy, there is significantly less disagreement about the size of the multiplier. According to the literature and the results above, fiscal multiplier is close to but below 1: the expansionary effects of fiscal policy are limited.

Literature:

Blanchard, O. and Perotti, R. (2002), "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output", *Quarterly Journal of Economics* 117(4): pp. 1329-68.

Coenen, G., Christopher J. E., Freedman, C., Furceri, D., Kumhof, M., Lalonde R., Laxton, D., Lindé, J. Mourougane, A. Muir, D., Mursula, S., de Resende, C., Roberts, J., Roeger, W., Snudden, S., Trabandt, M. and in't Veld, J. (2012), "Effects of Fiscal Stimulus in Structural Models", *American Economic Journal: Macroeconomics* 4(1): pp. 22-68.

Mountford, A. and Uhlig, H. (2009), "What Are the Effects of Fiscal Policy Shocks?", *Journal of Applied Econometrics* 24(6): pp. 960-92.

Ramey, V. (2019), "Ten Years after the Financial Crisis: What Have We Learned from the Renaissance in Fiscal Research?", *Journal of Economic Perspectives*, 33 (2): pp. 89-114.

3 The critique of SVAR analysis usually focuses on the nature of economic shocks, as the shocks are not necessarily unexpected to firms and households due to the anticipation of fiscal policy. The size of the multiplier may also depend on the business cycle (Ramey, 2019). Estimating a state-dependent multiplier involves, however, a great deal of uncertainty.

2.1.2 General government debt

The general government debt-to-GDP ratio fell to 58.9% last year. The ratio will remain unchanged this year and in 2020 even though the debt will continue to rise. The debt ratio will, however, start increasing again as the economy is slowing down, the appropriations for the fighter aircraft purchases are budgeted and the general government budgetary position becomes weaker. The debt ratio will exceed the 60 per cent limit and will be near 62% at the end of the outlook period. Central government debt to GDP ratio will be to 45%.

On-budget debt totalled about EUR 105 billion in 2018 and it accounted for most of Finland's general government debt. Central government debt amounted to EUR 115 billion. In 2018, on-budget debt decreased for the first time in ten years. Local government debt increased to EUR 21 billion. The debt of social security funds stood at about EUR 2 billion.

In addition to on-budget debt, a number of other items are also included in general government debt. For example, central government debt includes the debts of a number of off-budget units and companies as well as the collateral on the derivative contracts used in the management of the central government debt portfolio. Local government debt also includes the debt of many municipality-owned companies. The debt of the social security funds comprises the debts of the Employment Fund and the cash collateral on the derivatives of employment pension institutions.

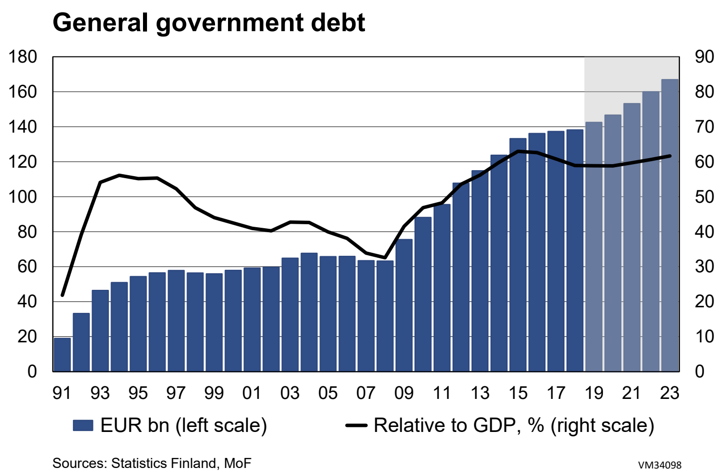
The factors behind the changes in the debt ratio in the outlook period are itemised in the table below. GDP growth and a number of other factors were the main reasons behind the decrease in the debt ratio in 2018. From 2019, the debt ratio will be increased by the growing central and local government primary balance, interest expenses and other factors (such as the appropriations for the purchase of the fighter aircraft from 2021 onwards). Local government deficit will increase the debt ratio by an average of more than one percentage point each year.

Revenue generated by sales of shares will reduce the borrowing requirement. The Government is planning to finance its one-off spending increases through sale of financial assets, which will not increase the amount of debt. Economic growth will help to reduce the debt ratio but its impact is smaller than in the past few years.

Table 18. Change in general government debt ratio and related factors

	2017	2018	2019**	2020**	2021**	2022**	2023**
Debt ratio, relative to GDP, %	60.8	58.9	58.8	58.8	59.7	60.6	61.6
Change in debt ratio	-1.8	-1.9	-0.1	-0.0	0.9	0.9	1.0
Factors impacting change in debt ratio							
Primary budgetary position (excluding employment pension funds)	0.7	0.9	1.1	1.4	1.5	1.4	1.3
Interest expenditure	1.0	0.9	0.8	0.7	0.7	0.6	0.7
Other factors[1]	-1.2	-1.4	-0.1	-0.4	0.4	0.5	0.6
Change in GDP	-2.3	-2.2	-1.9	-1.7	-1.7	-1.6	-1.6
Surplus of employment pension funds	1.0	1.0	0.8	0.7	0.6	0.6	0.6

1) Includes privatization proceeds, lending and factors related to the valuation and timing of revenue and expenditure.
Plus indicates increasing effect on debt ratio, minus a lowering effect on debt ratio.



2.2 Central government

Even though Finland's central government deficit has decreased over the past few years, it still remains substantial. Rapid increase in tax revenue (especially income tax and valued added tax revenue) is the main reason behind the contraction. At the same time, consolidation measures have helped to slow down spending growth. The cuts in employer's contributions introduced as part of the Competitiveness Pact and the temporary cuts in holiday bonuses have also reduced the employee compensations paid by the state in 2017 and 2018.

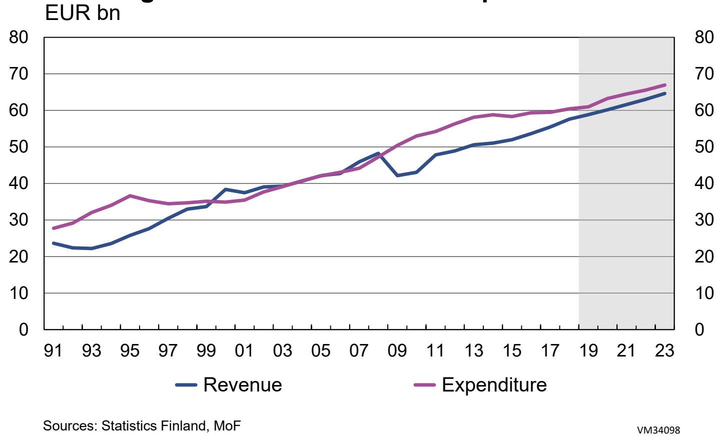
There will be further strengthening of the central government budgetary position this year and the deficit will be smaller than at any time since the financial crisis. The consolidation measures introduced by the previous Government and the end of the key projects are helping to slow down spending increases. The elimination of the temporary cuts in holiday bonuses will increase employee compensations from 2019 onwards. There will be a substantial weakening of the budgetary position next year, a result of the spending increases envisaged in the Government Programme and the economic slowdown. The measures envisaged in the Government Programme will mainly increase the level of investments.

In the medium term, there will be a deficit of about one per cent in the budgetary position. Economic growth is expected to slow down, which means that it will not provide any help in the efforts to reduce the debt ratio.

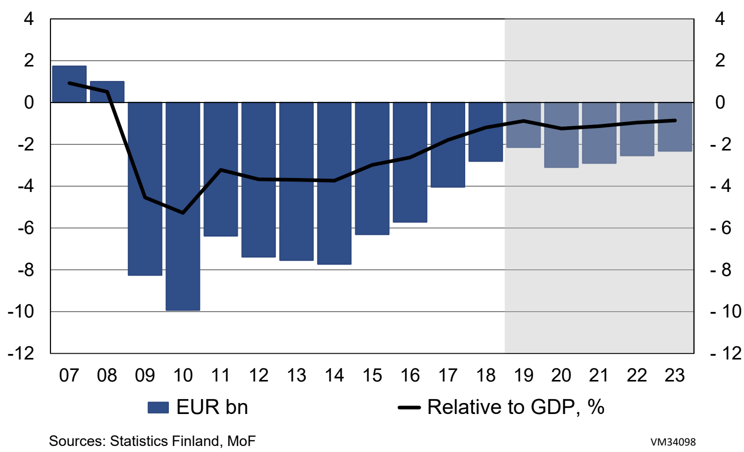
Central government debt has almost doubled over the past ten years and totalled about EUR 105 billion at the end of last year. Exceptionally low interest rates have resulted in low interest expenses. Interest expenditure recognised in the national accounts constituted 3.2% of the total expenditure last year, compared with the peak of almost 16% in 1997. The debt is expected to increase by an average of about three per cent each year during the current Government term.

At the end of the first quarter of 2019, central government guarantee portfolio totalled more than EUR 55 billion, which was almost equal to the annual on-budget expenditure. The guarantee portfolio increased by about four billion euros year on year. Government guarantees comprise the guarantees granted by the state, unincorporated state enterprises, state-owned limited liability companies and specialised financing companies, which are ultimately central government liabilities. The guarantees are not expenditure items and do not appear in the Budget, unless the state has to pay them.

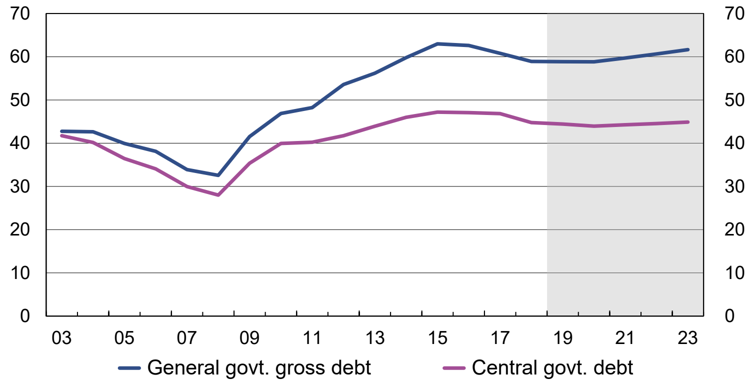
Central government revenue and expenditure



Central government financial balance



General government debt
relative to GDP, %



Sources: Statistics Finland, MoF

VM34098

Table 19. Central government[1]

	2016	2017	2018	2019**	2020**	2021**
	EUR billion					
Current taxes	13.7	14.4	14.9	15.5	16.2	16.7
Taxes on production and imports	31.1	31.6	33.1	33.5	34.2	35.1
Social security contributions	0.0	0.0	0.0	0.0	0.0	0.0
Taxes and social security contributions, total[2]	45.3	46.9	48.7	49.7	51.2	52.6
Other revenue[3]	8.8	8.8	9.0	9.1	8.9	8.9
of which interest receipts	0.3	0.3	0.2	0.2	0.2	0.2
Total revenue	**54.1**	**55.8**	**57.7**	**58.8**	**60.1**	**61.5**
Consumption expenditure	14.0	13.6	13.9	14.2	15.0	15.2
Subsidies and current transfers, total	38.7	39.4	40.0	40.4	41.6	42.7
to general government	27.1	28.1	28.2	28.5	29.3	30.2
Interest expenses	2.2	2.1	1.9	1.9	1.7	1.5
Capital expenditure[4]	4.9	4.7	4.7	4.5	4.9	4.9
Total expenditure	**59.8**	**59.8**	**60.5**	**61.0**	**63.2**	**64.4**
Net lending (+) / net borrowing (-)	**-5.7**	**-4.0**	**-2.8**	**-2.1**	**-3.1**	**-2.9**
Primary balance[5]	-3.8	-2.2	-1.1	-0.4	-1.6	-1.6

1) As calculated in the National Accounts
2) Incl. capital taxes
3) Incl. capital transfers (excl. capital taxes) and consumption of fixed capital
4) Gross fixed capital formation and capital transfers
5) Net lending before net interest expenses

Growth in spending is accelerating

As a result of economic growth, consolidation measures and the lowering of the employer's contributions under the Competitiveness Pact, central government expenditure has fallen to about 26% of the GDP. Transfers to other sectors of the economy, account for more than half (EUR 33 billion) of all central government expenditure. Most of the transfers go to municipalities and social security funds but they also include payments to non-profit organisations, EU contributions and development assistance. Consumption (labour costs and purchases of production inputs) account for nearly one quarter (EUR 14 billion) of the expenditure. Other major expenditure items include subsidies and interest and investment expenditure.

Central government expenditure is expected to grow fairly slowly this year as a result of the consolidation measures introduced by the previous Government and the end of the key projects. Expenditure is boosted by higher employee compensations and increases in goods and service purchases. At the same time, expenditure increases are slowed down by a decrease in investment and interest expenses.

From 2020 onwards, central government expenditure will be boosted by the permanent and one-off spending increases envisaged in the Programme of Prime Minister Rinne's Government. They will increase central government spending by EUR 2 billion in 2020. Transfers to other general government actors will account for most of the spending increases and they include rises in small pensions, higher basic security, additional spending on environmental protection and development of vocational education and training. From next year onwards, spending on basic transport infrastructure will be increased by EUR 300 million, which means that investments will grow more rapidly than GDP. In 2020, central government expenditure is expected to increase more rapidly than the revenue for the first time since 2014. Expenditure will rise by 3.7% and the revenue by 2.2% and as a result, the budgetary position will weaken to three billion euros.

In the projection for the period 2021-2023, transfers to other general government actors (especially to local government) will account for most of the spending increases. In additionally, consumption expenditure will be boosted by growth in purchases of goods and services.

Central government budgetary position will still be substantial in 2023, about EUR 2.3 billion. In the long run, central government expenditure will be increased by growth in age-related spending even if no new decisions on expenditure increases were made. The purchases of the Finnish Defence Forces will also increase central government expenditure on a one-off basis in the mid-2020s.

THE 2020 BUDGET AND CENTRAL GOVERNMENT SPENDING LIMITS

The Budget proposal for 2020 is based on the technical General Government Fiscal Plan of April 2019 and the Programme of Prime Minister Rinne's Government. On-budget expenditure will total about EUR 57.6 billion in 2020. Expenditure will rise by about EUR 2.1 billion compared with the spending of Budget for 2019. The permanent spending increases envisaged in the Government Programme are considered in the Budget proposal and their impact on the Budget will be about EUR 1.1 billion in 2020. Expenditure will also be boosted, among other things, by the one-off future-oriented investments planned by the Government (about EUR 750 million). Compared with 2019, expenditure will also be increased by a number of other factors, such as full index adjustments, compensation to municipalities for revenue losses arising from changes in tax criteria and the adjustment of the division of costs between central and local government. At the same time, however, debt interest payments are only expected to total about EUR 0.9 billion, which is EUR 0.3 billion less than this year. Moreover, the need for cyclical appropriations is expected to decrease by almost EUR 0.3 billion from this year.

In 2020, on-budget revenue (excluding borrowing) is estimated to be EUR 55.6 billion, with tax revenue accounting for approximately EUR 47.1 billion of the total. Revenue will rise by about EUR 1.6 billion compared with the total budgeted for 2019. The changes in tax criteria envisaged in the Government Programme and the sales of shares required for the funding of the future-oriented investments are considered in the revenue estimates. Financing of the welfare state will be put on a stronger basis by introducing a more comprehensive tax base. Taxation will also be used to promote climate policy goals. Indirect taxes on transport fuels, tobacco products and soft drinks will be raised in 2020. The purpose of the index adjustment in earned income taxation is to prevent a rise in taxation as a result of higher earning levels. Taxation in low-income and middle-income brackets will be lowered by EUR 200 million to compensate for the increases in indirect taxes. The solidarity tax will remain in effect until the end of the Government term. In net terms, the tax revenue changes proposed by the Government will boost tax revenue by EUR 227 million in 2020. The new decisions will have an annual impact of about EUR 460 million because the increase in transport fuel tax will not take effect until August 2020.

Table. On-budget revenue, expenditure and balance, EUR billion

	2019	2020 Budget proposal	2021	2022	2023
Revenue	53.8	55.6	56.7	57.6	58.8
Expenditures*	55.5	57.6	60.6	61.5	62.8
Balance	-1.7	-2.0	-3.9	-3.9	-4.0

* The expenditure for the period 2021-2023 has been converted into nominally priced spending using the central government expenditure price index projection.

Spending limits for the 2020-2023 parliamentary term

The Government of Prime Minister Rinne will continue the practice of setting spending limits for central government. This expenditure rule ensures a responsible, long-term central government spending policy that promotes economic stability. The spending limits cover about 80 % of all on-budget expenditure. The following items are outside the spending limits: expenditure that varies according to the economic cycle and automatic fiscal stabilisers, such as unemployment security expenditure, pay security, housing allowances and social assistance. However, expenditure effects generated by changes in the criteria for these items are included within the spending limits. Debt interest payments, value added tax expenditure, financial investment expenditure and expenditure corresponding to technically transmitted payments by central government are also excluded from the spending limits.

The Government set real central government spending limits for the period 2020-2023 in its General Government Fiscal Plan of 7 October 2019. They are based on the technical Spending Limits Decision set by the previous Government on 4 April 2019 and compared with this document, central government expenditure within the spending limits will increase by EUR 1.4 billion at 2023 levels. Spending increases and cuts envisaged in the Government Programme, spread over the years covered by the spending limits, are considered in the setting of the expenditure ceiling. A total of EUR 300 million within the spending limits will be reserved for supplementary budgets each year in the period 2020-2022 and EUR 100 million in 2023.

On average, on-budget expenditure in the period 2020-2022 will be about EUR 1.4 billion and in 2023 about EUR 0.4 billion higher than in the technical Spending Limits Decision set in spring 2019. Higher expenditure is mainly the result of the permanent and one-off spending increases planned by the Government but the increases are partially compensated by a substantial decrease in interest expenditure relative to the technical spending limits. During the spending limits period 2020-2023, expenditure in individual administrative branches will increase by an average of about 1.2% each year in real terms when consideration is given to structural changes. In nominal terms, the expenditure in individual administrative branches will grow by an average of about 3.3% annually.

During the spending limits period, annual revenue is expected to increase by slightly more than 2 % on average. Annual tax revenue is expected to grow by about 2.7 % on average. The on-budget revenue estimate is based on the medium-term outlook for the national economy. Economic growth is expected to slow down and amount to less than one per cent at the end of the outlook period. This will be also be reflected in tax revenue. Compared with the technical spending limits decision made in spring 2019, on-budget revenue has increased, mainly as a result of the new tax criteria set by the Government and the sales of shares to fund the one-off future-oriented investments

Overall economic growth will be slightly weaker than what was estimated in spring 2019, which will dampen the impact of the criteria changes on tax revenue.

Table. Factors affecting changes in on-budget balance compared with the technical General Government Fiscal Plan of spring 2019/Spending Limits Decision, EUR billion

	2020	2021	2022	2023
Estimated balance, General Government Fiscal Plan of 4 April 2019	**-1.6**	**-3.0**	**-3.5**	**-4.1**
Revision of expenditure estimate	**-1.6**	**-1.7**	**-0.8**	**-0.4**
Permanent increases envisaged in the Government Programme (Appendix 1)	-1.1	-1.4	-1.3	-1.4
Spending cuts envisaged in the Government Programme (Appendix 1)	0.1	0.1	0.1	0.1
One-off future-oriented investments planned by the Government	-0.8	-0.4	-0.2	0.0
Compensation for tax revenue losses paid to municipalities as central government transfers	-0.1	-0.1	0.0	0.0
Elimination of the energy tax cuts granted to industries	0.0	0.0	0.1	0.2
Change in debt interest payment estimate	0.2	0.4	0.6	0.7
Change in other expenditure (net)	0.0	-0.3	-0.2	-0.1
Revision of revenue estimate	**1.2**	**0.7**	**0.4**	**0.4**
New tax criteria changes (net)	0.2	0.6	0.5	0.7
Changes to estimates of miscellaneous revenue and revenue from interest, dividends and sales of shares	0.1	0.0	0.0	0.1
Property income to finance future-oriented investments	0.7	0.4	0.2	0.0
Other factors affecting projected revenues (including accrual data and new economic forecast)	0.0	-0.3	-0.4	-0.4
Total change	**-0.4**	**-0.9**	**-0.4**	**0.1**
Estimated balance, Budget proposal 2020 and General Government Fiscal Plan 2020-2023	**-2.0**	**-3.9**	**-3.9**	**-4.0**

Decent growth in tax revenue

Tax revenue accounts for about 85% of all central government revenue. The taxes on earned income and capital, value added tax and corporate tax are the most important tax revenue items. In the 2010s, the emphasis of taxation has been shifted from direct taxes towards indirect taxes.

Most of the tax increases envisaged in the Programme of Prime Minister Rinne's Government are in the form of higher excise duties. The aim is to finance some of the permanent spending increases envisaged in the Government Programme with higher tax revenue and at the same time to encourage citizens to adopt healthier and more environmentally friendly consumption habits. To promote healthier lifestyles, excise duties on tobacco products, alcohol and soft drinks will be raised during the Government term. Compensation for higher consumption taxation will be in the form of lower income taxes in low-income and middle-income brackets. The solidarity tax will remain in effect until the end of the Government term. Annual adjustment corresponding to rising earnings and inflation will be made in earned income taxation.

There will be a further increase in the earned income and capital tax revenue though the rate of growth is slowing down. A gradual slowdown in the growth of earned income towards the end of the outlook period is expected, which means that earned income tax revenue will not grow at the same rate as before. Pension income will grow rapidly as the number of pensioners grows and the pension system matures. At the start of 2020, taxes on low and middle incomes will be lowered by raising the earned income deduction, the basic deduction in local government taxation, and the pension income deduction in central and local government taxation. At the same time, the upper limit of the domestic help credit will be lowered and the deductibility of housing loan interest payments will be reduced. Corporate tax revenue will also increase this year compared with 2018 because the business operating environment will remain favourable. The slowdown in economic growth will, however, be reflected in slower growth in corporate tax revenue during the outlook period. Low interest rates will keep interest income source tax revenue at low levels in the next few years.

Value added tax revenue will be boosted by a steady rise in household consumption in the outlook period. The revenue from excise duties is expected grow only moderately in overall terms. However, in the next few years, revenue from excise duties will be boosted by increases in energy taxes and taxes on alcoholic beverages, soft drinks and tobacco products. At the same time, a reduction in energy tax revenue will be main reason for the fall in the revenue from excise duties and this development is due to a shift from taxable fuel consumption to more lightly taxed biofuels as a result of the biofuel distribution obligation. Car tax revenue will decrease during the outlook period because the carbon dioxide emission values of vehicles are expected to decline.

Table 20. Forecasts for certain revenue and demand items impacting taxable income and the tax base

	2018	2019**	2020**	2021**	2023/2019**
	change, % per year				annual change, %
Taxable earned income and capital income	4.5	3.3	3.2	3.1	3.0
Wage and salary earnings and other income	4.3	3.7	3.6	3.2	3.1
Pensions and other social security benefits	0.2	2.2	3.3	3.2	3.2
Capital income	2.4	4.8	0.8	2.4	2.6
Index of wage and salary earnings	1.7	2.7	3.1	2.9	2.8
Operating surplus	4.3	5.2	3.9	4.4	3.9
Value of household taxable consumption expenditure	3.1	2.3	2.8	3.0	2.9
VAT base	3.4	2.4	2.6	4.4	3.1
Petrol consumption	-1.3	-2.0	-2.1	-3.8	-2.5
Diesel consumption	1.0	1.4	-0.3	-1.1	-0.3
Electricity consumption	2.8	-0.9	0.1	0.3	0.1
Duty-paid alcohol consumption	1.0	1.4	-0.3	-1.1	-0.3
New passenger cars	117900	108000	110000	112000	111600
Consumer price index	1.1	1.1	1.4	1.7	1.5

Other sources of central government revenue include property income and the transfers from the State Pension Fund. The purpose of the transfers from the State Pension Fund is provide partial funding for central government pension expenditure each year. In the national accounts, Solidium Oy is part of the state sector and for this reason, the payments made by the company to the on-budget entities are not recognised as central government revenue in the accounts.

However, the dividends received by Solidium Oy are recognised as central government revenue. Central government property income is expected to remain at about EUR 1.6 billion in the outlook period. The dividend income received by central government have been high and they will increase slightly during 2019. In historical terms, interest income will remain at extremely low levels

Table 21. Impact of change in selected tax base items on tax revenue

Tax category	Tax base	Change	Change in tax revenue, EUR million
Taxes on earned income	Wage and salary earnings	1-pp	446, of which central govt. 130 and local govt. 207
	Pension incomes	1-pp	140, of which central govt. 36 and local govt. 91
Capital income tax	Investment income	1-pp	39
Corporate tax	Operating surplus	1-pp	63, of which central govt. 43 and local govt. 20
VAT	Value of private consumption	1-pp	130
Car tax	Sales of new cars	thousands	5
Energy tax	Electricity consumption[1]	1-pp	9
	Petrol consumption	1-pp	13
	Diesel consumption	1-pp	14
Duty on alcoholic beverages	Alcohol consumption	1-pp	15
Duty on cigarettes	Cigarette consumption	1-pp	10

1 excl. manufacturing industries, datacenters and greenhouses

Table 22. Central government on-budget revenue

	2018	2019**	2020**	2021**	2022**	2023**	2023/2019**
	provisional financial accounts	budget incl. supplementary budget					annual change, %
	EUR billion						
Total tax revenue estimates	44.4	46.0	47.1	48.7	49.8	51.1	2.8
Income and wealth taxes	14.5	15.4	15.9	16.4	17.0	17.6	3.9
Taxes based on turnover	19.0	19.8	20.3	21.3	21.9	22.4	3.3
Excise duties	7.4	7.5	7.6	7.7	7.6	7.6	0.6
Other taxes	3.4	3.3	3.3	3.3	3.4	3.4	-0.2
Miscellaneous revenue	5.8	5.8	5.9	5.7	5.8	5.9	0.4
Interest income and profit entered as income	3.0	2.1	2.5	2.1	1.9	1.7	-9.1
Total revenue estimates	54.9	54.0	55.6	56.7	57.6	58.8	1.4

Table 23. **Impact of discretionary tax measures on general government tax revenue**

	2018	2019	2020**	2021**	2022**	2023**
	EUR million					
Earned income taxes	-417	-216	-545	-453	-455	-441
Average increase in municipal tax rate	-38	40	0	0	0	0
Investment income tax	-9	0	26	26	0	0
Corporate tax	5	9	15	-6	0	0
Other direct taxes	-57	-81	2	2	2	2
Value-added tax	-150	-16	-23	33	-13	0
Energy taxes	47	35	82	174	49	179
Other indirect taxes	151	113	43	97	55	50
Social security contributions	-437	-627	280	-95	33	28

On-budget accounts and national accounts

No direct conclusions on the central government budgetary position recognised in the national accounts can be made on the basis of the on-budget budgetary position. On-budget entities showed a deficit of EUR 0.4 billion in 2018. According to the preliminary national accounts, central government deficit was EUR 2.8 billion or more than two billion euros higher. There was a substantial difference between the on-budget budgetary position and the budgetary position recognised in national accounts. There are two main reasons for this: on-budget sales of shares and the repayments of loans granted by the state, neither of which has an impact on the deficit recognised in the accounts.

The year 2020 will be the only year in the outlook period when the on-budget deficit will be lower than the budgetary position recognised in the national accounts. That year, the on-budget deficit will be reduced by revenue from sale of financial assets, which will not have any impact on the deficit recognised in the national accounts. The timing differences concerning major defence materiel purchases will be one factor resulting in a gap between on-budget entities and the national accounts from 2021 onwards. As a result, it is estimated that from 2021 onwards, the deficit recognised in the national accounts will be substantially lower than the on-budget deficit.

Likewise, it is not always possible to make conclusions about the central government borrowing requirement on the basis of the on-budget deficit. In 2018, the State Treasury made loan repayments totalling EUR 0.8 billion. Using the deficit as a criterion, new loans amounting to EUR 0.4 billion should have been taken out, which means that central government borrowed about EUR 1.3 billion less than what the on-budget deficit would have required. There are several reasons for this difference. Last year's difference was primarily due to deferrable appropriations, increases in state funds and the use of liquid assets.

There are several reasons for the difference between the on-budget budgetary position and the central government budgetary position recognised in the national accounts. The most important of them is that in the national accounts, the central government sector is larger than on-budget entities, which basically comprise central government agencies. In the national accounts, the central government sector comprises on-budget entities, government funds (except for the State Pension Fund), universities and their real estate companies as well as the Senate Properties. The decisions on the categorisation of public sector units are regularly reviewed. All central government and general government units are listed on the website of Statistics Finland.

In addition to the classification, differences also arise because the criteria for recognising expenditure in the national accounts and in on-budget entities differ from each other. The national accounts are accrual-based whereas the on-budget entities are partially cash-based. Because of the differences in recognition criteria, deferrable appropriations in particular cause a difference between on-budget and national accounts expenditure. Deferrable appropriations are multi-year appropriations that are entered in the Budget for one year only. In the national accounts, deferrable appropriations are recognised on accrual basis in accordance with their year of use (as all other expenditure). There can be substantial variation in the net effect of deferrable appropriations from one year to another. In the national accounts, taxes, subsidies and EU contributions are converted into accrual-based items by means of timing adjustments. The difference arising from the timing adjustments can only be determined afterwards.

Such financial investments as loans granted and repaid by the state and sales and acquisitions of shares that in the national accounts are primarily treated as financial transactions are also included as revenue and expenditure in the on-budget budgetary position. Financial transactions do not have any effect on the central government budgetary position recognised in the national accounts. The financial transactions also include the derivatives using which the State Treasury has achieved significant reductions in on-budget interest payments. The fact that derivative contracts reduce interest payments is not considered in the national accounts, which means that the interest expenditure recognised in the national accounts is substantially higher than the on-budget interest payments.

EU Member States report to Eurostat twice a year on the differences between the figures in on-budget entities and the national accounts as part of their deficit and debt reporting. Detailed explanations should be given for the differences between the final accounts budgetary position for central government and other general government subsectors and national accounts net lending in the preceding years. Debt dynamics (the uniformity of the change in general government net lending and public debt) must also be detailed in the reporting.

Table 24. On-budget balance and central government net lending[1]

	2017	2018	2019**	2020**	2021**
	EUR billion				
On-budget surplus (+) / deficit (-)[2]	**-3.7**	**-0.4**	**-2.6**	**-2.0**	**-3.9**
Privatization proceeds (net proceeds from equity sales)	0.0	-1.0	-0.3	-0.9	-0.5
Financial investment, net	-0.9	-2.1	-0.2	-0.2	-0.2
Revenue surplus in off-budget units	-0.2	-0.2	-0.1	-0.1	-0.1
Cash / accrual basis adjustment	0.5	0.5	0.7	-0.1	1.7
Other adjustment items[3]	0.3	0.3	0.4	0.1	0.2
Central government net lending (+) / borrowing (-)	**-4.0**	**-2.8**	**-2.1**	**-3.1**	**-2.9**

1) In National Accounts terms
2) Incl. government debt servicing
3) Incl. debt cancellations, profit on reinvested foreign direct investments, impact of the difference in the recording of deferrable budgetary appropriations, superdividends

2.3 Local government

According to the national accounts, the deficit in the local government budgetary position was 0.9% of GDP last year. The local government deficit will grow further this year. The expenditure will be boosted by growing health and social service needs, as well as by municipal sector pay rises and the expiry of the holiday bonus cut under the Competitiveness Pact, which will already have its largest impact in 2019. There will also be further increases in investment expenditure as the construction of schools and hospitals will continue and infrastructure investments will remain at high level. Local government revenue will grow substantially more slowly than the expenditure.

The economic projection of local government finances for 2020–2023 is a pressure projection that, in addition to general economic and population trends, only takes into account the measures impacting local government finances that are already included in the Budget proposal and the General Government Fiscal Plan. The projection does not include municipalities' and joint municipal authorities' own measures for the period 2020–2023. They will only be included in the projection after the budgets have been finalised. Municipal tax rates have been kept at 2019 levels.

Ageing of the population will increase local government health and social services expenditure by 1.2% each year. At the same time, a declining birth rate will theoretically reduce the need for early childhood education and other education services. The need for more services is estimated to increase local government consumption expenditure by an average of 0.5% each year. However, the impacts of the reduced need for educational services has been revised slightly downwards in the estimates because the need to reduce the number of daycare centres and schools is expected to be realised more slowly than estimated.

In addition to increasing service needs, local government consumption expenditure will also be boosted by discretionary Government measures. Prime Minister Rinne's Government will expand local government tasks and obligations by allocating substantial additional funding to health and social services as well as education. Key measures include the extension of compulsory education, higher staff-to-client ratio in services for the elderly and better access to basic services. The Government is planning to introduce the permanent spending increases envisaged in its

Programme in a front-loaded manner. The permanent measures will boost local government consumption expenditure by about EUR 550 million at 2023 levels.

The one-off spending increases envisaged in the Government Programme will boost local government expenditure on average by EUR 200 million yearly between 2020 and 2022. From local government perspective, the most substantial spending increases will be allocated to enhance the quality and equality of early childhood education and basic education and to the employment of vocational education teachers and guidance counsellors.

Local government collective agreements will expire at the end of March 2020. Decrease of the unemployment rate close to the level of structural unemployment will tighten the labour market, which in turn will create more pressures for pay increases and give rise to labour bottlenecks in the Finnish economy. This is expected to lead to higher earnings in the national economy. It is assumed in the trend projection that the rise in local government earnings will be in line with the projected overall rise in earnings. Tightness of the labour market is already affecting the local government sector because according to the employment outlook by occupation published by the Ministry of Economic Affairs and Employment, there is a shortage of such professionals as health and social services experts. At the same time, however, economic slowdown is easing wage pressures. Personnel expenses constitute the largest expenditure item in local government and for this reason, wage and salary agreements are extremely important for future development of local government finances.

Local government investments will remain at high level throughout the outlook period because the construction projects in progress will last for several years and investment pressures will remain substantial. The number of building permits granted for health and social services buildings and schools is still on the increase, which means that more construction starts can be expected. At the same time, however, the economic slowdown and the bleak outlook for local government finances may lead to a situation where some of the investment decisions are postponed.

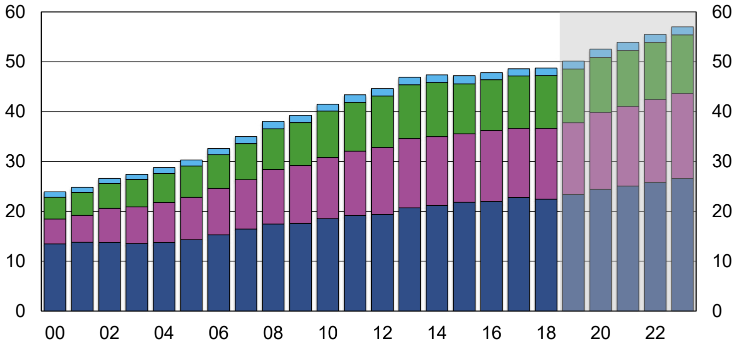
Local government budgetary position will improve slightly in 2020, compared with the current year but the improvement is only temporary and is explained by timing factors. Government transfers and grants in particular are expected to increase at their fastest rate in 2020. Government transfers and grants are boosted by the expiry of the temporary cuts introduced with the Competitiveness Pact, compensations for lost tax revenue paid to municipalities and index increases in central government transfers to local government.

As a whole, the changes in government transfers and grants will not strengthen local government finances as a substantial part of the increases in government transfers and grants will be compensated by a decrease in other revenue or cost increases. Under the Act on Central Government Transfers to Local Government for Basic Public Services, central government transfers cover 100% of new or expanding tasks. Moreover, it is envisaged in the Government Programme that full government funding will be provided for measures increasing or expanding local government tasks and obligations, or if this is not possible, tasks or obligations will be discontinued. Thus, it is estimated at this stage that the measures planned by the Government of Prime Minister Rinne will have a more or less neutral impact on local government finances. Even though the measures planned by the Government will increase local government expenditure, there will be an almost equal increase in the government transfers and grants to finance them.

There will also be a non-recurring factor boosting tax revenue next year as the amount of secondary income tax refunds is expected to decrease. Rise in earnings is one of the factors sustaining the rise in tax revenue between 2021 and 2023. A growth in revenue will not be enough to improve the state of local government finances as investments will remain at a high level and the ageing population will need more health and social services. Local government deficit will increase between 2021 and 2023. Strengthening of local government finances would require measures improving productivity, structural reforms and adjustment measures by municipalities and joint municipal authorities. Especially in the smallest municipalities, the potential for expenditure adjustments has already been exhausted and for this reason, there will be substantial pressures on local income tax rates in the coming years.

Local government debt to GDP ratio decreased in 2017 but increased again in 2018. The debt ratio will rise more substantially this year and the rate of growth will be rapid throughout the outlook period, a result of local government deficits and a slowdown in economic growth.

Local government revenue
EUR bn

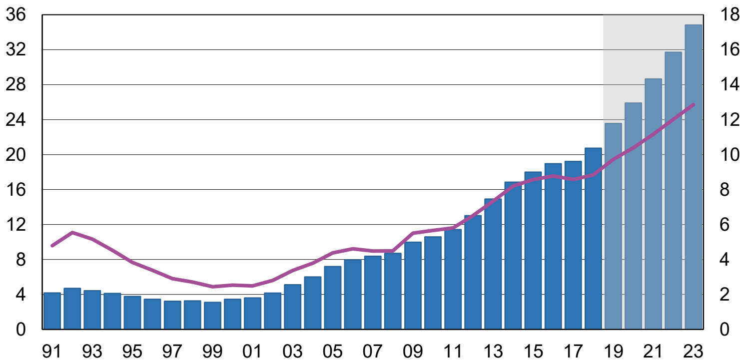


Tax revenue, Central government transfers, Sales, fees and charges, Other revenue

Sources: Statistics Finland, MoF

VM34098

Local government debt



EUR bn (left scale) Relative to GDP, % (right scale)

Sources: Statistics Finland, MoF

VM34098

Table 25. Local government[1]

	2016	2017	2018	2019**	2020**	2021**
	EUR billion					
Taxes and social security contributions	21.9	22.8	22.5	23.4	24.4	25.1
of which municipal tax	18.7	19.1	18.8	19.5	20.5	21.0
corporate tax	1.5	1.9	1.9	2.0	2.0	2.1
real estate tax	1.7	1.8	1.8	1.9	1.9	1.9
Other revenue[2]	19.0	18.8	19.3	19.7	21.0	21.7
of which interest receipts	0.3	0.3	0.3	0.3	0.3	0.3
transfers from central government	14.3	13.9	14.2	14.4	15.4	16.0
Total revenue	**40.9**	**41.5**	**41.8**	**43.1**	**45.4**	**46.7**
Consumption expenditure	34.0	34.3	35.6	37.2	39.0	40.5
of which compensation of employees	21.6	21.0	21.4	21.9	22.8	23.5
Income transfers	3.3	2.7	2.6	2.6	2.6	2.7
of which social security benefits and allowances	1.3	0.7	0.7	0.7	0.7	0.7
subsidies and other transfers	1.8	1.9	1.8	1.8	1.8	1.8
interest expenses	0.1	0.1	0.1	0.1	0.1	0.1
Capital expenditure[3]	4.5	5.0	5.6	6.1	6.2	6.3
Total expenditure	**41.8**	**42.0**	**43.8**	**45.9**	**47.8**	**49.5**
Net lending (+) / net borrowing (-)	**-0.9**	**-0.5**	**-2.1**	**-2.8**	**-2.3**	**-2.8**
Primary balance[4]	-1.0	-0.6	-2.2	-3.0	-2.5	-2.9

1) As calculated in National Accounts
2) Incl. capital transfers and consumption of fixed capital
3) Gross capital formation and capital transfers
4) Net lending before net interest expenses

2.4 Social security funds

2.4.1 Employment pension schemes

Employment pension institutions' surplus was 1.0% of GDP in 2018. Social security contributions and property income increased substantially. The improved employment situation led to increases in pension contribution income. However, there has been a substantial reduction in the surplus of the employment pension institutions over the past decade because in the first decade of the 2000s, the average surplus stood at more than three per cent relative to GDP. An increase in the number of pensioners and the rise in average pensions are the main reasons for this development. Low interest rates have also caused a decline in the property income of the pension funds. Despite this, a rise in asset prices (which has been mainly driven by rising share prices) has increased the value of the pension assets to almost EUR 200 billion.

Surplus of the employment pension institutions will decline to about 0.6% of GDP during the outlook period. The growth in employment pension institutions' property income will come to a halt in the coming years as a result of low interest rates. Employment pension expenditure will, however, continue to increase at a rate of four per cent during the outlook period. Even though the growth in the number of pensioners will gradually slow down, pension expenditure will be boosted by increases in average pensions and annual index increases. At the same time, a rise in the wage bill will generate more pension contribution income. The assumption has been that the private-sector pension contribution will remain at its current level (24.4%) throughout the outlook period. According to the long-term projections published by the Finnish Centre for Pensions, there will slight pressures to increase these contributions after the outlook period.

Table 26. Finances of social security funds[1]

	2016	2017	2018	2019**	2020**	2021**
	EUR billion					
Investment income	3.7	3.9	4.1	4.1	3.9	4.0
Social security contributions	27.9	27.3	27.9	28.3	29.6	30.5
of which contibutions paid by employers	18.8	17.6	17.7	17.6	18.2	18.8
contributions paid by insured	9.2	9.7	10.3	10.7	11.4	11.7
Transfer from general government	14.6	15.8	15.5	15.4	15.2	15.5
Other revenue	0.4	0.4	0.3	0.3	0.3	0.3
Total revenue	**46.6**	**47.4**	**47.8**	**48.1**	**49.1**	**50.3**
Consumption expenditure	3.5	3.5	3.6	3.8	3.9	4.0
Social security benefits and allowances	36.6	37.6	37.9	38.6	39.8	41.0
Other outlays	3.6	3.4	3.3	3.3	3.4	3.4
Total expenditure	**43.7**	**44.5**	**44.9**	**45.7**	**47.0**	**48.5**
Net lending (+) / net borrowing (-)	**2.9**	**2.9**	**2.9**	**2.5**	**2.1**	**1.8**
Earnings-related pension schemes	2.4	2.2	2.2	2.0	1.8	1.6
Other social security funds	0.5	0.7	0.7	0.4	0.2	0.2
Primary balance[2]	1.7	1.9	1.8	1.2	1.0	0.7

1) As calculated in National Accounts
2) Net lending before net interest expenses

2.4.2 Other social security funds

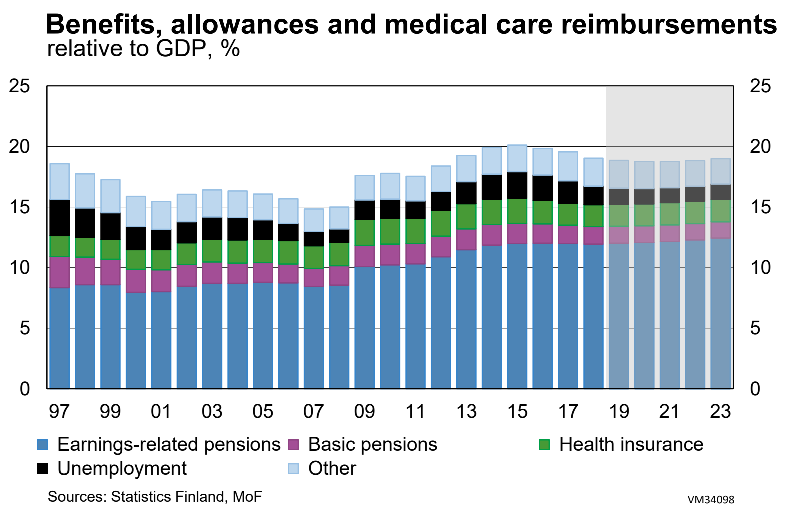
The other social security funds are the Social Insurance Institution of Finland, which is primarily responsible for basic security, and the Employment Fund, which is responsible for earnings-related unemployment security. The surplus of the other social security funds remained at 0.3% of GDP in 2018. The surplus is due to the one-percentage-point increase in the unemployment insurance contribution at the start of 2016 and a substantial reduction in unemployment security expenditure, a result of an improved employment situation.

A gradual reduction in the surplus of the other social security funds is expected in the outlook period. This is because the unemployment insurance contribution was lowered by 0.8 percentage points at the start of this year and it will be lowered by further 0.49 percentage points in 2020. The Employment Fund now posts a significant surplus, a result of the economic upturn. Improvements in the employment situation will continue to reduce unemployment expenditure and the rising wage bill will boost social security contribution income. After the lowering of the contributions, other social security funds will still post a slight surplus. The increase in small pensions will be the Government measure with the most substantial impact on benefit expenditure from next year.

Table 27. Social security contributions rates and pension indices

	2016	2017	2018	2019	2020**	2021**
Social insurance contributions[1]						
Employers						
Sickness insurance	2.12	1.08	0.86	0.77	1.36	1.35
Unemployment insurance	2.85	2.41	1.91	1.50	1.26	1.26
Earnings-related pension insurance	18.00	17.95	17.75	17.35	16.95	16.95
Local government pension insurance	23.21	21.95	21.60	21.20	20.80	20.80
Employees						
Sickness insurance	2.12	1.58	1.53	1.54	1.88	1.78
Unemployment insurance	1.15	1.60	1.90	1.50	1.25	1.25
Earnings-related pension insurance	6.00	6.45	6.65	7.05	7.45	7.45
Benefit recipients						
Sickness insurance	1.47	1.45	1.53	1.61	1.65	1.56
Pension indices						
Earnings-related index (over 65)	2519	2534	2548	2585	2619	2668
National pension index	1631	1617	1617	1617	1633	1659

1) Annual averages. The contributions of employers and the unemployment and employment pension contributions of beneficiaries as percentages of wages and salaries. The figures are weighted averages.



2.5 Long-term sustainability of public finances

There is a long-term imbalance between general government revenue and expenditure, which threatens to increase the debt-to-GDP ratio to unsustainable levels. The imbalance arises from the medium-term and long-term outlook. A slowdown in economic growth will increase the deficit and debt ratio in the medium term. Changing age structure of the Finnish population is the key long-term factor that weakens the sustainability of general government finances. Government finances are also facing pressures arising from climate change, planned defence materiel purchases and infrastructure projects as well as the maintenance backlog in public buildings, transport infrastructure and urban infrastructure.

The dependency ratio will rise further in the coming decades because the ageing population is growing and the working-age population is shrinking. The growth of the ageing population will lead to higher pension, health care and nursing costs. Simultaneously, the working-age population, which is financing welfare services and social security through taxes, is shrinking. This means that the current total tax rate will be insufficient to finance the growing expenditure. These phenomena are illustrated in the charts below. If no measures are taken to strengthen general government finances, the permanent imbalance between revenue and expenditure (sustainability gap) will lead to a high level of public debt.

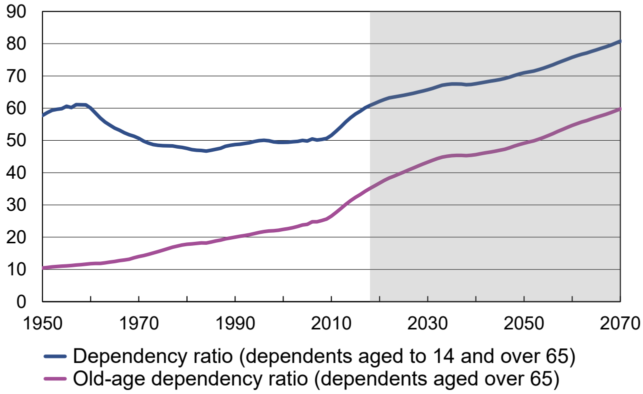
The Ministry of Finance estimates that the sustainability gap is approximately 4.5% of GDP. The sustainability gap shows how much general government finances should be consolidated by the year 2023 so that the general government debt ratio develops sustainably in the long term. The estimated general government structural deficit will be approximately 1.5% of GDP in 2023. General government finances should, however, show a surplus of about 3% relative to GDP in 2023 so that the expenditure pressures arising from ageing would not lead to indebtedness. Due to the updated medium-term projection of the general government debt ratio and financial balance, the estimated sustainability gap is higher than what was forecast last spring. Despite these changes regarding the medium-term outlook, the growth in age-related expenditure, a result of the changing age structure of the Finnish population, contributes to the sustainability gap the most.

The Ministry of Finance's estimate of the long-term sustainability of general government finances is based on the methods and calculation principles jointly agreed in the EU. The sustainability calculation is a pressure calculation in which the trends under current legislation and practices are projected to the future with the help of population projections, spending decompositions by age cohorts, and estimates of long-term economic growth trends. In other words, the sustainability gap gives an indication of the long-term balance in general government finances under the current revenue and expenditure structure. Only the decisions whose impacts on general government finances can be estimated with sufficient accuracy are considered in the sustainability gap estimate. The methods used for the calculation of the sustainability gap are detailed in the description of the methods available from the website of the Ministry of Finance.[1]

In the sustainability gap estimate, assumptions are made of future trends, and the long-term revenue and expenditure are determined on the basis of these assumptions. These assumptions are associated with uncertainty, which has an impact on the size of the sustainability gap. Despite the uncertainty, the calculation provides a consistent way of examining the challenges facing general government finances and means to overcome them. The sensitivity is examined in the table below, in which the sustainability gap has been calculated using a range of different assumptions. Sustainability gap is narrowed by more positive assumptions of employment and productivity trends, stronger general government finances in the medium term and the postponement of the service needs as people live longer.

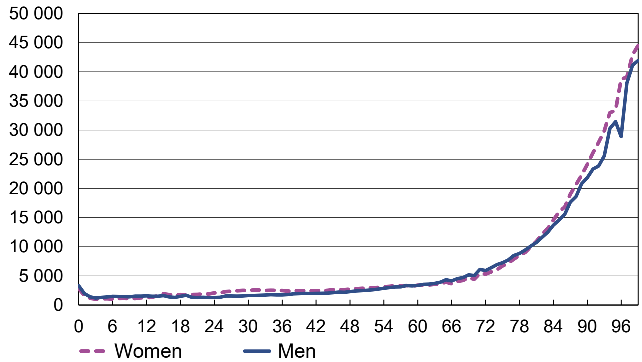
1 https://vm.fi/en/descriptions-of-methods

Dependency ratio and old-age dependency ratio
dependents per 100 persons of working age



Source: Statistics Finland

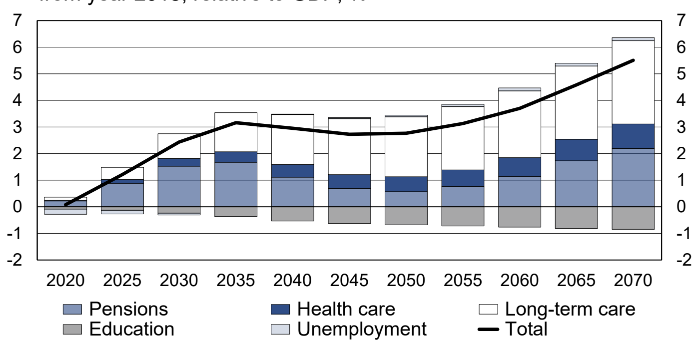
Health expenditure by age and gender 2011
EUR per inhabitant*



* Includes long-term care

Sources: The National Institute for Health and Welfare, Statistics Finland

Change in age-related expenditure
from year 2018, relative to GDP, %



The figure is compiled using the model developed by the Ministry of Social Affairs and Health for social expenditure analysis

Source: MoF

VM34098

Table 28. General government finances

	2018	2023**	2030**	2040**	2050**	2060**	2070**	2070/2018**
	relative to GDP, %							change, %
Total expenditure	53.1	52.9	56.0	58.4	59.8	62.7	67.0	13.9
of which age-related and unemployment expenditure	28.5	29.3	30.9	31.5	31.3	32.2	34.0	5.5
Pensions	13.0	13.7	14.6	14.2	13.6	14.2	15.2	2.2
Old-age pensions	12.0	12.7	13.7	13.3	12.7	13.1	14.1	2.1
Other pensions	1.0	0.9	0.9	0.9	1.0	1.1	1.2	0.1
Health care	5.5	5.6	5.8	5.9	6.0	6.2	6.4	0.9
Long-term care	2.6	2.9	3.5	4.5	4.8	5.1	5.7	3.1
Education	5.6	5.5	5.4	5.1	4.9	4.8	4.8	-0.8
Unemployment	1.8	1.7	1.7	1.8	1.9	1.9	1.9	0.1
Interest expenditure	0.9	0.7	2.0	4.0	5.5	7.5	9.9	9.1
Total revenue	52.2	51.6	52.1	52.4	52.5	52.8	52.8	0.6
of which: property income	2.9	2.7	3.2	3.4	3.6	3.9	3.9	1.0
Net lending[1]	-0.8	-1.4	-3.9	-6.1	-7.3	-9.9	-14.2	-13.3
of which: transfer to pension funds	1.1	0.6	-0.0	0.6	1.5	1.4	0.5	-0.6
General government debt	58.9	61.6	71.0	101.4	140.7	190.2	253.2	194.3
General government assets, consolidated	124.3	122.0	119.0	113.4	115.2	120.2	119.8	-4.5
Pension funds`financial assets, consolidated	83.6	81.3	80.1	77.4	81.9	88.5	88.7	5.1

[1] Cyclically-adjusted net lending as of 2030

Table 29. Underlying assumptions

	Assumptions, %					
	2023**	2030**	2040**	2050**	2060**	2070**
Labour productivity growth	1.0	1.0	1.4	1.5	1.5	1.5
Real GDP growth	0.7	0.6	1.3	1.3	1.3	1.2
Participation rate						
Males (15–64)	79.5	78.6	78.6	79.1	79.8	80.6
Females (15–64)	77.0	75.8	76.0	76.6	77.3	77.8
Total (15–64)	78.3	77.3	77.3	77.9	78.6	79.2
Unemployment rate	6.5	7.1	7.4	7.6	7.9	7.8
Old-age dependency ratio[1]	38.9	43.3	45.6	49.2	54.7	59.8
Inflation	1.7	2.0	2.0	2.0	2.0	2.0
Real interest rate	-0.6	0.9	2.0	2.0	2.0	2.0
Real return of pension assets	2.1	2.9	3.5	3.5	3.5	3.5

[1] The ratio of people aged over 65 to those aged 15–64
Sources: Statistics Finland, MoF

Table 30. Impact of various factors on the sustainability gap

	Baseline scenario (autumn 2019)	Change	Impact on sustainability gap, pp.
Growth in general productivity (and real earnings)	on average 1.4%	+0.5 pp.	-0.5
Employment rate (from the late 2020s onwards)	73.1% in 2023 and 73.4% in 2070	+1.0 pp.	-0.4
Annual productivity growth of public health and social services	0%	+0.5 pp.	-1.8
General government structural primary balance[1] / GDP in 2023	0.7%	+1.0 pp.	-1.0
Total fertility rate	1.45	+0.25 (= 1.70)	-1.0
Annual net immigration (impact if employment rate remains unchanged)	15,000	+7,500 (= 22,500)	-0.8
Life expectancy at the age of 50 (33.6 years in 2019)	Will be increased by 6.9 years by 2070	-1.4 years (= 5.5 years)	-0.6
Postponement of the need for health and social services as life expectancy increases	Will be postponed by half of the life expectancy increase (people aged over 50)	Will be postponed at the rate of life expectancy increase	-1.3
		No postponement as life expectancy increases	+1.4
Inflation (change in GDP deflator and consumer prices)	2%	-0.5 pp.	approx. 0.0
Real interest rate on central and local government debt (+ impact on the discount rates of the two sectors)	Real interest rate on central and local government debt and interest income 2%, real rate of return on central and local government's investments in shares 4% and real rate of return on employment pension schemes' investments 3.5% (from 2030s onwards)	-0.5 pp.	approx. 0.0
Real interest rate on central and local government debt and impact on the real rate of return on central and local government and employment pension schemes' investments in bonds (+ impact on all sectors' discount rates)		-0.5 pp.	+0.4
Real interest rate on central and local government debt and real rate of return on all general government investments (+ impact on all sectors' discount rates)		-0.5 pp.	+0.6

1) Deficit excl. interest expenditure

Supplementary statistics

1. Evolution of forecasts over time
2. Outturn data and forecasts used in budget process for 2014–2018
3. National balance of supply and demand
4. Financial balance of the Finnish economy

Table 1. Evolution of forecasts over time[1]

	2018				2019**				2020**				2021**			
Forecast date	summer18	autumn18	winter18	outcome	winter18	spring19	summer19	autumn19	winter18	spring19	summer19	autumn19	winter18	spring19	summer19	autumn19
GDP at market prices, change in volume, %	2.9	3.0	2.5	1.7	1.5	1.7	1.6	1.5	1.3	1.4	1.2	1.0	1.1	1.2	1.1	0.9
Consumption, change in volume, %	1.6	1.6	1.1	1.7	1.2	1.3	1.3	1.6	1.1	1.3	1.3	1.5	1.1	1.2	1.2	1.1
Exports, change in volume, %	4.9	4.9	3.5	2.2	3.1	3.2	2.9	2.4	2.6	2.9	2.9	2.4	2.4	2.0	2.0	2.1
Unemployment rate, %	8.0	7.4	7.5	7.4	6.9	6.3	6.6	6.5	6.7	6.1	6.3	6.3	6.6	6.0	6.2	6.2
Consumer price index, change, %	1.1	1.1	1.2	1.1	1.4	1.2	1.2	1.1	1.6	1.5	1.5	1.4	1.7	1.7	1.7	1.7
Central government net lending, relative to GDP, %	-1.7	-1.5	-1.3	-1.2	-0.7	-0.7	-0.7	-0.9	-0.7	-0.7	-0.7	-1.2	-0.3	-0.7	-0.7	-1.1
General government net lending, relative to GDP, %	-0.7	-0.7	-0.8	-0.8	-0.4	-0.3	-0.6	-1.0	-0.1	0.0	-0.3	-1.4	-0.1	-0.1	-0.4	-1.5
Central government debt, relative to GDP, %	46.3	46.0	45.0	44.8	44.5	44.2	44.2	44.4	43.8	43.4	43.4	43.9	43.8	43.3	43.2	44.3

[1] Economic Survey
Sources: Statistics Finland, MoF

Table 2. Outturn data and forecasts used in budget process for 2014–2018

	Years 2014–2018		Average forecast errors	
	Forecast averages, % ch.	Outcome averages, % ch.	Forecast under-/over-estimation[1], pp.	Magnitude of forecast error[2], pp.
GDP (volume)	1.3	1.2	0.1	1.2
GDP (value)	2.9	2.6	0.2	1.1
Private consumption (value)	2.3	2.4	-0.2	0.6
Current account, relative to GDP, %	-0.7	-0.4	-0.3	0.5
Inflation	1.6	0.6	0.9	0.9
Wage bill	1.8	1.8	0.0	1.3
Unemployment rate	8.5	8.6	-0.1	0.6
Central government debt, relative to GDP, %	49.4	46.8	2.5	2.5
Central government net lending, relative to GDP, %	-2.7	-2.5	-0.1	0.7
General government net lending, relative to GDP, %	-2.2	-1.9	-0.3	1.2

Forecasts are compared with March/July preliminary national accounts data.
Averages for the past five years are calculated on the basis of spring and autumn forecasts concerning the budget year.
[1] Over- or understimation is indicated by average forecast error.
[2] The average of absolute error values indicates the average magnitude of forecast errors, regardless of the direction of error.

Table 3. **National balance of supply and demand, EUR million**

	Current prices					
	2016	2017	2018	2019**	2020**	2021**
GDP at market prices	217 469	225 781	234 453	242 109	249 328	256 561
Imports of goods and services	78 498	84 826	92 124	95 488	99 922	103 705
Total supply	**295 967**	**310 607**	**326 577**	**337 597**	**349 251**	**360 266**
Exports of goods and services	75 719	85 085	90 408	94 478	98 636	102 583
Consumption	169 627	171 649	176 835	182 413	188 746	194 669
private	118 165	120 152	123 702	127 192	130 829	134 950
public	51 462	51 497	53 133	55 221	57 916	59 718
Investment	49 418	52 486	55 456	57 008	57 966	59 122
private	40 401	43 272	45 584	46 810	47 296	48 287
public	9 017	9 214	9 872	10 198	10 670	10 835
Total demand	**295 910**	**310 707**	**325 635**	**336 659**	**348 313**	**359 328**
	At reference year 2010 prices; not additive					
	2016	2017	2018	2019**	2020**	2021**
GDP at market prices	193 530	199 449	202 786	205 851	208 012	209 972
Imports of goods and services	80 598	83 874	88 057	89 651	91 709	93 506
Total supply	**265 444**	**274 271**	**281 342**	**285 832**	**289 839**	**293 414**
Exports of goods and services	74 610	81 186	82 963	84 964	86 966	88 826
Consumption	153 067	154 171	156 833	159 333	161 738	163 464
private	106 761	107 782	109 733	111 595	113 189	114 895
public	46 310	46 393	47 104	47 742	48 552	48 588
Investment	44 659	46 466	47 986	48 169	48 043	48 195
private	36 320	38 070	39 147	39 245	38 864	39 109
public	8 342	8 391	8 840	8 928	9 195	9 096
Total demand	**273 599**	**283 017**	**290 222**	**295 707**	**300 690**	**305 220**

Table 4. Financial balance of the Finnish economy

	2014	2015	2016	2017	2018
	relative to GDP, %				
Gross investment	**21.5**	**21.2**	**22.7**	**23.2**	**23.7**
households and non-profit institutions	6.4	6.1	6.7	7.0	7.2
non-financial corporations and financial and insurance corporations	10.9	11.3	11.9	12.2	12.2
general government	4.2	3.7	4.1	4.1	4.2
Gross saving[1]	**20.8**	**21.0**	**21.4**	**23.2**	**24.0**
households and non-profit institutions	4.3	3.9	3.5	3.5	3.6
non-financial corporations and financial and insurance corporations	15.2	15.9	15.6	16.4	17.0
general government	1.1	1.0	2.2	3.3	3.3
Financial surplus	**-1.3**	**-0.7**	**-1.9**	**-0.7**	**-1.3**
households and non-profit institutions	-2.4	-2.4	-3.6	-3.7	-3.7
non-financial corporations and financial and insurance corporations	4.2	4.2	3.4	3.7	3.6
general government	-3.0	-2.4	-1.7	-0.7	-0.8
Statistical discrepancy	0.2	0.1	0.0	-0.0	0.4

[1] Incl. capital transfers (net)

MINISTRY OF FINANCE
Snellmaninkatu 1 A
PO BOX 28, 00023 Government
Tel. +358 295 160 01
www.financeministry.fi

ISSN 1797-9714 (pdf)
ISBN 978-952-367-032-7 (pdf)

October 2019