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# Overview of Central Government Risks and Liabilities, autumn 2021

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# Overview of Central Government Risks and Liabilities, autumn 2021

Sami Napari, Sakari Lehtiö, Markku Puumalainen, Jukka Hytönen,  
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## Overview of Central Government Risks and Liabilities, autumn 2021

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### Abstract

Central government liabilities have been increasing for many years, not only in terms of their nominal value but also in relation to the size of the economy. The COVID-19 pandemic has further intensified this long-term trend.

In 2008, just before the start of the financial crisis, central government debt totalled EUR 54 billion, representing approximately 28 per cent of GDP. At the end of 2020, central government debt amounted to about EUR 125 billion, nearly 53 per cent of GDP. In other words, the amount of debt in euros has more than doubled in just over a decade, and the debt ratio has almost doubled.

Central government contingent liabilities have also shown strong growth over a long period. At the beginning of last decade, the government's guarantee liabilities totalled about EUR 23 billion, or about 12 per cent of GDP. At the end of 2020, liabilities amounted to EUR 62 billion, bringing the liabilities-to-GDP ratio to over 26 per cent.

Significant growth in liabilities over a long period, combined with moderate long-term growth prospects, raises concerns about the central government's risk-bearing capacity. In the coming years, it would be important to strengthen the sustainability of general government finances to ensure Finland is prepared to face a potential negative economic shock in the future.

<b>Keywords</b>	central government's balance sheet, off-budget liabilities, guarantee liabilities, economic policy, general government finances, central government finances, balance sheets
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## Katsaus valtion taloudellisiin vastuisiin ja riskeihin, syksy 2021

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<b>Tekijä/t Kieli</b>	Sami Napari, Sakari Lehtiö, Markku Puumalainen, Jukka Hytönen, Johannes Räsänen englanti	<b>Sivumäärä</b>	92
<b>Tiivistelmä</b>	<p>Valtion vastuut ovat olleet pitkään kasvu-uralla. Ne ovat kasvaneet paitsi nimellisarvoisesti myös suhteessa talouden kokoon. Koronaviruspandemia on osaltaan vielä voimistanut tätä pidemmän aikavälin kehitystä.</p> <p>Valtionvelka oli vielä finanssikriisin kynnyksellä vuonna 2008 54 miljardia euroa, mikä oli noin 28 prosenttia suhteessa kokonaistuotantoon. Vuoden 2020 lopussa velan määrä oli jo noin 125 miljardia euroa ja lähes 53 prosenttia suhteessa bkt:hen. Euromääräinen velka on siis yli kaksinkertaistunut reilussa vuosikymmenessä ja myös suhteellinen velka on lähes kaksinkertaistunut.</p> <p>Velan tavoin myös valtion ehdolliset vastuut ovat olleet pitkään voimakkaassa kasvussa. Viime vuosikymmenen alussa valtion takaus- ja takuuvastuut olivat noin 23 miljardia euroa eli noin 12 prosenttia suhteessa bkt:hen. Vuoden 2020 lopussa vastuut olivat jo 62 miljardia euroa, mikä oli yli 26 prosenttia suhteessa kokonaistuotantoon.</p> <p>Vastuiden voimakas ja pitkään jatkunut kasvu yhdistettynä maltillisiin pidemmän aikavälin kasvunäkymiin herättää huolta valtion riskinkantokyvystä. Tulevina vuosina olisikin tärkeää vahvistaa julkisen talouden kestävyyttä, jotta Suomella olisi valmiudet kohdata uusi mahdollinen negatiivinen talouden sokki.</p>		
<b>Asiasanat</b>	valtion tase, talousarvion ulkopuoliset vastuut, takausvastuut, talouspolitiikka, julkinen talous, valtiontalous, taseet		
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## Översikt över statens finansiella åtaganden och risker, hösten 2021

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<b>Språk</b>	engelska	<b>Sidantal</b>	92
<b>Referat</b>	<p>Statens ansvarsförbindelser har ökat redan under en längre tid. De har ökat förutom nominellt också i förhållande till ekonomins storlek. Covid-19-pandemin har för sin del stärkt denna långsiktiga utveckling ytterligare.</p> <p>Statsskulden var 54 miljarder euro före finanskrisen år 2008, vilket var cirka 28 procent i förhållande till totalproduktionen. I slutet av 2020 uppgick skulden redan till cirka 125 miljarder och nästan 53 procent i förhållande till BNP. Skuldbeloppet i euro har alltså mer än fördubblats under ett drygt årtionde och även den relativa skulden har nästan fördubblats.</p> <p>I likhet med skulden har också statens villkorade åtaganden ökat kraftigt under en längre tid. I början av förra årtiondet uppgick statens borgensförbindelser och garantiansvar till cirka 23 miljarder euro, dvs. cirka 12 procent i förhållande till BNP. I slutet av 2020 uppgick åtagandena redan till ca 62 miljarder euro, vilket är ca 26 procent i förhållande till bruttonationalprodukten.</p> <p>Den kraftiga och långvariga ökningen av åtagandena i kombination med återhållsamma tillväxtutsikter på längre sikt väcker oro för statens risktäckningskapacitet. Under de kommande åren är det därför viktigt att stärka den offentliga ekonomins hållbarhet för att Finland ska kunna klara av eventuella nya negativa ekonomiska chocker.</p>		
<b>Nyckelord</b>	statens balansräkning, ansvar utanför budgeten, borgensansvar, finanspolitik, offentlig ekonomi, statsfinanserna, balansen		
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## SUMMARY

The economic landscape has been strongly shaped by the COVID-19 pandemic over the past two years. Since the outbreak of the pandemic in spring 2020, Finland and the rest of the world have had to resort to wide-ranging restrictive measures to curb the spread of coronavirus. This has resulted in major changes in the situational picture concerning the economy. Economic forecasts produced in the early stages of the crisis turned out, however, to be bleaker than actual development. For example, in October 2020 the Ministry of Finance still projected a 4.5% decline in GDP for 2020, whereas according to current data the economy only contracted 2.8%. Nevertheless, this was the biggest decline since 2009.

The rollout of vaccinations has enabled a gradual relaxation of restrictions which, coupled with the strong recovery of export demand, has resulted in a rapid recovery of economic growth and an improved outlook. According to the most recent forecasts, economic growth would be in the 2%–3% range this year and next, and total economic activity would reach the pre-pandemic level already by the end of this year.

Although current data indicates that the economy is recovering quite rapidly from the plight caused by the coronavirus crisis, the crisis has still had major impacts on the development of central government liabilities and risk position. The significant contraction of GDP in 2020 and the multiple support measures taken by the public authorities to alleviate the adverse effects of the pandemic in various sectors of the economy have resulted in a strong increase in central government borrowing. At year-end 2019, central government debt totalled just over EUR 106 billion and the debt-to-GDP ratio was 44.3%. At the end of last year, the figures had already risen to EUR 125 billion and almost 53% respectively.

It is important to note that the COVID-19 pandemic is not the only factor underlying the growth in direct liabilities of central government. Instead, there is a much longer-term trend at play in this respect. Central government debt has been increasing considerably both in terms of nominal value and relative to GDP for more than a decade. In 2008, central government debt amounted to around EUR 54 billion or around 28% of GDP. This means that debt has more than doubled over the past 13 years in terms of euros and also almost doubled relative to GDP.

Central government risk position and capacity to bear negative macroeconomic shocks are also affected by contingent liabilities of central government. These, too, have long been on an upward trajectory. At the beginning of last decade, central government guarantee liabilities amounted to around EUR 23 billion or around 12% relative to GDP. At the end of last year, guarantee liabilities totalled EUR 62 billion or more than 26% relative to GDP.

The largest contingent liabilities and strongest growth in liabilities are associated with the operations of the state-owned specialised financing company, Finnvera, and with housing financing. As regards Finnvera, central government liabilities in effect totalled EUR 31.6 billion at year-end 2020<sup>1</sup>, while the corresponding figure for the Housing Fund of Finland was EUR 16.4 billion. In total, liabilities relating to these have increased by around EUR 27 billion over the past ten years.

Risks associated with central government guarantee liabilities are increased by the fact that these liabilities are highly concentrated in certain industries and enterprises. The risks involved in this have become visible in the context of the COVID-19 pandemic. The cruise industry is among the industries that have been hit hardest by COVID-19, with the pandemic in practice fully suspending cruise operations for a while. The cruise industry accounts for a significant share of Finnvera's export financing liabilities, and this was reflected in Finnvera Group's financial performance and resulted in the Group reporting a loss of EUR 748 million for 2020.

The overall risk position of central government is also affected by implicit liabilities. These are not legally binding on central government but, due to political and societal factors, central government is nevertheless expected to bear ultimate responsibility for them. One of the key implicit liabilities pertains to the banking sector. The history of banking crises has shown that the societal costs of severe banking crises are, or they are considered to be, so high that states have been forced to take support measures to ensure the continuity of financial services.

Finnish banks fared well through 2020, and their financial performance has been strong. The feared wave of enterprise bankruptcies did not materialise, and non-performing loans have remained at a moderate level. Stress tests conducted by the European Banking Authority (EBA) also show that the solvency of Finnish banks is good and the banks could even withstand a major decline in the operating environment.

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<sup>1</sup> This figure also includes central government guarantees for export credit funding. The credit risk arising from export credits is covered by an export credit guarantee, which means central government liability in this respect is not doubled but could be realised as a result of various factors and at different times.

Another key implicit liability of central government is related to local government. Finnish municipalities have broad autonomy and are responsible for their own financial liabilities. Municipalities are, however, part of general government finances. This is why any extensive problems in local government finances might be reflected in central government finances, too.

The amount of local government debt has increased considerably in recent years and totalled around EUR 19 billion at year-end 2020 — an almost fivefold increase over a period of 20 years. By contrast, the changes seen in municipalities' guarantee portfolios have been slighter over the past few years, with the total of municipal guarantees having remained below EUR 10 billion.

The long-term increase in central government liabilities can be said to have weakened the risk-bearing capacity of central government. One way of examining this is to conduct a stress test for general government finances. The stress test carried out for this overview is based on the weak economic growth scenario in accordance with the June macroeconomic projection of the European Central Bank (ECB). The scenario for financial market developments used by the EBA in its stress tests for banks was also utilised.

The stress test assumes that the coronavirus pandemic worsens again during 2021. The pandemic and the measures taken to contain its spread weaken economic growth, increase unemployment and cause contractions in financial asset price valuations. In this scenario, Finland's economic growth over the three-year period is just under 4% below the baseline.

Already difficult at the outset, the status of general government finances in Finland shows a considerable further decline in the stress scenario. Deficit increases by around 1.8 percentage points relative to GDP when compared with the baseline. The debt-to-GDP ratio rises to almost 78% — around 5 percentage points above the baseline.

Central government assets and their development are also of significance with regard to economic crises and central government capacity to bear risks. Central government financial assets totalled more than EUR 119 billion at year-end 2020. The stress test examined the impacts of uncertainties in the financial market and of price movements on central government financial assets and net debt position. In the scenario employed, central government financial assets decrease by more than EUR 33 billion in 2021 due to plummeting share prices. Only a partial rebound in prices is seen towards the end of the period examined, with central government financial assets still remaining around EUR 25 billion below the baseline in 2023.

The decrease in financial asset values is also reflected in central government net debt position. Central government net debt was still negative before the financial crisis but since then has increased to around 15%–20% of GDP. The stress test indicates a further decline in net debt position as the net debt-to-GDP ratio increases to 30%.

The scenario rules out any need for capital injections for financial institutions. The debt crisis in the euro area is also not expected to be reignited and no liabilities under the financial assistance facilities for euro area countries are expected to be realised for payment, either. However, the possibility of such tail risks cannot be fully excluded. The negative impacts of any more extensive banking or debt crisis on general government finances would be an order of magnitude greater than in the stress test scenario used in this overview.

In recent years, the Ministry of Finance Overviews of Central Government Risks and Liabilities have raised concerns about the strong increase in central government liabilities and the weakening of risk-bearing capacity. This concern has increased further due to the coronavirus crisis and its repercussions. In the years ahead, it would therefore be important to strengthen the sustainability of general government finances to ensure Finland's sufficient capacity to face any new negative economic shock.

# 1 Introduction

Central government liabilities have long been on an upward trajectory. The situation has also been exacerbated by the COVID-19 pandemic and its repercussions. At year-end 2020, central government debt totalled around EUR 125 billion or almost 53% relative to GDP. Just before the financial crisis in 2008, central government debt amounted to around EUR 54 billion or around 28% of GDP. This means that, over the past 13 years, debt has more than doubled in terms of euros and also almost doubled relative to GDP.

At the same time, central government liabilities have increased due to a significant increase in central government guarantees. During last decade, guarantee liabilities increased by almost EUR 40 billion, whereas at year-end 2020 the guarantee portfolio totalled EUR 62 billion or over 26% in ratio to GDP.

With regard to the overall risk position of central government, implicit contingent liabilities may also be significant. These are not as such legally binding on central government but, due to societal or political factors, central government may have to bear ultimate responsibility for them. One of the key implicit liabilities pertains to local government. Although responsible for their own financial liabilities, municipalities are part of general government finances. This is why any extensive problems in local government finances might be reflected in one way or another in central government finances, too.

As is the case with central government, municipal indebtedness has also increased considerably in recent years. Local government debt totalled around EUR 19 billion at year-end 2020, with the amount having increased almost fivefold over the past two decades. Municipalities also had guarantees exceeding EUR 8 billion at the end of last year, but the changes in the municipalities' guarantee portfolio have been minor in recent years.

As a whole, the changes in the amount of central government liabilities have been significant. This is problematic concerning central government risk-bearing capacity, especially as at the same time the longer-term outlook for economic growth is rather moderate. The growth outlook is weakened by well-known factors, namely the shrinking of the labour force and weak productivity development.

This report also provides an overview of the development of not only the liabilities but also of the financial assets of central government. Efforts have been made to use the most

recent data possible to enable the better estimation of the impacts of the coronavirus crisis, too, on central government risk position.

The structure of the report is as follows. Chapter 2 describes the overall operating environment of the economy and the related risks. Chapter 3 focuses on central government financial assets. Chapter 4 discusses government liabilities, starting from direct financial liabilities. Chapter 5 focuses on contingent liabilities of central government, with explicit contingent liabilities discussed first. These are legally binding on central government. The remaining part of the chapter concentrates on implicit contingent liabilities. The last chapter of the report gives the results of the stress test of general government finances, which examines the impacts of a sudden economic downturn on general government key figures.

## 2 Operating environment

- The global economy has recovered from the coronavirus crisis faster than initially expected. The International Monetary Fund (IMF) projects rapid growth in the global economy for this year and next. There are, however, major differences in recovery between countries and economic sectors, and the IMF foresees increased uncertainty in near-term prospects. Inflation has accelerated globally to levels not seen for a long time. Inflation accelerating clearly above the targets set by central banks is a key policy challenge for the near future.
- Detected in South Africa in late November, the new Omicron variant of coronavirus has caused unrest in the financial market, and many countries have imposed travel restrictions to prevent the spread of the virus. It is, however, still too early to speculate on the impacts of the new virus variant on the economic outlook.
- The Finnish economy pulled through 2020 with less damage than expected, with the GDP contracting by 2.8%. Recovery from the pandemic has been rapid, and economic growth is expected to exceed 3% during the current year. Growth is projected to remain strong next year, too, and then to settle at 1%–2%.
- Financial markets recovered rapidly from the market turmoil caused by the COVID-19 pandemic during the first months of the crisis, and appetite for risk made a major comeback in the markets. The year 2021 has seen key stock market indices break all-time price records in the United States, and European share prices have also risen sharply due to good business performance.
- The very light financing conditions maintained by central banks have been reflected not only in stock markets but also in the price development of other assets. Prices in the housing and commercial property markets as well as the prices of higher-risk corporate bonds have been increasing for many years. At the same time, there has been a strong increase in the indebtedness of households, enterprises and states, exposing them to the risk of rising interest rates.

The economic operating environment and its changes affect not only policy decisions but also the direct or indirect risks associated with central government assets and liabilities.

The operating environment outlined in the risk review for central government asset management comprises the macroeconomy and the financial market.

## 2.1 Recovery of the economy from the COVID-19 crisis

At the time of writing this overview (in November 2021), there is no reliable assessment available on the future development of the pandemic. Before the pandemic, including its new virus variants, is fully brought under control globally, it will influence economic development in ways that are difficult to anticipate. The prevailing view is, however, that, as progress is made with vaccine rollouts, the disease will gradually become less severe and restrictions can be eased. However, the possibility cannot be ruled out that, in the future too, the pandemic may occur in waves followed by economic restrictions.

In October 2021, the International Monetary Fund (IMF) forecast<sup>2</sup> global economic growth of 5.9% for 2021 and 4.9% for 2022. The IMF estimates that in 2020 global economic activity contracted by 3.2%, which was highly exceptional. According to the IMF, the recovery of economies from the coronavirus crisis is on a positive track, but concern is caused by the fact that the rate of recovery threatens to be affected in developing countries by the slow vaccine rollouts and by new virus mutations. Recovery in advanced economies is supported by speedy rollout of vaccines and sizeable public support for enterprises and households.<sup>3</sup> The latest OECD Economic Outlook also paid attention to the striking imbalances in recovery and vaccinations across countries.<sup>4</sup> Progress in recovery has also been slowed by the shortage of components caused by disruptions in global supply chains that is affecting certain sectors (such as the car and electronics industries) of advanced economies.

International forecasters (IMF, OECD, ECB) provide very similar forecast profiles for Finland's most important export markets in Europe and North America for the next few

<sup>2</sup> World Economic Outlook, October 2021.

<sup>3</sup> According to data compiled by the Bank of Finland, the maximum scale of public COVID-19 support in the EU was around EUR 2,500 billion in 2020, equivalent to 17.5% of EU area GDP. At year-end, around EUR 1,200 billion of the maximum support was in use in various ways. There is major variation from one country to another. <https://www.eurojatalous.fi/fi/2021/artikkelit/kansallisina-koronatukina-myonnettiin-kaikkiaan-n-1-300-miljardia-euroa-euroopassa-vuonna-2020/>

<sup>4</sup> OECD Economic Outlook, May 2021. According to sources including the Our World in Data database maintained by Oxford University, around 40% of the world's population has received two doses but, for example, in Africa the share of people vaccinated against COVID-19 is only just over 6% and in low-income countries only 2.3%. In high-income countries the figure is higher than 66%. Source: <https://ourworldindata.org/>.



years: brisk growth for this year and next but slowing from 2023 onwards. The forecasts are based on assumptions of fiscal and monetary policy support continuing, progress being made in vaccine rollouts and COVID-19 restrictions being relaxed. In Europe, the economic development of markets important for Finnish exports is also boosted by the substantial European Union Recovery Instrument (EURI).

In 2020, the Finnish economy contracted by 2.8%, which was clearly less than expected but still the deepest dip since 2009, the grimmest year of the financial crisis. In spring 2020, following the onset of the COVID-19 pandemic and the introduction of various restrictions, the economic outlook was extremely bleak. Projections of economic decline for 2020 were still moving around the 5%–6% range in the middle of the summer. With progress made in vaccine rollout, the resulting relaxation of restrictions and rekindling of demand have helped the economy to recover, and total economic activity is projected to pick up to the pre-COVID-19 crisis level this year. After the financial crisis, a similar process took roughly ten years. According to the latest forecasts, economic growth in 2021 and 2022 would settle at 2%–3% and then slow to 1%–2%.

There have been major differences between sectors of the Finnish economy, with the service industries having suffered clearly more than enterprises in the manufacturing industries from the impacts of restrictions imposed due to the COVID-19 pandemic. There has been a great deal of variation between industries within the service sector, too. Layoffs and public support have enabled enterprises at least so far to avoid the feared wave of bankruptcies that could in the worst-case scenario have resulted in a sharp rise in unemployment. A role has also been played by the temporary amendments made to bankruptcy regulations and by the loan repayment holidays granted by banks. The fact that enterprises and households have so far pulled through the coronavirus crisis with relatively little damage has helped to keep banks' credit losses low and profitability sound, which has enabled the continuation of finance provision.

Public support measures have been very sizeable at the global level and have helped enterprises and households to survive through the crisis. The measures have, however, resulted in a rapid increase in public debt. The IMF projects that the average debt-to-GDP ratio in the euro area will rise to 97% this year (around 84% in 2019), with Greece projected to have the highest debt-to-GDP (211%) this year and with Italy's debt-to-GDP also forecast to increase to 156% before taking a slow downward trajectory. The level of indebtedness and how to deal with it, particularly if interest rates rise, is one of the big challenges facing economic policy-makers in the years ahead.

The acceleration of inflation due to the strong demand recovery and the problems seen in supply has been particularly rapid in the United States. If, as forecast by the IMF, the average inflation rate reaches 4.3% this year, that would be the highest level since

1991. Inflation in the euro area also exceeded 4% in October and is projected to rise on average above 2% this year, pushed up by factors including the rapid increases in energy prices. Accelerating inflation is a new feature in the operating environment to which economic actors should adapt, but the rocketing prices of energy and in particular gas, which is widely used in heating in Europe, has caused concern and political debate, too. In the United States, accelerating inflation has also been reflected since the summer in consumer confidence, which has declined clearly as regards expectations in particular. This phenomenon is not yet detectable in the euro area or EU Member States. A key issue here is how long the period of accelerated inflation persists and at which level inflation expectations settle.

## 2.2 Financial markets

In financial markets, risk appetite and valuation levels have fluctuated in line with developments in the COVID-19 pandemic since early 2020. In February–March 2020, market actors woke up to the threat posed by the virus, which prompted them to rapidly flee the risk and resulted in stock market prices plummeting and higher-risk fixed-income investment yields jumping up. Certain industries, such as tourism and restaurants, saw their share prices downright collapse.<sup>5</sup> The market scare did, however, mostly wear off by the autumn, which is when key stock market indices in the United States and Europe had returned to pre-COVID-19-shock levels.

After that, stock market indices have continued to climb. During 2021 (up until 15 November), the S&P 500 Index has risen by around 25% and the Eurostoxx 50 by 21%. Good financial performance of enterprises during past quarters, the widely shared view of the coronavirus crisis being temporary (vaccinations) and the continuing support measures of central banks have pulled asset prices up, although cautions have also been voiced for quite some time about the sustainability of valuations.

The US and European central banks have continued their monetary policy supporting financing conditions of economies. Key interest rates have remained at zero, securities purchases have continued uninterrupted, and banks have received very cheap finance from central banks.

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<sup>5</sup> For example, American cruise shares sank by 80%–85% during February and March compared with late-2019 prices. Prices have in part recovered but still remain 40%–55% below their pre-COVID-19 level.

In early November 2021, the Federal Reserve announced the gradual tightening of monetary policy (tapering), effective immediately. The asset purchase programme will be reduced by USD 15 billion a month, putting it on course to end in June 2022. This would be followed by a policy interest rate hike provided that grounds for that exist at the time. Tapering had been anticipated by the market ever since late summer 2021, and the 12-month LIBOR as well as longer-term interest rates of federal bonds have climbed by tens of basis points.

The ECB has not yet provided any details of the use of the securities purchase programme next year. The pandemic emergency purchase programme (PEPP) ends in March 2022, but the other purchase programmes are to continue. Christine Lagarde, President of the ECB, stated at the hearing of the European Parliament on 15 November 2021 that any rise of policy interest rates is unlikely in 2022.<sup>6</sup> At its meeting on 2 November 2021, the Bank of England maintained Bank Rate at 0.1% (confounding expectations of an increase) and decided to continue its securities purchases, maintaining the total target stock of corporate and government bond purchases at GBP 895 billion.

Monetary policy measures of central banks have undoubtedly maintained market stability, but at the same time they have become a dominant market actor and a key driver that, with the COVID-19 crisis easing, is more strongly directing market movements.

The key role of the euro system in the government bond market of the euro area is illustrated by its 30%–40% market share of the long-term bonds of euro area countries. The European System of Central Banks (ESCB) is a significant actor in the corporate bond market, too. The slightest indications of changes in the operating model are quickly reflected in changes in expectations and prices in the market. It is obvious that any changes in monetary policy stance must be made with caution and following careful preparation of the market in advance.

Alongside stock markets, the very light financing conditions have unwound as multiple years of price increases in the housing and commercial property markets and as decreases in yields from higher-risk corporate bonds (and therefore as increases in loan prices). Financial assets have also moved increasingly towards illiquid private equity and hedge funds.

The downside of monetary stimulus policies and higher asset values has been the growing indebtedness throughout the economy. Debt levels of households, enterprises and states

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6 <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp211115~6fa9a12c1e.en.html>

have risen for several years, which has made the various actors of the economy more vulnerable to interest rate movements.

States are receiving finance at zero or negative interest rates. For example, the current (16 November 2021) 10-year borrowing rate of the State of Portugal, with its credit rating close to the lower limit of the investment grade category (BBB), is only 0.38%. In December 2020, Portugal's interest rate even dipped momentarily below zero. The 10-year interest rate of the country with the best credit rating – Germany – in turn is -0.24%. This means investors are willing to pay for the opportunity to hold German government bonds.

The state of the European banking system has improved during the current year, which has also been reflected in the sector's stock market index development. The EURO STOXX Banks index has risen by around 40% during the year (situation on 16 November 2021), while at the same time the blue-chip index EURO STOXX 50 is up 24%. The stronger crisis resilience of banks was also verified by the stress test organised by the European Banking Authority (EBA) and the European Central Bank (ECB) in the first half of 2021.<sup>7</sup> The test involved 50 large banks from 15 EU countries, and only one (Monte dei Paschi di Siena) did not have the capital required to cover losses arising from a prolonged crisis. Stress tests concerning small and medium-sized banks were also conducted by national banking supervisors, but there are no detailed public reports available on these.

It should, however, be noted that the full impacts of the coronavirus crisis are yet to be seen. The amount of banks' non-performing loans which, considering the circumstances, has remained exceptionally low and even decreased, is likely to increase as deferred repayments of loans fall due and government guarantees on loans taken out by banks' corporate clients expire. The stress test indicates that banks appear at least on average to be prepared for increases in bad loans. Provisions for losses must, however, be increased if the volume of bad loans increases, which would reduce the already rather weak profitability of European banks.

## 2.3 Risks in the operating environment

Risks in the operating environment of central government assets and liabilities are not independent of each other. Instead, they constitute a complex risk space where everything affects everything. Economic growth, inflation and the functioning of the financial system as well as the central banks are interconnected in the financial market through expectations, asset prices and risks. Coronavirus hit the system from outside

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7 <https://www.eba.europa.eu/eba-publishes-results-its-2021-eu-wide-stress-test>

and caused a shock, whereas the financial crisis is an example of an internal crisis of the system. Recovery from the latter has taken a considerably long period of time. In fact, recovery was still in part incomplete when the coronavirus crisis broke out.

Overvaluation (bubbles) in the market can usually only be substantiated afterwards, if ever. Sudden downward corrections in prices do not necessarily always mean the bursting of a bubble. The key issue is how well investors have prepared for changes in market conditions. An interest rate hike is likely to be seen over some timeframe, as is a decline in economic growth and in the financial performance of enterprises. The key issue is whether market actors have to adapt to changes quickly, in which case the likelihood of various overreactions increases, or gradually, which is when overreactions could at least mostly be avoided.

If developments in the next few years follow the latest forecasts, economic growth will recover steadily, the acceleration of inflation will be temporary, and employment will develop positively. Household, enterprise, state and bank balance sheets will strengthen. Thanks to positive development in economic fundamentals, central banks will be able to gradually reduce their support measures and eventually break away from zero interest rates. The interest rate level will start a gradual rise and the yield curve will become steeper. Equity and interest rate market valuation levels will stabilise and major market swings will be avoided. Although differences can still be seen between European countries, all of them will be able to pull out of the crisis at their own pace. A long period of adaptation of debt levels will commence.

There are obvious risks involved in the favourable scenario. Economic growth may exceed projections, which involves the risk of not only intermediate input price hikes but also the tightening of the labour market, resulting in accelerating wage increases and changes in inflation expectations, which would increase market uncertainty about the direction of monetary policy.

This could cause major fluctuations in asset prices and occasional/local problems for highly leveraged investors, with these problems spreading due to internal linkages within markets to also other financial sector participants (funds, insurance companies). Central banks would have to continue their purchase programmes to prevent long-term interest rates from rising to unsustainable levels. Normalisation of monetary policy, with central banks gradually withdrawing from the market, would be put off. Higher financing costs and a more blurred outlook would increase caution, which would dampen consumption and investment.

The other key risk is also driven by macroeconomic factors. New virus variants, with the most recent example being the Omicron variant detected in South Africa, may begin to

spread, which might force the authorities to introduce new restrictions. Coupled with a drop in consumer and business confidence, this would reduce economic activity. The tools available for stimulating recovery are, however, already mostly in use and the question is how monetary and fiscal policy could in this situation be employed to support growth. A new serious pandemic wave and, in particular any reintroduction of restrictions to curb it, could also cause broad social discontent.

The impacts of a worsening of the coronavirus situation and any related new restrictions are examined in Chapter 6 below, which presents the results of the stress scenario.

### 3 Central government financial assets

- Central government financial assets have increased strongly in recent years. According to the financial accounts, central government financial assets totalled EUR 98.2 billion at year-end 2020, up almost 20% year on year. The reasons underlying this include the strong development in stock markets.
- The robust mood of stock markets was also reflected in the development of the size of the State Pension Fund, which grew by almost EUR 400 million last year and was around EUR 21 billion at year-end 2020.
- Central government cash funds have been increased due to the uncertainty caused by the COVID-19 pandemic. In late 2020, the cash assets administered by the State Treasury totalled EUR 7.6 billion or 6% in relation to central government debt. The change from the pre-pandemic period is considerable. For example, at year-end 2019, the figures were EUR 2.2 billion and 2.1% respectively.

In this overview, financial assets include central government cash assets, major loan receivables, fixed-income investments, shares and other investments. The scope of the review is determined by the liquidity perspective and on the basis of the amount of the assets.

Table 1 sums up central government financial assets at year-ends 2019 and 2020 and during the second quarter of 2021. Due to the uncertainties triggered by the coronavirus pandemic, in spring 2020 central government increased its cash assets considerably (for more details on central government cash assets see section 3.1) and cash assets have also been kept at a higher level than usual since then. At year-end 2020, the cash assets administered by the State Treasury totalled around EUR 7.6 billion, up clearly on the pre-pandemic level when central government liquid cash assets typically totalled EUR 2–3 billion at year end.

The plummeting of the stock markets in the early weeks of the crisis had a negative effect on central government share assets and assets of the State Pension Fund, although the situation in these respects improved quickly. Stock market development has been highly favourable over the past year, and central government share assets far exceeded their pre-COVID-19 crisis levels already at the end of 2020. All in all, according to Statistics Finland financial accounts, in the second quarter of 2021 central government financial assets

totalled around EUR 99 billion and around EUR 122 billion when also taking the State Pension Fund into account.

Only some of the central government financial assets shown in Table 1 can be realised relatively quickly to finance central government liabilities and activities. In addition to deposits, such assets mainly comprise some of central government investment assets.

**Table 1.** Central government financial assets

Central government financial assets	2019 EUR million	2020 EUR million	30 June 2021 EUR million
<b>Total deposits</b>	<b>3,061</b>	<b>8,908</b>	<b>10,593</b>
• State Treasury cash assets	2,200	7,550	9,300
• Other deposits	861	1,358	1,293
<b>Total loans</b>	<b>13,061</b>	<b>12,889</b>	<b>13,120</b>
• Arava	3,700	3,240	3,006
• Business Finland	1,046	1,126	1,157
• Loan to Greece under programme 1	1,005	992	977
• EFSF*	3,401	3,401	3,401
• Other loans	3,909	4,130	4,579
<b>Shares and participations</b>	<b>55,605</b>	<b>65,796</b>	<b>66,065</b>
• Listed shares	28,859	37,605	37,882
• Unlisted shares and other participations	23,430	24,834	23,934
• Fund units	3,316	3,357	4,249
<b>Swaps and other derivatives</b>	<b>6,351</b>	<b>6,736</b>	<b>5,033</b>
<b>Other receivables</b>	<b>3,817</b>	<b>3,919</b>	<b>4,541</b>
<b>State Pension Fund</b>	<b>20,588</b>	<b>20,964</b>	<b>22,666</b>
<b>Total assets</b>	<b>102,483</b>	<b>119,212</b>	<b>122,018</b>
Assets excluding State Pension Fund	81,895	98,248	99,352

\* Finland's imputed share of the loans granted by the EFSF, situation at year-ends 2019 and 2020.

Sources: Statistics Finland financial accounts, General government deficit and debts, and State Pension Fund (VER)



### 3.1 Central government cash assets

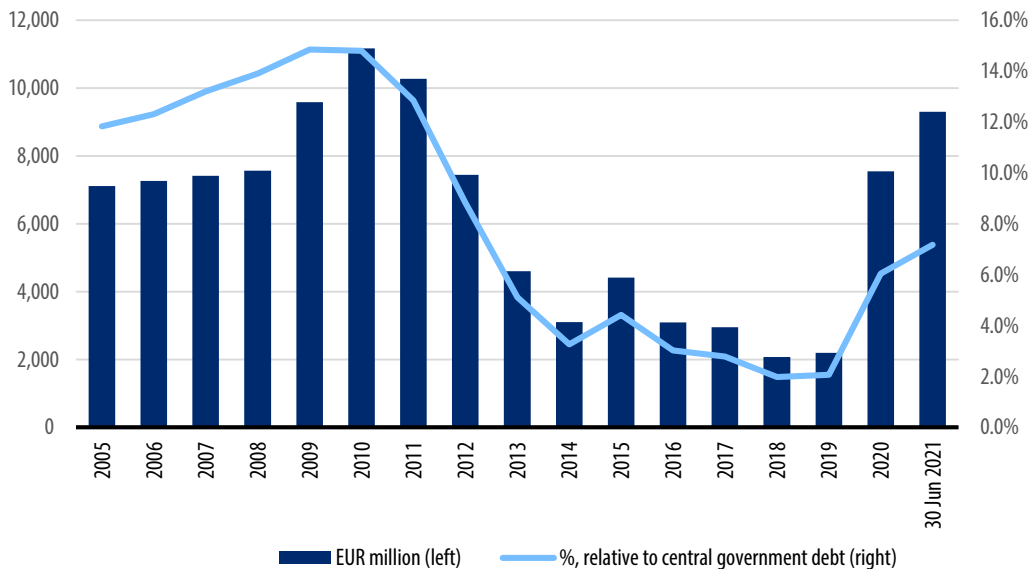
The general economic uncertainty and larger financing needs caused by the COVID-19 pandemic have been reflected significantly in the amount of central government cash assets. Central government increased its cash assets quickly in spring 2020 as the coronavirus pandemic was gaining strength, and the cash assets have remained larger than normal also after that in terms of euro as well as relative to central government debt (Figure 1).<sup>8</sup> At year-end 2019, the cash assets administered by the State Treasury amounted to EUR 2.2 billion and 2.1% in relation to central government debt. At year-end 2020, the figures were EUR 7.6 billion and 6% respectively. Over the longer term, however, the State Treasury has, on the basis of its assessment of sufficient liquidity, systematically sought to lower the amount of liquid cash reserves.

Central government is exposed to credit risk in cash asset investments and derivatives activity. This credit risk is minimised by means of diversification and by requiring high credit ratings of counterparties. Credit risk is also controlled by setting limits for maximum investment based on the credit rating of the counterparty, whereas credit risk involved in derivatives is minimised by requiring collateral securing the market value of derivative contracts.

The credit risk involved in central government cash assets and derivatives activity can be estimated to be moderate at the moment. Derivatives-related credit risks have, in practice, been eliminated by means of collateral arrangements, and the credit risk arising from cash investments is limited strongly by the key role of the Bank of Finland in the placement of liquid assets. The credit risk arising from payment-related bank deposits is reduced by their short maturity.

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<sup>8</sup> Figure 1 focuses on cash assets administered by the State Treasury, which are relevant from the perspective of central government liquidity. Ensuring central government liquidity is the most important task of cash asset management.

**Figure 1.** Development of central government cash funds

Sources: General government financial accounts; State Treasury

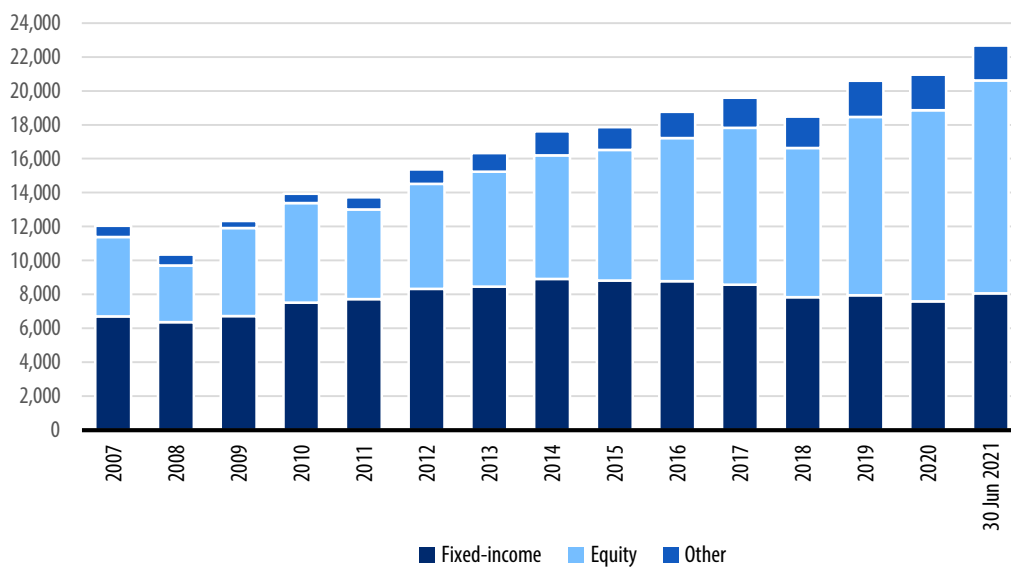
## 3.2 State Pension Fund

The State Pension Fund (VER) is an off-budget fund used to prepare for funding government employees' pension expenditure and to level out the expenditure burden of different years over time. The pension contributions of employers and employees within the scope of the central government pension scheme are remitted in full to a fund, from which a sum amounting to 40% of the annual central government pension expenditure is then transferred to the Budget every year. The assets held by VER are central government assets but managed by the fund. The costs arising from these operations are paid out of VER assets. VER's revenue comprises the pension contributions and other fees paid to the fund and the investment returns.

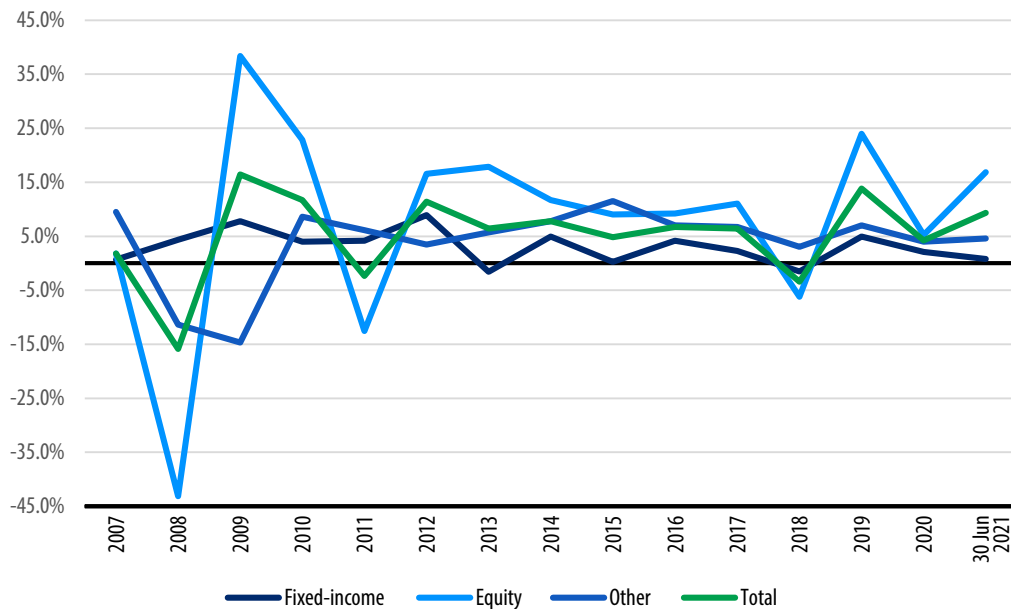
At year-end 2020, the market value of VER's investments was around EUR 21 billion (Figure 2). Of these, 36.2% were fixed-income investments and 53.8% were investments in equities. The size of the fund has grown significantly compared with the start of last decade. This is despite the fact that, since 2013, the transfer made from VER to the Budget has exceeded the pension contribution income received by VER. This has been owing to the high returns on investments made by VER. Over the past ten years, the nominal returns have averaged 5.5% and real returns 4.3%.

VER's financial assets and their returns entail market risks. The fund has taken measures to manage these risks by extensive diversification of its investment portfolio geographically and by type of securities. Regardless of extensive diversification, there has been strong fluctuation in return between years (Figure 3). This fluctuation has been greatest in equity investments, and the large weight of equity investments in the investment portfolio is also reflected in the variability of returns in the portfolio as a whole. The greatest variability of returns is naturally seen in conjunction with larger economic crises and market turbulences, with the latest example being the COVID-19 pandemic that started in 2020. Supported by strong recovery measures, the markets did, however, pull out rapidly from the plummet seen in spring 2020, and the return on VER's investment portfolio ended up being clearly positive (4.0%) for last year, too.

**Figure 2.** State Pension Fund's investment assets, EUR million



Source: State Pension Fund (VER)

**Figure 3.** Annual returns on State Pension Fund's investment activity

Source: State Pension Fund (VER)

### 3.3 Other state holdings in listed companies

The market value of state holdings (including direct state holdings and those of Solidium Oy) in listed companies was around EUR 37.4 billion at year-end 2020. At year-end 2020, the State of Finland had direct holdings in four listed companies (Altia Corporation, Finnair Plc, Fortum Corporation and Neste Corporation). The holdings in Finnair, Fortum and Neste are of strategic interest for central government.

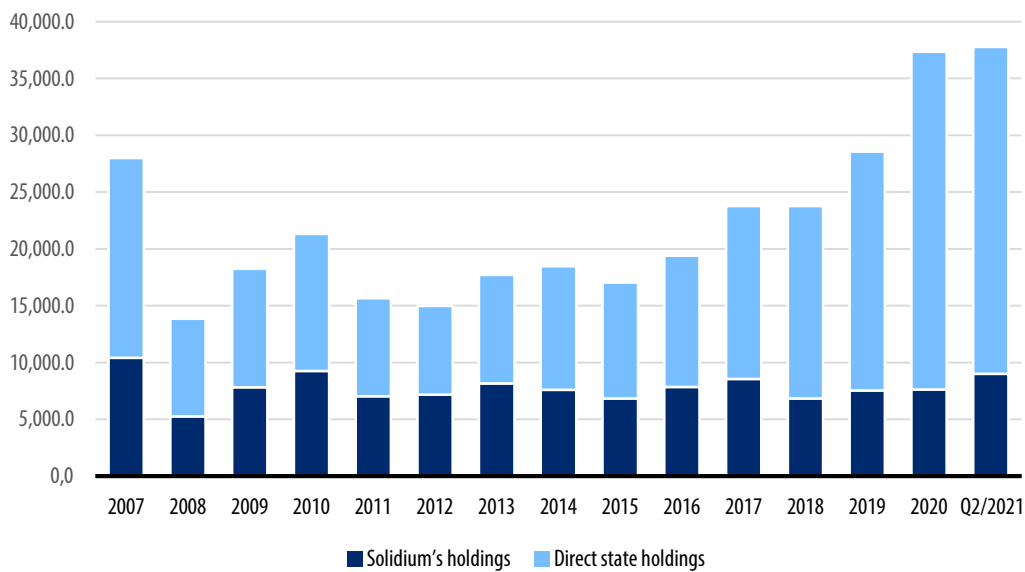
The state also has indirect holdings in listed companies through its investment company Solidium Oy. Solidium's portfolio had a market value of around EUR 7.6 billion at year-end 2020.

The state's holdings in listed companies entail a price risk, with the value of the portfolio having seen a great deal of fluctuation between years (Figure 4).<sup>9</sup> The strong market movements caused by the COVID-19 pandemic cut the market value of the companies

<sup>9</sup> A comparison between the years does not provide a direct indication of the price risk as it does not take the purchasing or selling of shares into account. The figures also include the Neste shares held by the Finnish Climate Fund.

directly owned by the state by almost 40% in spring 2020. As stated above, however, the market recovered quickly and at year-end 2020 the value of state holdings in listed companies was almost EUR 9 billion higher than at year-end 2019.

**Figure 4.** Changes in the value of state holdings in listed companies, EUR million



Source: Prime Minister's Office

### 3.4 Loan receivables of the Housing Fund of Finland

The loan receivables of the Housing Fund of Finland comprise Arava loans granted for state-subsidised housing financing. Most of these loans have been granted to rental housing and right-of-occupancy housing corporations. The maximum loan period for Arava loans is 45 years. No new loans have been granted since 2007, which is why the loan portfolio of the Housing Fund of Finland has contracted significantly (Figure 5). State subsidies for housing financing are currently granted as interest subsidies and as guarantees for loans issued by credit institutions, which are discussed in section 5.1.2.

At year-end 2020, the loan receivables of the Housing Fund of Finland totalled EUR 3.2 billion, while the guarantee portfolio amounted to EUR 16.4 billion, which means that the housing financing liabilities totalled EUR 19.6 billion. At the end of June 2021, the loan receivables totalled EUR 3.0 billion and the guarantee portfolio amounted to EUR 16.9 billion, with the housing financing liabilities totalling EUR 19.9 billion. From the

perspective of credit risk, both direct and indirect financing liabilities leave the central government in the same position.<sup>10</sup> In both cases, central government incurs a cost from a customer's insolvency if payments obtained by realising the collateral are not sufficient to cover the unpaid loans. Risk management of direct and indirect lending is often also interlinked, as a significant share of social housing stock operators have both direct and indirect state-subsidised financing.

There are several reasons for the credit risk associated with Arava loan receivables. Long loan periods and tail-end repayment programmes mean more risks, as the loans are not repaid at the rate at which the properties are exposed to wear and tear. The need for renovation financing will arise before an adequate proportion of the construction loans has been repaid. The highest external risk arising from the loan receivables is associated with areas suffering from depopulation where declining occupancy rates cause payment problems to rental housing corporations.

Of the loan receivables, 28% or around EUR 850 million are located in high-risk municipalities (Figure 6).<sup>11</sup> The risk content of the loan portfolio increases further as the population concentrates in a small number of growth centres.

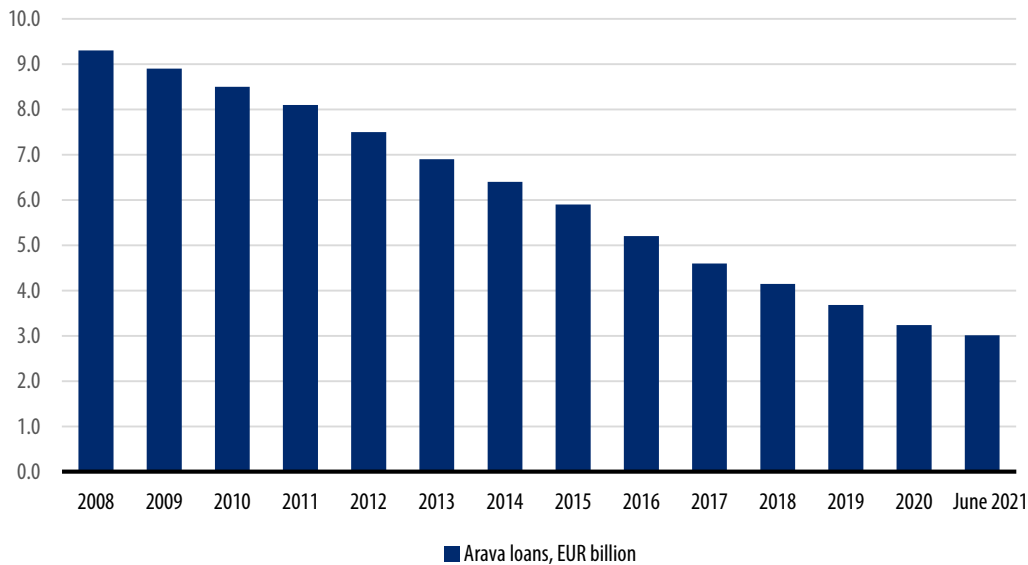
The high loan-to-value ratio (85%–95%)<sup>12</sup> also increases the risk content of the Arava loan portfolio as there is no secure collateral margin in the financing. There has been a rapid decline in property values in areas affected by depopulation, which means that the properties held as collateral do not fully cover the state's receivables in insolvencies.

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10 For a more detailed discussion of central government guarantee liabilities in housing financing, see section 5.1.2.

11 The State Treasury's risk classification model for municipalities takes into account the municipality's population projection, unemployment rate and tax revenue, vacancy rates of rental housing corporations, and late payments. Municipal mergers have resulted in municipalities that extend over increasingly large geographical areas, and a municipality in a good risk class can also contain areas with a high risk level.

12 The loan-to-value ratio of construction loans is 90%–95% of the approved building and site costs in rental housing and 85% in right-of-occupancy housing.

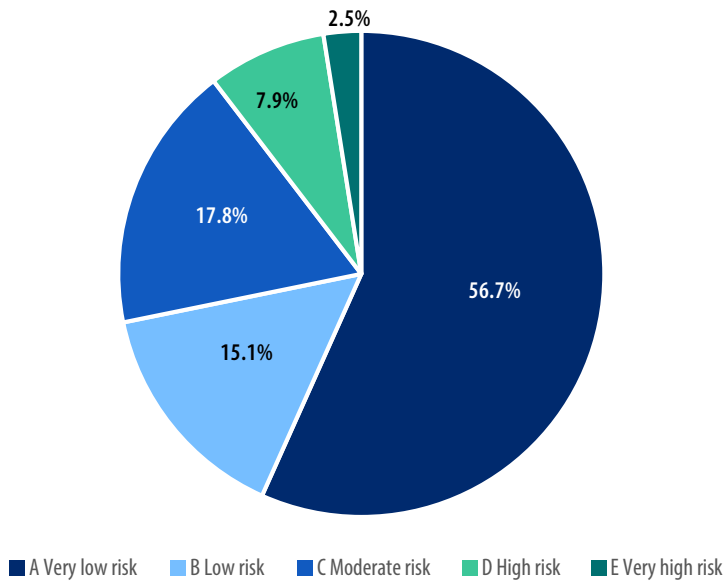
**Figure 5.** Development in loan receivables of the Housing Fund of Finland, EUR billion

Source: State Treasury

The risks associated with the loan portfolio are managed through measures including state-supported restructuring measures and financing arrangements in which the aim is to minimise losses by taking managed and systematic measures instead of initiating bankruptcy proceedings and forced sales of properties held as collateral. Legislative amendments in force since 2019 have enabled more effective further measures for reducing the financial problems and loan portfolio risks of rental housing corporations in areas affected by depopulation. These legislative amendments increased the maximum amounts of restriction and demolition remissions of debt and reduced interest rates in loan groups where the interest rate level was high in comparison with the general interest rate environment. The terms of restructuring measures were also amended so that, going forward, restructuring of loan and real property portfolios can begin at an earlier stage, which promotes proactive risk management.

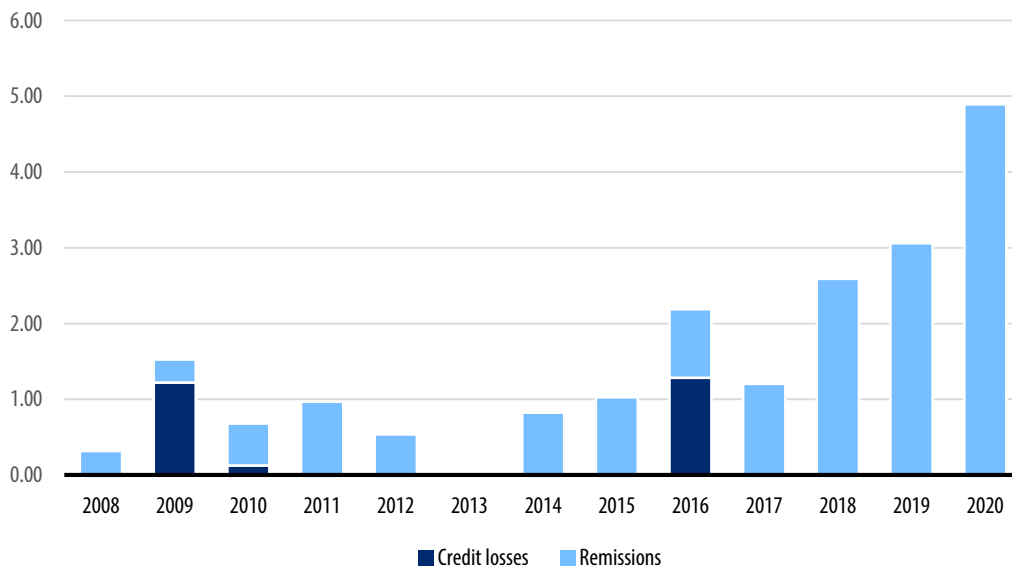
So far, the Arava loan portfolio has generated a relatively low amount of credit losses from bankruptcies and forced realisation of collateral. Losses from restriction and demolition remissions of debt associated with restructuring averaged less than EUR 1.2 million a year in the 2010s. Over the past three years, there has been a clear rise in the amount of remissions. In 2018, remissions totalled EUR 2.6 million, in 2019 EUR 3.1 million and in 2020 EUR 4.9 million. This was caused by increased problems in areas experiencing depopulation as well as by the option allowed by the 2019 legislative amendments to carry out proactive risk management measures.

**Figure 6.** Distribution of loan receivables of the Housing Fund of Finland by municipality risk class, 30 June 2021 (%)



Source: State Treasury

**Figure 7.** Credit losses and remissions related to Arava loan receivables in 2008–2020, EUR million



Source: State Treasury and 2020 annual accounts of the Housing Fund of Finland



## 3.5 Other loan receivables

In addition to financial aid granted through the EFSF, ESM and IMF, Finland and other euro area Member States have also granted bilateral loans to Greece.<sup>13</sup> Within the framework of bilateral loan arrangements, Finland has loan receivables from Greece with a nominal value of around EUR 1 billion.

Central government loan receivables associated with product development loans granted by Business Finland totalled EUR 1,126 million at year-end 2020. The loan portfolio has grown substantially over the past ten years, with the annual increase averaging just under 8%. The loan portfolio of Business Finland increased by 2.8% in the first half of 2021, totalling EUR 1,157 million at the end of June.

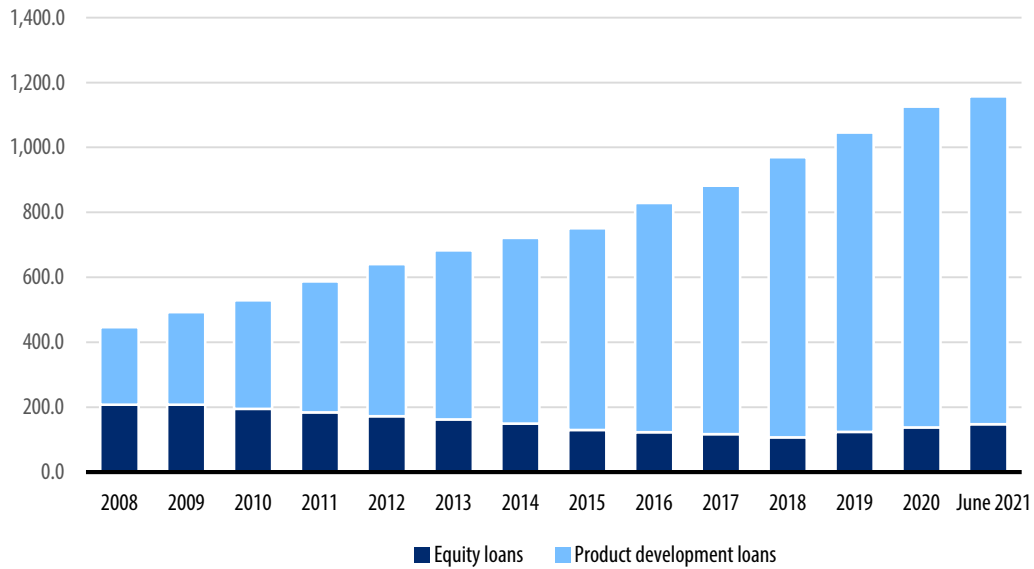
Most of the product development loans are provided as debt instruments. Following a break of several years, in 2018 Business Finland restarted the granting of equity loans, too.

Product development loans are risk loans, most of which are granted without collateral. Most of the financing goes to young growth-oriented companies that are only just launching their product development activities and have little or no revenue to cover their expenditure. General changes in economic trends are reflected rapidly in product development lending risks. Non-performing loans and bankruptcies increase rapidly during downturns and economic crises. The economic impacts of the coronavirus crisis can also be seen in the product development loan portfolio. In the first half of 2020 and 2021, the number of new bankruptcies of companies provided with product development loans was higher than during the corresponding period in earlier years. In 2010–2019, January–June saw an average of 26 new bankruptcies, whereas the figure for the corresponding period was 42 bankruptcies in 2020 and 52 in 2021.

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13 For more information (in Finnish and Swedish) about Finland's receivables and liabilities arising from the management of the euro area debt crisis, visit the Ministry of Finance website <https://vm.fi/kansainvaliset-rahoitusasiat/euroalueen-vakaus/suomen-vastuut>.

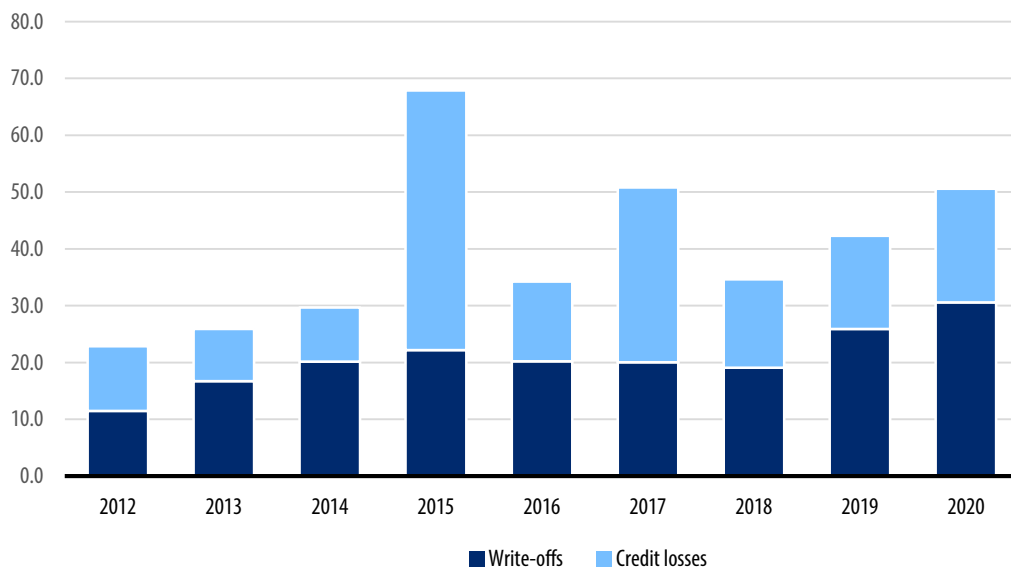
**Figure 8.** Business Finland’s product development loan portfolio, EUR million



Source: State Treasury

In 2012–2019, the credit losses recorded on product development loans granted by Business Finland averaged just under EUR 39 million annually. Credit losses arise from decisions not to collect loans and from business insolvency. In 2020, credit losses and debt write-offs totalled EUR 50.6 million.

**Figure 9.** Business Finland’s credit losses on product development loans and debt write-offs, EUR million



Source: Business Finland

## 4 Direct financial liabilities of central government

- Central government debt has been growing substantially for a long time, and the COVID-19 crisis has contributed to this indebtedness development. Debt has grown not only in absolute terms but also relative to the size of the economy.
- Central government debt currently amounts to around EUR 130 billion, and the debt-to-GDP ratio exceeded 52% at year-end 2020. The figures for 2008 were EUR 54 billion and 28% respectively.
- Thanks to the low interest rate environment, interest expenditure on debt has been decreasing despite the growing volume of central government debt. There is, however, a significant interest rate risk associated with the debt.

### 4.1 Central government debt

#### 4.1.1 Changes in central government debt

Central government debt has long been on an upward trajectory (Figure 10).<sup>14</sup> In 2008, just before the financial crisis, central government debt totalled around EUR 54 billion, whereas at year-end 2019 the figure had already exceeded EUR 106 billion. The COVID-19 crisis considerably increased the need for funding, and central government debt totalled almost EUR 125 billion at year-end 2020. Indebtedness has continued to grow this year, with the figure totalling around EUR 132 billion at the end of October.

When assessing indebtedness and related risks, it is essential to examine debt relative to GDP. If GDP grows faster than debt, there is less cause for concern about the absolute level of debt. For Finland, however, the central government debt-to-GDP ratio has also been increasing significantly for more than a decade. The central government debt-to-GDP ratio fell below 30% at the end of 2008, but then started growing rapidly during the post-crisis

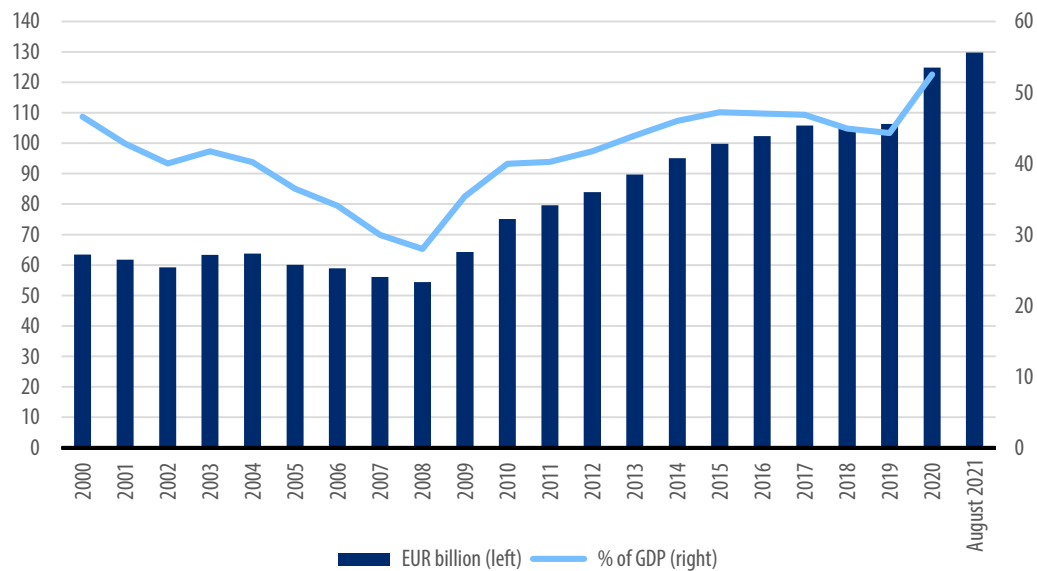
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<sup>14</sup> In this context, central government debt means on-budget and off-budget debt administered by the State Treasury. Indicators describing the debt structure are comprehensively available on such debt. Another commonly used debt concept is general government debt calculated and published by Statistics Finland.

years of weak economic growth and amounted to around 45% a decade later. The COVID-19 crisis further increased relative indebtedness, and the central government debt-to-GDP ratio exceeded 52% at year-end 2020.

Major increases in central government debt appear to be continuing during the years ahead, too. According to the General Government Fiscal Plan for 2022–2025, central government debt is expected to grow during the spending limits period by, on average, EUR 7.6 billion a year and to reach around 59% in ratio to GDP.

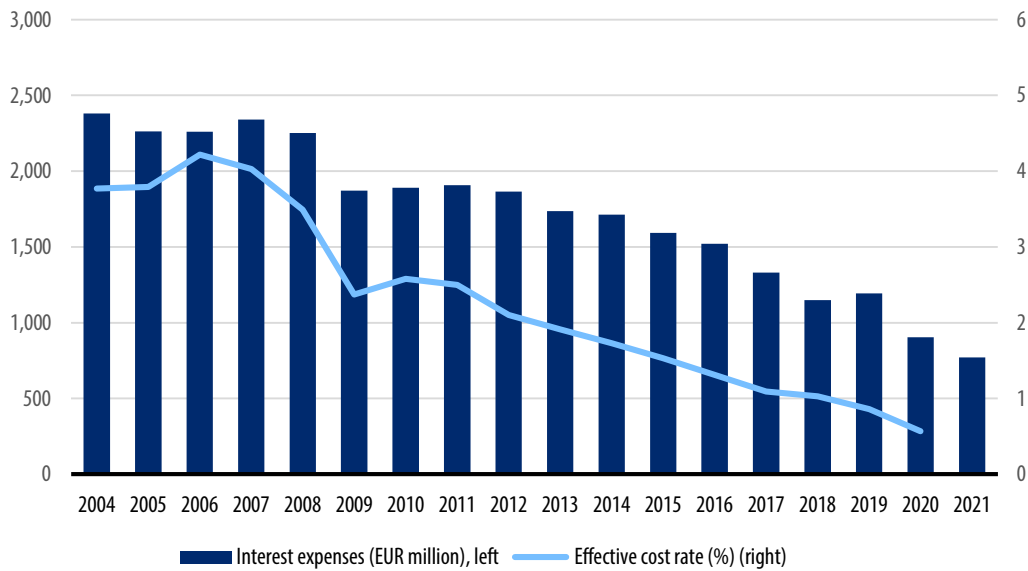
**Figure 10.** Changes in central government debt



Source: State Treasury

The substantial increase in debt has not been reflected in growth in interest expenditure from central government debt (Figure 11). On the contrary, the interest expenditure on central government debt has been declining for a longer period now. This is explained by the drop in market rates to historically low figures, which has considerably reduced the effective debt servicing costs.<sup>15</sup>

<sup>15</sup> Effective costs refer to the average of the debt servicing costs weighted by the nominal value of the debt.

**Figure 11.** On-budget interest expenses and effective interest costs of central government debt

Source: State Treasury

#### 4.1.2 Risks arising from and risk position of central government debt

Central government debt involves many types of risks<sup>16</sup>, of which financing risks and market risks are discussed in more detail in this section. Financing risks include risks associated with the availability or terms of financing and the resulting risk of insolvency or a significant increase in borrowing costs. This may be due to reasons including exceptional market conditions or the downgrading of the central government's credit rating. There are financing risks involved in funding to balance the Budget and in financing to cover repayments of loans falling due by taking out new loans.

Financing risks are divided into liquidity risk and refinancing risk. Liquidity risk means a situation where the sources of financing available to central government are insufficient to allow central government to cost-effectively meet its payment obligations in the next 12 months. Refinancing risk concerns a longer-term risk associated with the acquisition of new finance.

<sup>16</sup> For more information about risks arising from central government debt and their management, visit <https://www.treasuryfinland.fi/>.

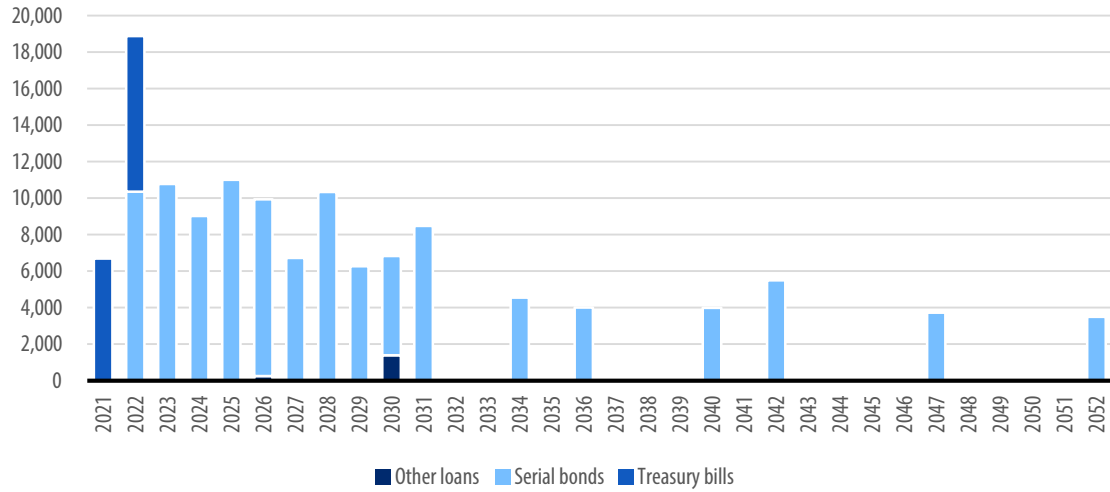
The starting point for the management of the refinancing risk is to seek to distribute loan repayments as evenly as possible over time and to maintain a sufficiently broad range of funding channels.

The amortisation profile for central government debt is shown in Figure 12. Due to the high level of indebtedness, large amounts of loan will fall due for payment by central government in the next few years. The COVID-19 crisis is reflected in the figure as large amortisations of central government debt this year and next. Following the onset of the coronavirus crisis, central government safeguarded its liquidity by issuing large amounts of treasury bills. Otherwise, yearly amortisations in 2023–2031 average around EUR 8.8 billion. In ratio to the total amount of debt, only a relatively small percentage, around 26%, of debt will fall due after 2030.

Finland's debt amortisation profile would not appear to stand out substantially from the reference countries, that is, small Member States in the euro area (Figure 13). For them, too, a significant proportion of amortisations will take place in the 2021–2030 period. This also applies to those countries that have issued ultra-long bonds with maturities exceeding 30 years. Their role in relation to the total fundraising volume of these countries is, however, rather small. For example, Austria has issued bonds with maturities of up to 100 years, but bonds with maturities of 30 years or longer only account for around 7% of Austria's debt stock, too.

The refinancing risk is typically examined by means of one- or five-year rollover indicators that show the ratio of debt to be refinanced within one year/five years. Finland is very similar to the key reference countries and the euro area on average in this respect, too, especially as regards the five-year rollover ratio (Figures 14 and 15). The one-year ratio for Finland is slightly above the average for the euro area but in the same order of magnitude as for the Netherlands.

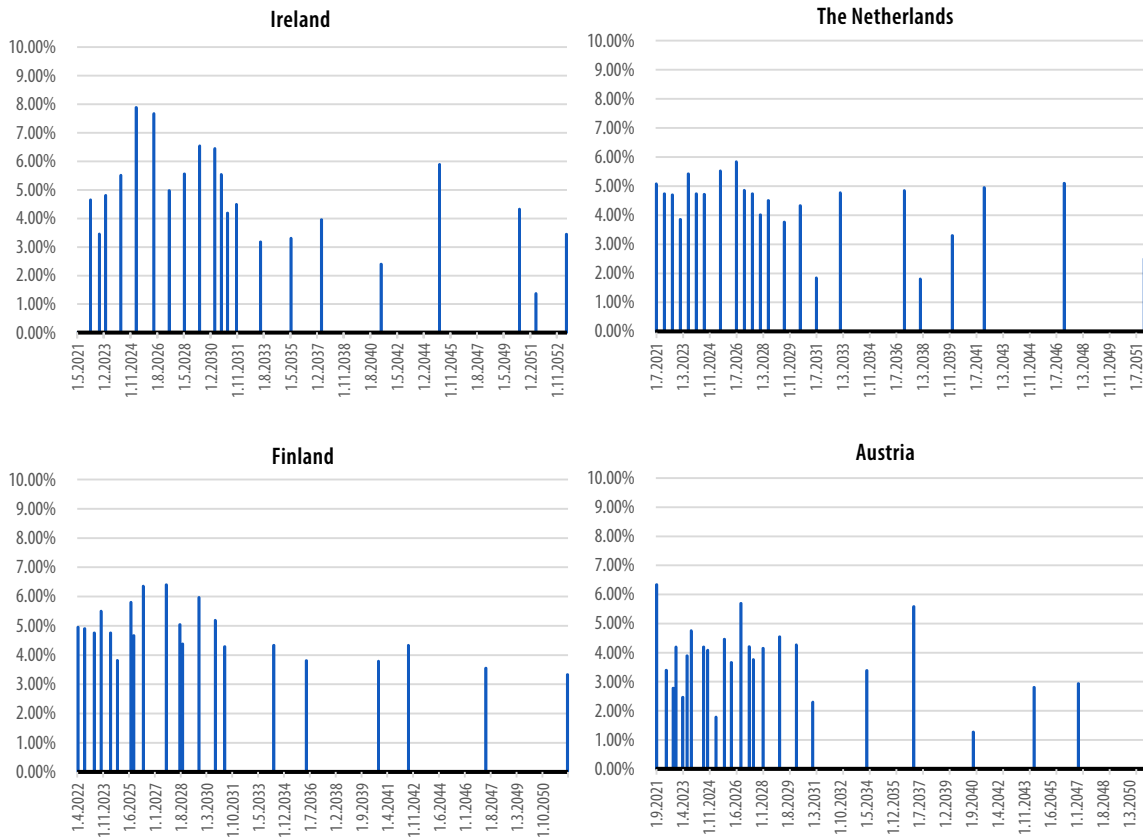
**Figure 12.** Amortisations of central government debt, EUR million<sup>17</sup>



Source: State Treasury, situation on 11 October 2021

<sup>17</sup> Serial bonds are fixed-rate bullet loans on which the coupon interest is paid once a year. Treasury bills are discount-based debt instruments with maturity of a maximum of one year. Other loans include bonds issued under the EMTN programme.

**Figure 13.** Debt amortisation profiles, % of debt stock<sup>18</sup>

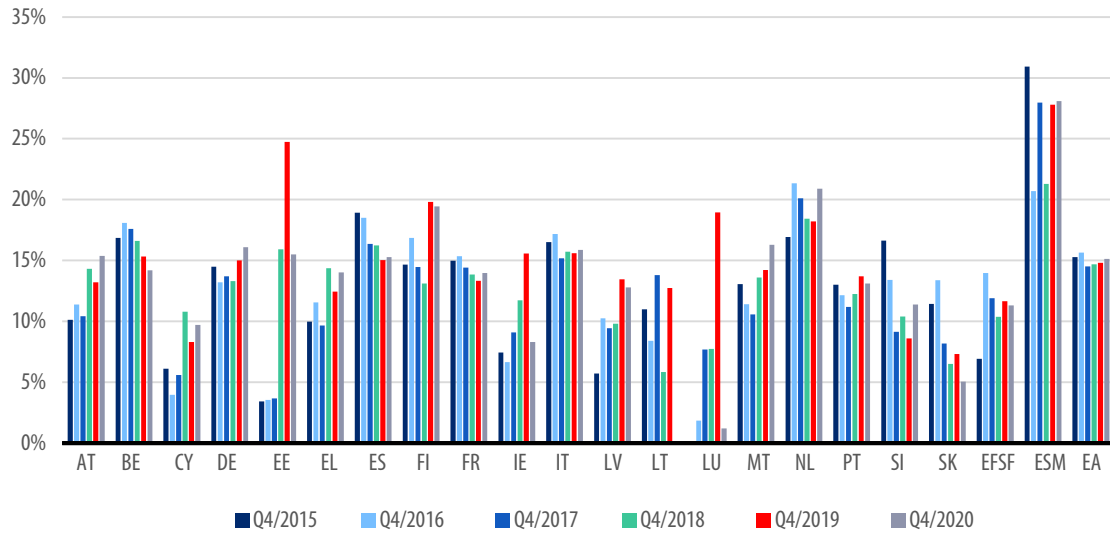


Source: Bloomberg

<sup>18</sup> For display reasons, the time axis for Austria had to be truncated to 2055. In reality, Austria has bonds maturing as late as 2120.

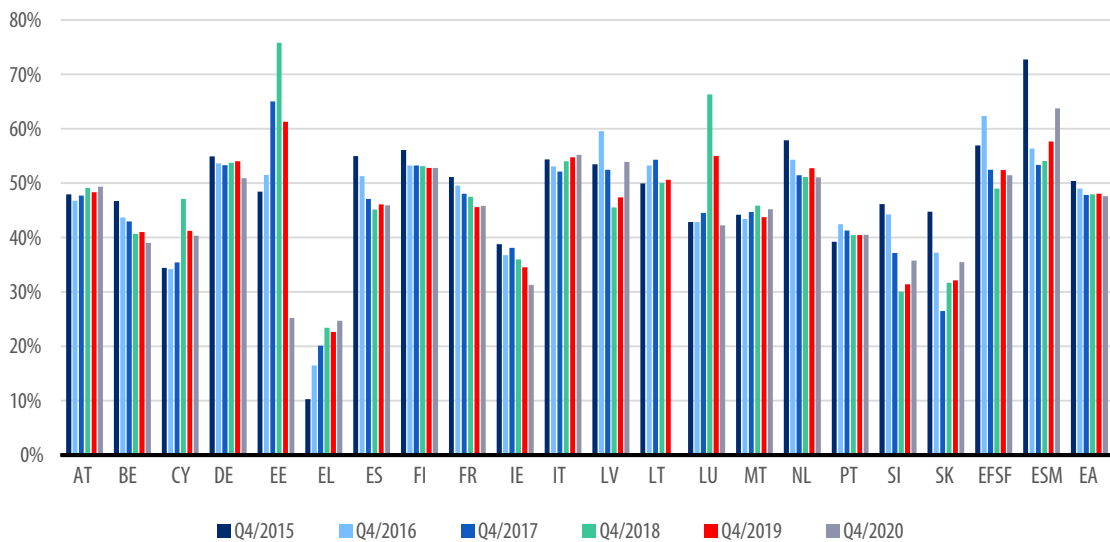


**Figure 14.** One-year rollover indicator in euro area countries, % of debt stock



Source: ESDM

**Figure 15.** Five-year rollover indicator in euro area countries, % of debt stock



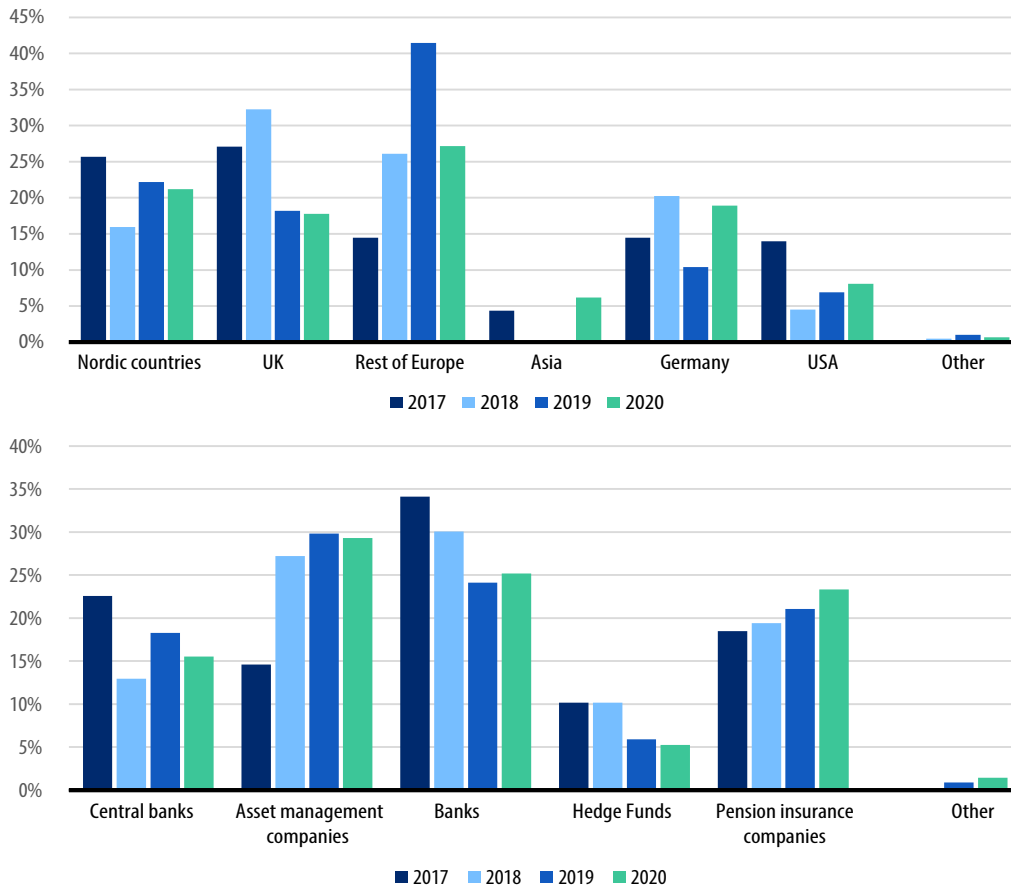
Source: ESDM

As stated above, the management of refinancing risk should pay attention not only to a smooth redemption profile but also to the investor base, its quality and its width. Figure 16 provides data on the investor base of Finland's government bonds in the primary

market regarding syndicated issues.<sup>19</sup> It shows that funding has successfully been diversified broadly both geographically and by investor type.

Market risk refers to the interest and exchange rate risk arising from a debt. Interest rate risk can be defined as a negative deviation from the expected long-term costs arising from a debt as a result of interest rate changes. Interest rate risk may be caused by changes in general euro area interest levels or in a Finland-specific risk premium. Central government also issues debt in foreign currencies, but exchange rate risks are hedged through derivatives.

**Figure 16.** Syndicated bond issues in the primary market



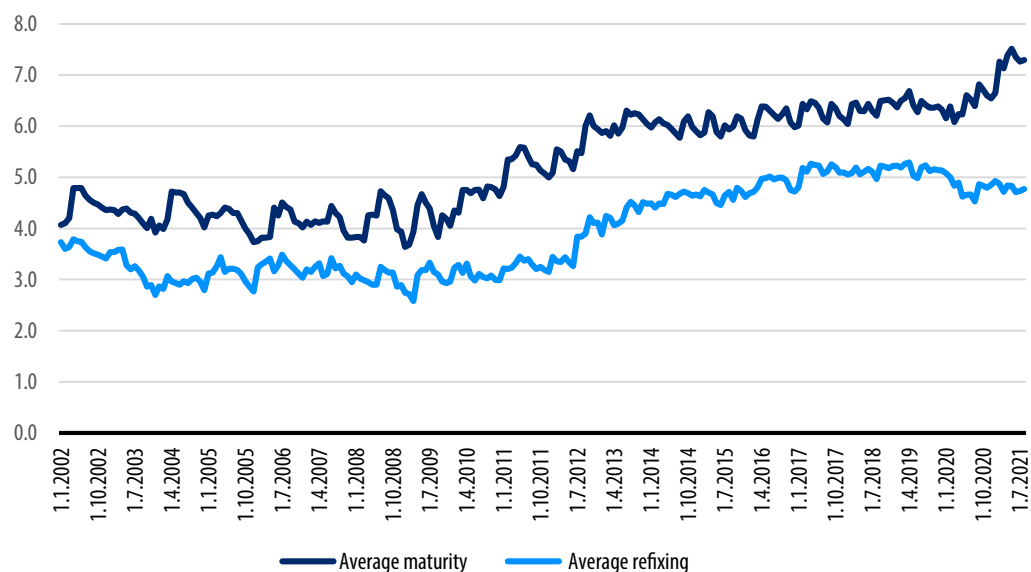
Source: State Treasury

<sup>19</sup> In syndicated bond issues, primary dealer banks are used to obtain investor bids for bonds.

Figure 17 provides information on movements in the interest rate sensitivity of central government debt measured using the average time to refixing of the debt portfolio. This indicator gives the average time (year) during which the debt portfolio is repriced.<sup>20</sup> The shorter the repricing period the faster any interest rate changes are reflected in debt interest costs.

Figure 17 also shows the average maturity of the debt; this figure describes the average period during which the loans must be refinanced. Maturity illustrates the financing risk involved in the debt. Measures were taken in the financial crisis context to extend debt maturity from around four years to more than five years. After 2012, the average maturity was extended further, as central government began to issue 30-year bonds. The current average maturity of the debt portfolio is more than seven years.

**Figure 17.** Development of central government debt interest rate risk position, year



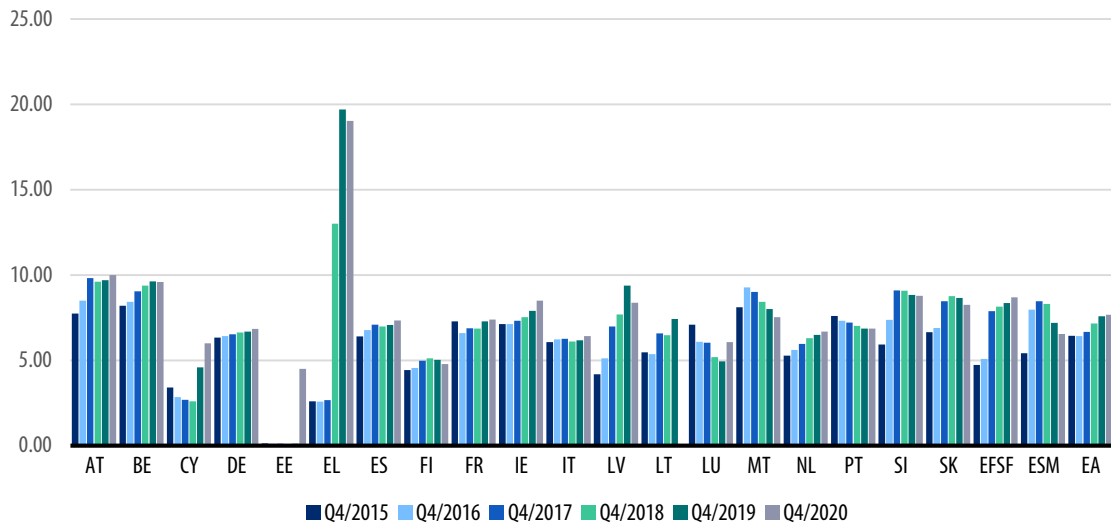
Source: State Treasury

Figures 18 and 19 provide data on central government debt interest risk position in euro area countries. In Finland the average time to refixing the debt portfolio is shorter than in other euro area countries, and differences from most other countries in this respect have also increased slightly over the five-year examination period. On the other hand, increases in Finland's average maturity of debt have been in line with most other euro countries.

<sup>20</sup> The average time to refixing is determined by the next interest rate review date for variable rate loans, whereas for fixed rate loans it is determined by the maturity.

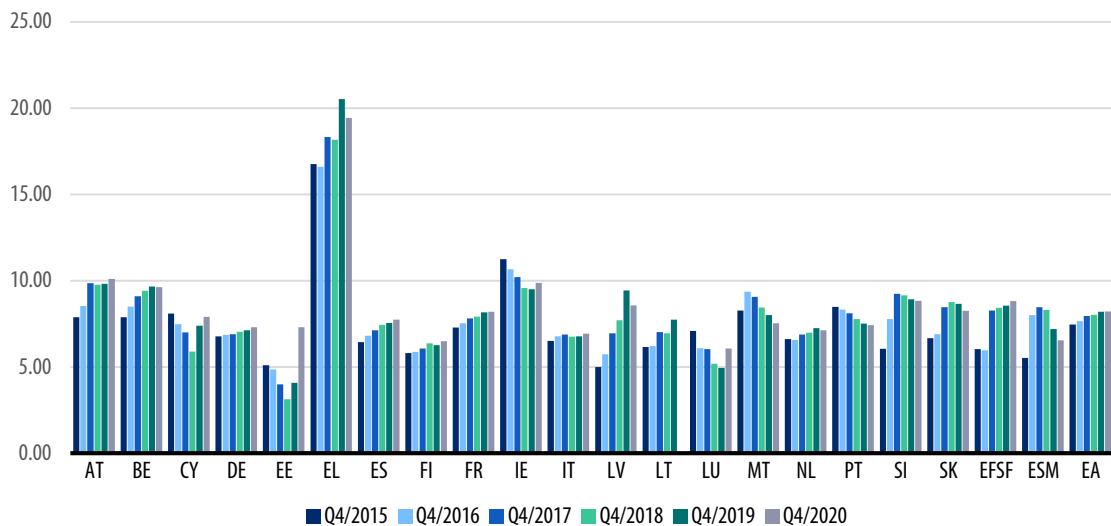
The maturity of Finland's debt portfolio was around 18 months shorter than the euro area average at year-end 2015, and the same difference was seen at year-end 2020.

**Figure 18.** Average time to refixing of the debt portfolio in euro area countries, year<sup>21</sup>



Source: ESDM

**Figure 19.** Average debt maturity in euro area countries, year

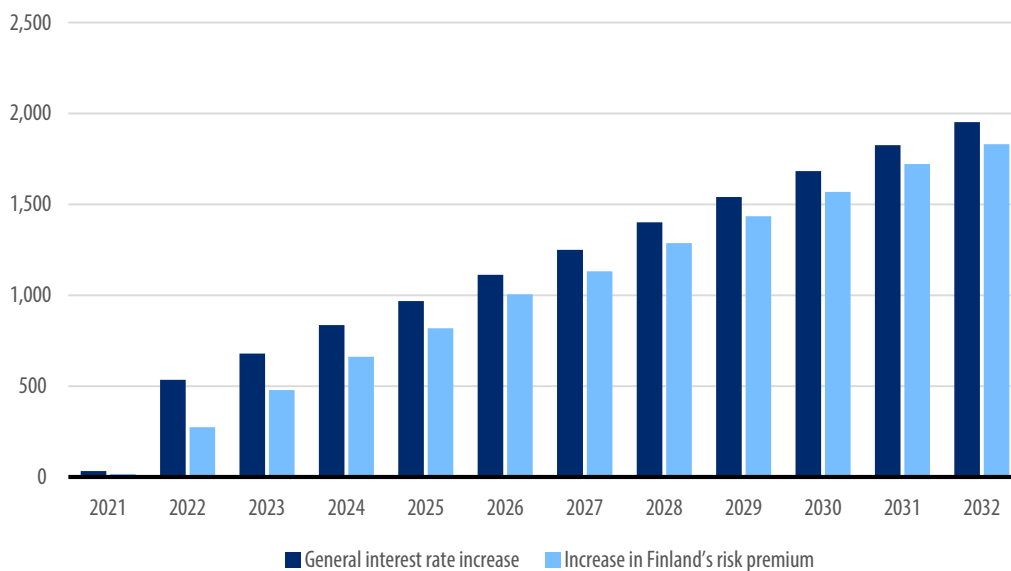


Source: ESDM

21 Impact of derivatives taken into account.

The interest rate risk associated with debt can also be illustrated using the concept of budgetary risk. This involves examining the change in interest expenses when the general interest rate level or Finland's risk premium rises permanently by one percentage point. An increase in the general interest level would increase the central government's forecasted interest expenses so that in 2022, for example, the annual interest expenses would be EUR 535 million higher than projected (Figure 20). Similarly, a one percentage point increase in the risk premium of Finland's central government debt would increase the interest expenses by EUR 275 million in 2022.<sup>22</sup> The difference in the increase in expenses results from the use of interest rate derivatives in interest rate risk management and in adjusting the interest rate risk position.

**Figure 20.** Budgetary risk arising from debt, EUR million



Source: State Treasury

<sup>22</sup> The amount of central government debt used in the calculations is based on the situation on 31 September 2021. Net borrowing in 2021 is assumed to total EUR 11.4 billion in accordance with the fourth supplementary budget proposal. As regards 2022–2025, the net borrowing assumptions are based on the decision on spending limits for those years. From 2025 onwards, net borrowing is projected to be at the same level as in 2025.

## 4.2 Contractual liabilities associated with the Public-Private Partnership (PPP) model

In the Public-Private Partnership (PPP) model, a service provider (project company) funds, plans, carries out and maintains a project under a contract for 15 to 25 years, while the public sector actor has the role of a customer and project supervisor.

The PPP model has been used in contexts including road projects (Table 2). In these cases, Parliament grants the Finnish Transport Infrastructure Agency a budget authority to carry out a PPP project. The authority includes the costs of the actual road construction and the service fee for road maintenance payable to the road infrastructure company. For this purpose, Parliament decides annually on the appropriations needed to fulfil the contract.

The risks involved in a PPP model include, in addition to the financial risk, an increase in building costs, delays and quality issues in construction work, a quality and cost risk related to maintenance, as well as a counterparty risk associated with the project company. Any termination of the contract may also involve substantial termination costs.

The PPP model ties up central government funds for decades, making it more difficult for future Parliaments to launch new projects. Due to the partial payments involved in the PPP model, there also is a risk that investments exceed the level that would be appropriate in terms of sustainable general government finances.

**Table 2.** PPP projects in the central government budget, EUR million

31.10.79 PPP PROJECTS	Authority	2008– 2021	2022– 2025	2026– 2029	2030– 2024	2008– 2040
Road E18 Muurla-Lohja	700.0	499.9	107.5	92.6	0.0	700.0
Road E18 Muurla-Lohja, service level increase	30.0	3.0	8.0	19.0	0.0	30.0
Road E18 Koskenkylä-Kotka	650.0	404.8	201.0	44.2	0.0	650.0
Road E18 Hamina-Vaalimaa	550.0	150.0	95.0	127.5	177.5	550.0
<b>TOTAL</b>	<b>1,930.0</b>	<b>1,057.7</b>	<b>411.5</b>	<b>283.3</b>	<b>177.5</b>	<b>1,930.0</b>

## 4.3 Other multi-annual central government liabilities

Central government also has other multi-annual contractual liabilities under which it has a direct statutory payment obligation. By far the largest of these multi-annual liabilities in on-budget finances are central government pension liabilities.

Pension liabilities mean the amount required to cover the future costs of pension benefits accumulated to date. Central government pension liabilities indicate the current value of central government pension commitment to former and present employees covered by the central government pension system. Central government pension liabilities totalled EUR 93.1 billion at year-end 2020.

Through the State Pension Fund (VER) described in section 3.2, central government has made arrangements to prepare for pension payments in the coming years and to even out annual pension expenditure. At year-end 2020, the ratio between the market value of the VER investment portfolio and the imputed central government pension liabilities was about 23%.

The funding base of central government pension expenditure involves risks associated with the prospect that the sum of wages and salaries on the one hand and the investment assets and returns on investment on the other will not develop as expected. The development of pension expenditure also involves uncertainties. While a decrease in the sum of wages and salaries would weaken VER's income base and reduce the assets available for investment, from the central government perspective it would cut direct labour costs and curb the growth in pension liabilities. The realisation of risks relating to the sum of wages and salaries and VER's investment returns may increase central government need for direct budget financing for central government pension payments.

Other multi-annual liabilities include the need for appropriations required by budget authorities, which in 2020 totalled EUR 10.7 billion.

The other multi-annual liabilities of off-budget entities and unincorporated state enterprises amounted to EUR 2.9 billion at year-end 2020.

## 5 Contingent financial liabilities of central government

- Central government guarantees in effect totalled EUR 62 billion at year-end 2020, representing growth of EUR 1.8 billion year on year. In 2010, the portfolio of guarantees amounted to EUR 23.1 billion.
- The largest liabilities in effect are associated with Finnvera's operations, housing finance and the management of international financial crises.
- The portfolio of guarantee liabilities has grown significantly not only in terms of euros but also in relation to GDP. In 2010, the ratio of guarantee liabilities in effect to GDP was 12.3%, whereas at year-end 2020 the corresponding figure was 26.1%.
- Risks associated with guarantee liabilities are increased by concentration risks associated with the largest sets of liabilities. For example, in export financing the ship industry accounts for around 50% of total liabilities. The operations of the Housing Fund of Finland are also associated with concentration risks. Risk development in housing finance is also materially affected by the population concentration trend and any changes taking place in it.
- Finnish banks fared well through the coronavirus year and their financial performance has been strong. Stress tests conducted by the ECB and the European Banking Authority (EBA) show that the solvency of Finnish banks is good and the banks could even withstand a major decline in the operating environment.
- Municipal loan stock grew by more than EUR 600 million in 2020 and amounted to around EUR 19 billion at year end. As is the case for central government, municipal loan growth has been strong over the past couple of decades. In 2000, the loan stock of municipalities totalled around EUR 3.9 billion.
- Municipal guarantees have also increased, although not as strongly as the loan stock. At year-end 2020, municipal guarantees totalled EUR 8.4 billion, whereas the corresponding figure in 2010 was EUR 5.5 billion.

The first section of this chapter focuses on explicit contingent liabilities, which involve a legal obligation for central government. These include government guarantees, callable capital in international financial institutions, climate liabilities and nuclear liability. In the later sections, the chapter discusses implicit contingent liabilities, which may put the central government under an obligation because of societal or political factors.



These include implicit liabilities of the banking sector and local government as well as contingent liabilities associated with state enterprises and environmental and chemical safety.

## 5.1 Central government guarantees

Central government guarantees<sup>23</sup> in effect totalled EUR 62.0 billion at year-end 2020, representing growth of EUR 1.8 billion year on year (Figure 21). At the end of June 2021, the amount of central government guarantees in effect was EUR 63.8 billion. The portfolio of guarantee liabilities has grown significantly throughout the 2010s, and the uptrend continues. In 2010, the guarantee portfolio was EUR 23.1 billion.

The portfolio of guarantee liabilities has grown significantly in relation to GDP, too. In 2010, the ratio of guarantee liabilities in effect to GDP was 12.3%, whereas at year-end 2020 the corresponding figure was 26.1%.

The largest liabilities in effect are associated with the operations of the state-owned specialised financing company, Finnvera (EUR 32.3 billion), housing finance (EUR 16.9 billion) and management of international financing crises (EFSF EUR 6.7 billion).<sup>24</sup> In 2020, Finnvera's guarantee portfolio decreased by EUR 1 billion, whereas the housing finance guarantee portfolio increased by EUR 1.1 billion and the student loan guarantee portfolio by EUR 0.52 billion.

The maximum amount of central government guarantees available was EUR 135.2 billion at year-end 2020. The maximum is the maximum amount set out in the law or authorised by Parliament. For the guarantee authorities given in the Budget annually, the maximum is the amount of guarantees in effect plus the amount of guarantees granted but not yet used.

The maximum amount of central government guarantees available increased considerably – by EUR 28.7 billion – to EUR 135.2 billion in 2020. This increase is mostly explained by the increase in Finnvera's export credit guarantee and funding guarantee authorities in early 2020 and the increases in the maximum amounts of Finnvera's domestic financing authorisations made in the spring due to recovery needs caused by the coronavirus

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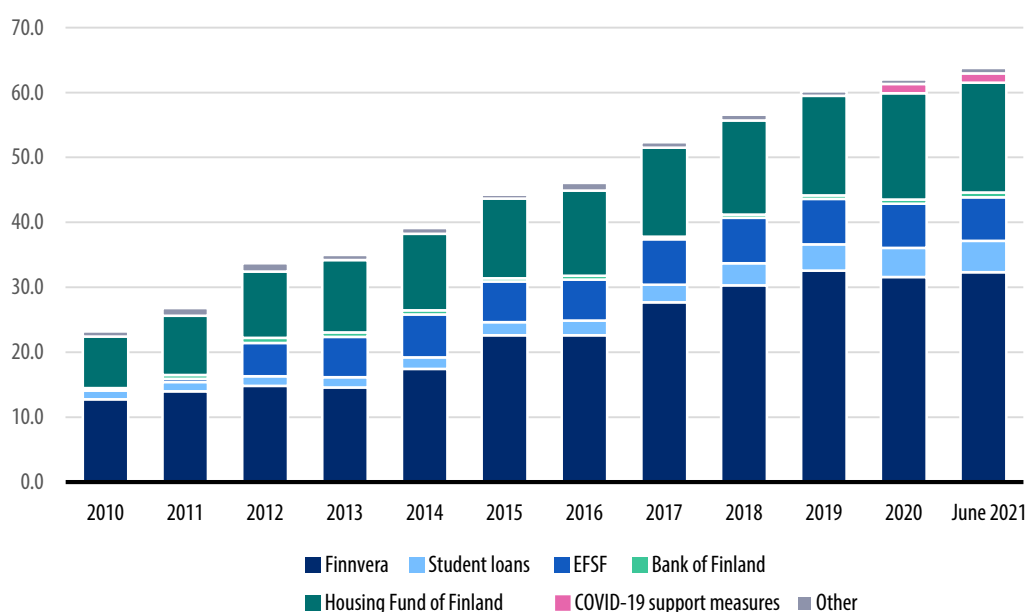
23 Central government guarantees mean legal commitments by central government to assume liability for the debt of another party. Guarantees also include legal commitments to cover losses arising from a specific activity.

24 The figures are data from the end of June 2021.

crisis. Other support measures relating to the pandemic increased the maximum amount available by EUR 2.9 billion.<sup>25</sup> In relation to the increases made in guarantee authorities, the amount of guarantee liabilities in effect grew more moderately during 2020, by EUR 1.8 billion.

The following section provides a more detailed description of the most important central government guarantees in financial terms and the risks associated with them.

**Figure 21.** Development in the amount of central government guarantees in effect, EUR billion



Source: State Treasury

The guarantees associated with Finnvera consist of 1) liabilities associated with export guarantee and special guarantee operations 2) the domestic liability portfolio, and 3) guarantees for funding. The liabilities in effect (used and unused) have been included in the guarantee and liability amounts related to export guarantee and special guarantee operations. The statutory liability amount includes liabilities in effect and one half of the guarantees offered, using the exchange rate of the date on which the decision was made. The risk arising from repayments of export credits granted by Finnish Export Credit

<sup>25</sup> Due to the coronavirus crisis, central government guarantees have been granted for European Commission funding (the SURE support instrument), for the European Investment Bank (the EU COVID-19 guarantee fund), for domestic shipping and aviation companies, and for the Employment Fund. The figures exclude the EU recovery fund.

Ltd is covered by an export credit guarantee granted by the parent company, Finnvera. Finnvera's funding within the framework of the EMTN and ECP loan programmes has a central government guarantee. To the extent that the loan guaranteed by central government has been used to finance export credits, central government's liability for export guarantees and government guarantees for funding is not doubled but, as a result of various factors, these could be realised at different times. The contingent liabilities reported in this review are consistent with the figures in final central government accounts.

COVID-19 support measures comprise central government guarantees for European Commission funding (the SURE support instrument), for the European Investment Bank (the EU COVID-19 guarantee fund), for domestic shipping and aviation companies, and for the Employment Fund.

### 5.1.1 Finnvera Plc

Three types of public export financing instruments are used in Finland: government export guarantees, interest equalisation, and export credit. Export financing is provided through Finnvera Plc, a special financing company fully owned by the State of Finland, and through Finnish Export Credit Ltd, a fully-owned subsidiary of Finnvera. Finnvera also provides financing to SMEs in Finland.<sup>26</sup>

Central government grants authorisations as a means of regulating the scope of public export financing activities. The export financing authorisations have been increased on several occasions over the past few years. At the end of June 2021, the authorisations concerning the maximum liabilities for export financing were:

- i) export guarantees granted by Finnvera PIC and hedging arrangements: EUR 38 billion;
- ii) export and ship credits of Finnish Export Credit: EUR 33 billion;
- iii) interest equalisation authorisation: EUR 33 billion;
- iv) authorisation for special risk-taking EUR 5 billion;
- v) maximum authorisation for the government guarantee of Finnvera's funding programme: EUR 20 billion; and

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<sup>26</sup> In domestic financing, liabilities are considerably smaller than in export financing. Liabilities in domestic financing have not increased, either, excluding 2020 when they increased by around EUR 500 million due to the COVID-19 pandemic. The domestic loan and guarantee portfolio totalled EUR 2.4 billion at year-end 2020.

- vi) maximum authorisation for a potential government credit facility for Finnvera: EUR 3 billion.

As the authorisations have increased, total central government liabilities for export financing have grown substantially over the past few years, as shown in Figure 21 and Appendix 2.

In particular, financing agreements have been concluded on ships ordered by shipping companies to be completed in the future, the guarantees and offers for which will only be drawn down several years later. Consequently, the amount of credit drawn down, which could result in credit losses, is less than the gross amount of the liabilities. At year-end 2020, the total amount of export credit and special guarantee liabilities was EUR 22.4 billion, while the amount of liabilities drawn down was EUR 11.8 billion.

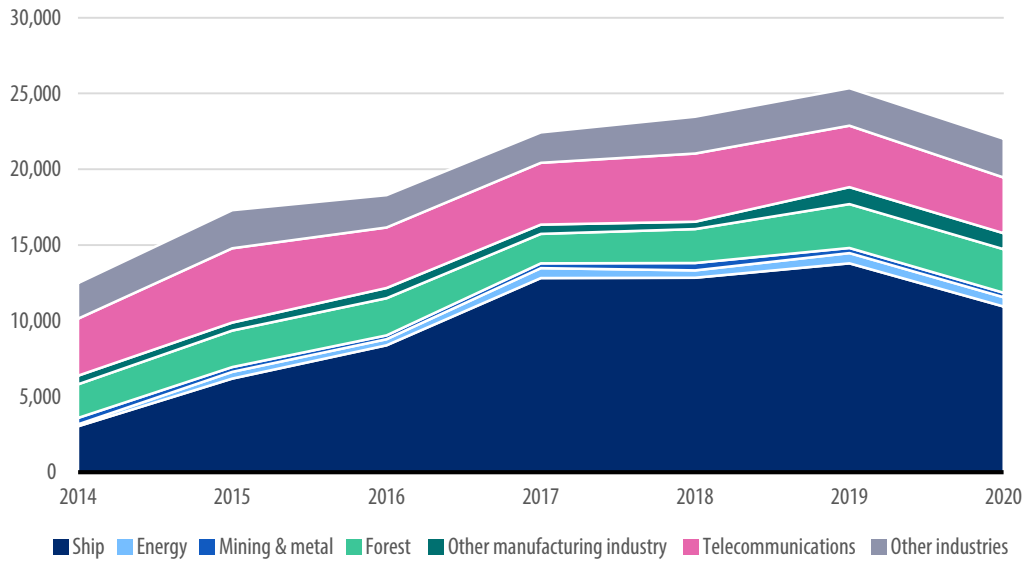
A key risk arising from Finnvera's export financing is related to credit risk. In this respect, a key role is played by diversification of liabilities, that is, the extent to which the risks in the portfolio concentrate in certain sectors, geographic areas and customers.

As seen in Figures 22–24, export financing operations are highly concentrated. The shipping industry accounted for around 49% of the total liabilities at year-end 2020 (Figure 22). A year earlier, the corresponding figure had been even higher at 54%. Sectoral concentration has increased in recent years. In 2014, the share of the shipping industry in the total liabilities was still below 25%.

A regional analysis shows that the concentration of total liabilities is significant and has increased over the review period (Figure 23). In 2020, clearly the largest share, 45%, of the export credit guarantee liability portfolio was related to the United States, while Germany accounted for 12%. In 2014, the United States' share was equal to that of Germany and Brazil at 14%.

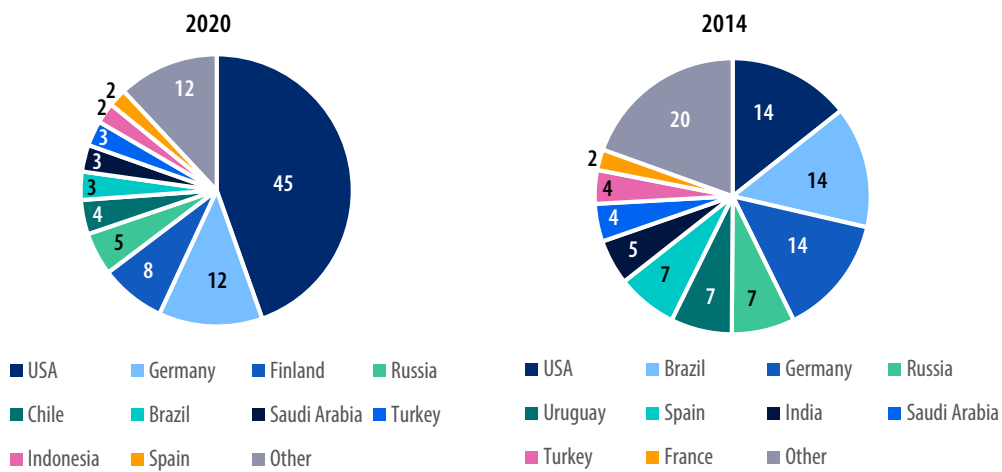
Export credit guarantee liabilities are also associated with significant risks arising from customer concentration (Figure 24). At year-end 2020, the three largest recipients of buyer financing accounted for 44% of the total export guarantee liabilities, the 10 largest ones accounted for 64%, while the top 20 accounted for 78%. The customer concentration risks have increased clearly compared to 2014, although the share of the largest customers of the total export credit guarantee liabilities has decreased over the past three years.

**Figure 22.** Sectoral distribution of export credit guarantees, EUR million

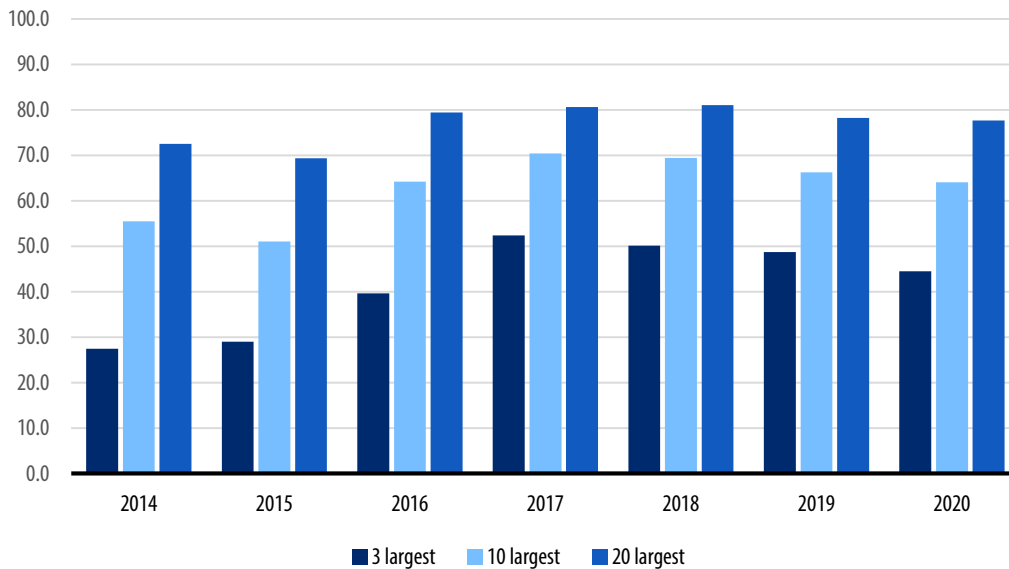


Source: Finnvera

**Figure 23.** Export credit guarantees by country, %



Source: Finnvera

**Figure 24.** Customer concentrations of export credit guarantees, %

Source: Finnvera

The risks associated with the concentrations of sectors, countries and customers are partly overlapping. There are individual customer concentrations underlying sectoral and country risk concentrations.

Based on changes in the risk classification distribution, the risk associated with the portfolio of export credit guarantee liabilities increased in 2020 compared to the situation in previous years. In 2019 approximately 66% and in 2018 approximately 69% of the liabilities in the portfolio belonged to risk class BBB or higher (Figure 25). In 2020, the corresponding figure was around 28%.

In addition to idiosyncratic shocks, concentration risks also expose export financing operations and risk management to systematic risk, which arises if realisations of various liabilities correlate with each other more strongly than expected. For example, over-capacity or a significant drop in demand in the shipping market may result in the realisation of larger liabilities than expected.

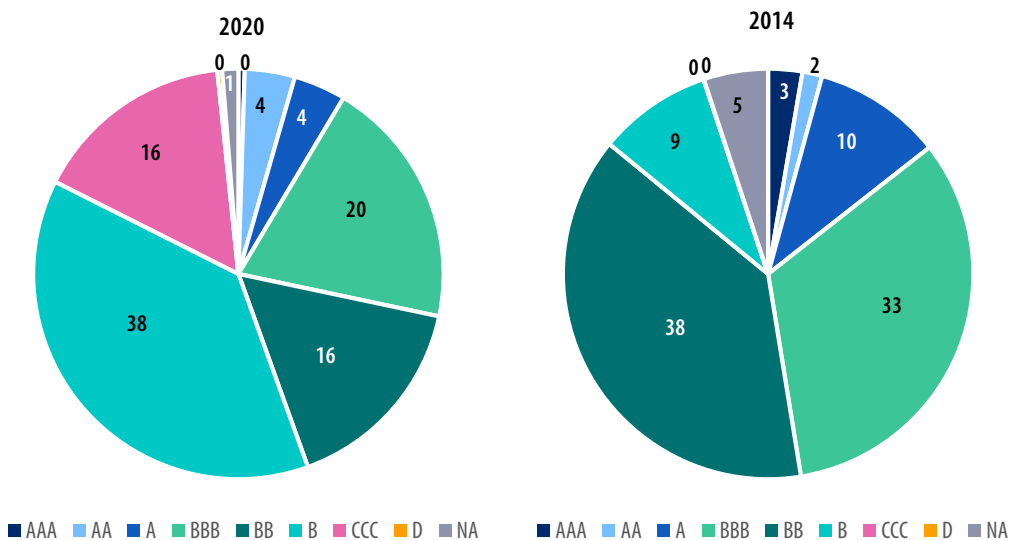
The coronavirus crisis has revealed in a concrete manner the risks relating to the concentrated structure of Finnish export financing. The COVID-19 pandemic had a major impact on the cruise industry, in practice fully suspending cruise operations for a while and weakening the outlook for the near future. This was reflected significantly in Finnvera Group's financial performance and resulted in the Group reporting a loss of EUR 748 million for 2020. In contrast, the Group had reported a profit of EUR 94 million

for 2019. Owing to the COVID-19 pandemic and, in compliance with the IFRS 9 standard, declining risk classifications and macroeconomic projections, Finnvera made credit loss provisions totalling EUR 1,166 million in export credit guarantee and special credit guarantee operations in 2020.

In addition to credit risk, export financing is also associated with liquidity and market risks. To ensure competitive export financing, Finnish Export Credit commits to pre-agreed terms of credit (incl. Commercial Interest Reference Rates, CIRRR) over a long delivery time<sup>27</sup>. At the same time, the competitive situation may make it necessary to offer the customer options with respect to loan withdrawal, terms of interest or currency.

Fixed-rate export credits carry an interest rate risk, which is transferred to central government by means of interest equalisation agreements. If the interest rate is set at a very low level in accordance with the OECD export credit agreement for competitive reasons, it may be impossible for the state to fully hedge against the interest rate risk without incurring losses, depending on the terms and conditions of the agreement and the market conditions.

Figure 25. Risk classification distribution of export credit guarantees, %<sup>28</sup>



Source: Finnvera

<sup>27</sup> The CIRRR interest is based on the return on long-term government bonds, plus a fixed margin.

<sup>28</sup> Class AAA describes the lowest risk, whereas class D means that the risk is certain to materialise. Class NA contains risks with no risk classification, including sovereignty risks related to states.

Any losses from Finnvera's export financing operations are covered through two reserve funds, which had assets totalling EUR 1.52 billion at year-end 2020 before Finnvera's negative result.<sup>29</sup> Losses from export credit guarantee operations are primarily covered out of the reserve for export credit guarantee and special guarantee operations in Finnvera's balance sheet, which at year-end 2020 amounted to EUR 829 million before the loss reported for the year. Secondly, losses are covered by the off-budget State Guarantee Fund, which was worth approximately EUR 691 million at year-end 2020.<sup>30</sup> If the two reserve funds turn out to be insufficient, Finnvera's losses are covered from central government budget.

The result of 2020 showing a loss was primarily covered out of assets in the reserve for export credit guarantee and special guarantee operations in Finnvera's balance sheet and by a fund payment of EUR 349 million from the State Guarantee Fund. After the result for the 2020 financial year, Finnvera's domestic and export financing reserves to cover potential future losses amounted to EUR 692 million. They consist of EUR 351 million in the domestic operations reserve and EUR 342 million remaining in the State Guarantee Fund after the fund payment.

Risks associated with individual counterparties and concentrations are partially hedged against through reinsurance. At year-end 2020, the maximum compensation amount of Finnvera's reinsurance contracts in effect totalled approximately EUR 1.28 billion, or around 11% of the liabilities taken out.

Finnvera's goal is to be self-sustainable, which means that the company's operating income must over the long term cover its operating costs and its share of the credit and guarantee losses. The review period of the self-sustainability goal is 10 years for SME financing and 20 years for export financing. The self-sustainability targets were reached until 2019 but, after the loss reserves booked in 2020, the self-sustainability target for export financing was missed. Self-sustainability of export credit guarantee and special guarantee operations was, however, reached cumulatively when taking into account funds in the State Guarantee Fund accumulated in the activities of Finnvera's predecessor organisations.

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29 Export credit guarantee operations have not received capital injections from central government funds. Loss reserves for export credit guarantee operations mainly consist of guarantee fees collected from customers, in addition to which funds received from recovery procedures and any reinsurance also contribute to them.

30 Provisions are also made for losses from domestic financing activities. In accordance with its credit and guarantee loss undertaking, the state has pledged to cover 80% of the losses arising from SME and midcap financing from the end of 2020 (and also for non-SMEs for a special reason). The current commitment is in effect until further notice but not beyond 31 December 2022. Any losses beyond this government compensation will be covered out of Finnvera's domestic operations reserve, which held EUR 351 million at year-end 2020.



Unlike for the funding of domestic operations, there is no specific capital adequacy requirement set for Finnvera's export financing in line with international practice. The Ministry of Economic Affairs and Employment does, however, monitor developments in liability and risk position and aspects including the capital adequacy requirement. The capital requirement relating to credit risk is measured using Value at Risk (VaR) and Conditional VaR (C-VaR). Capital adequacy in export financing declined due to the credit loss provisions made in 2020 and, taking into account the assets in the reserve for export credit guarantee and special guarantee operations and the State Guarantee Fund, was 1.3% at year-end 2020. In 2019, the corresponding figure was 6.9%.

### 5.1.2 Housing Fund of Finland

Central government currently has 11 off-budget funds. In terms of liabilities, the Housing Fund of Finland accounts for most of these funds' guarantee portfolio.<sup>31</sup>

The guarantees held by the Housing Fund comprise the government guarantees for loans granted for housing construction, renovation and purchases. Most of the loans granted for construction and renovation go to rental housing and right-of-occupancy corporations. The guarantee portfolio for private households comprises limited state guarantees for housing loans granted by financial institutions.

In addition to guarantees, the contingent liabilities of the Housing Fund also include the interest subsidy payments of interest subsidy loans granted for the housing sector. Most of the loans with a state deficiency guarantee granted to corporations for housing construction and renovation are interest subsidy loans. Loans intended for first-time home buyers (ASP loans) account for the majority of the interest subsidy loans granted to private households. Grants for housing construction, housing stock and financial restructuring of rental housing corporations are also paid out by the Housing Fund of Finland.

Guarantee payments based on guarantee liabilities and the expenses associated with securing loan receivables are paid out by the Housing Fund of Finland. If necessary, the Fund also uses its assets for its own loan amortisation and interest payments. The Housing Fund does not currently have any debts.

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31 In addition to the Housing Fund of Finland, central government guarantees are also held by the Development Fund for Agriculture and Forestry and the National Emergency Supply Fund.

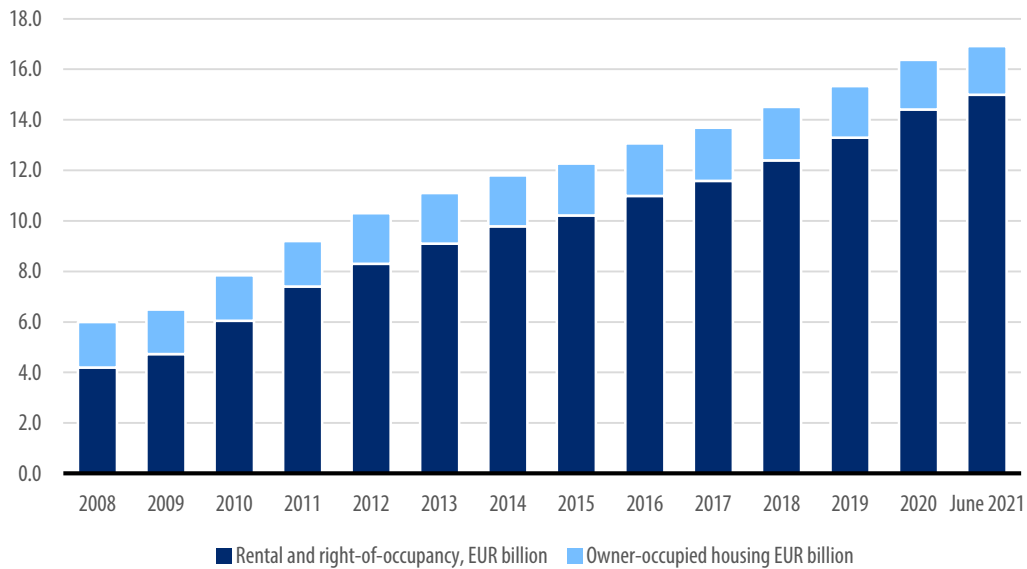
Long-term Arava loans granted to rental housing and right-of-occupancy corporations before 2008 account for most of the receivables in the balance sheet of the Housing Fund of Finland.<sup>32</sup> The Fund's revenue consists of Arava loan repayments and interests, and payments associated with various central government guarantees.

The housing financing guarantee portfolio has increased substantially over the past ten years (Figure 26). The guarantee portfolio totalled EUR 7.9 billion in 2010. By year-end 2020, it had grown to EUR 16.4 billion. Guarantees for corporate loans accounted for EUR 14.4 billion and state guarantees for housing loans taken out by private households for EUR 2 billion of this total. The guarantee portfolio totalled EUR 16.9 billion at the end of June 2021. This year's increase comprised guarantees for corporate loans, which increased to EUR 15.0 billion in total. The amount of guarantees for housing loans taken out by private individuals was EUR 1.93 billion at the end of June. As regards the guarantee portfolio for corporate loans, the guarantee portfolio for the financing of right-of-occupancy corporations totalled EUR 3.4 billion at year-end 2020 and EUR 3.6 billion at the end of June 2021. The proportion of financing for right-of-occupancy housing in the guarantees for corporate loans has increased from 15.5% in 2010 to 23.9% in June 2021.

The phasing out of direct housing financing by the state and substantial increases in guarantee authorisations have boosted the guarantee portfolio for housing lending. Between EUR 1.5 billion and EUR 1.7 billion a year was spent on housing construction guarantee authorisations in 2009 and 2010. In subsequent years in the 2010s, an average of EUR 1.1 billion was allocated to guarantee authorisations each year. Since 2018, the use of authorisations has again risen to the level of EUR 1.5 billion to EUR 1.7 billion. The guarantee authority given in the Budget annually for new rental and right-of-occupancy housing loans has totalled EUR 1.7 billion in recent years. In 2020, the authority was increased in the fourth supplementary budget by EUR 340 million, taking the total to around EUR 2 billion. The 2021 authority is just under EUR 2.1 billion.

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32 The receivables of the Housing Fund of Finland are discussed separately in section 3.4.

**Figure 26.** Development in housing financing guarantee portfolio, EUR billion

Source: State Treasury

The guarantees granted for housing financing are deficiency guarantees in which the property or apartment in question serves as the first-demand guarantee. In case of insolvency, if the loan receivables cannot be covered by the realisation price of the collateral, the state will pay the financial institution a statutory guarantee compensation. A total of EUR 0.18 million in guarantee compensations in connection with corporate loans was paid in 2020. An average of around EUR 0.5 million in guarantee compensations for housing loans taken out by private households was paid each year in the 2010s. In 2020, these payments totalled EUR 0.32 million.

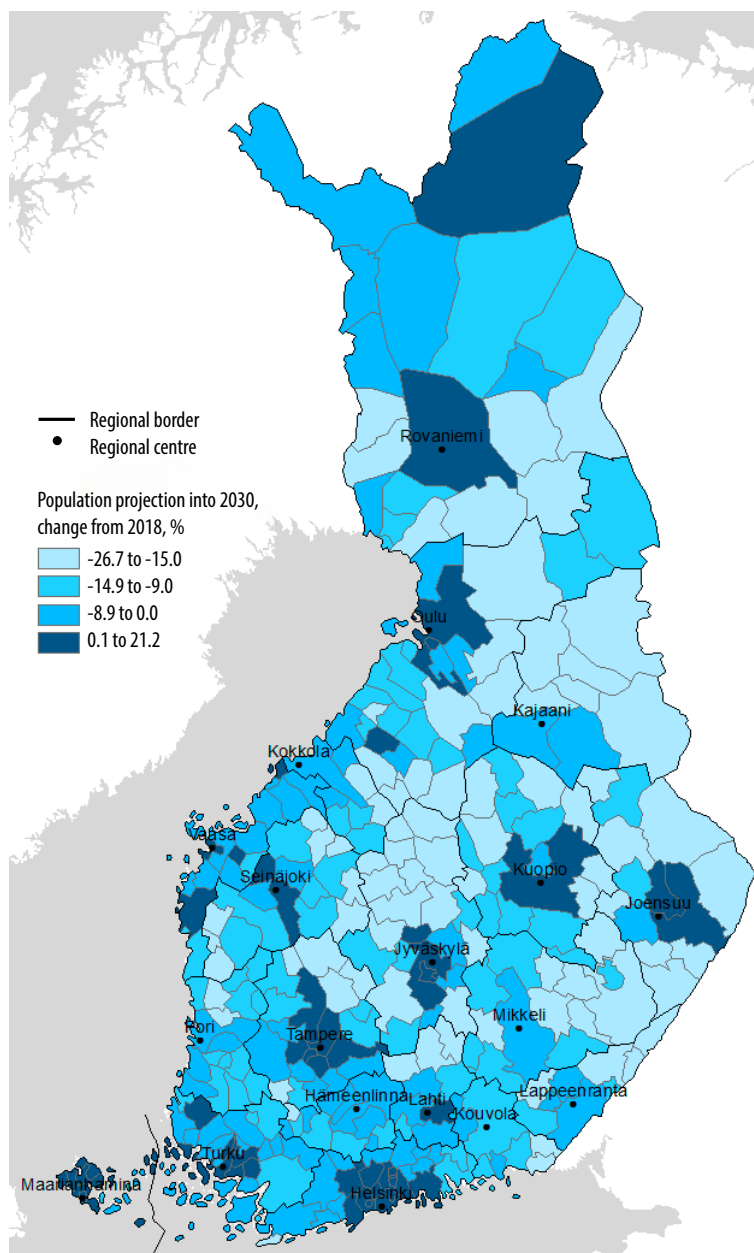
No guarantee fees are charged for most of the housing loans. The guarantee fee income from guarantees for corporate loans totals EUR 0.3 million to EUR 1.1 million each year, while the figure for guarantees for private households is around EUR 3 million to EUR 6 million.

As a rule, the deficiency guarantees for state housing financing involve deliberate risk-taking, as in housing construction loans lending accounts for 85%–95% of the construction costs and the loan periods may be as long as 45 years. With such terms, market-based financing would only be available with additional guarantees.

Areas affected by depopulation where rental housing corporations struggle financially due to declining occupancy rates constitute a growing credit risk in housing financing. Direct loans granted to high-risk areas total about EUR 0.85 billion, while the guarantee

portfolio for these areas amounts to about EUR 3.15 billion. This accounts for about 22.2% of the total liability portfolio for the financing of rental housing and right-of-occupancy corporations amounting to EUR 18.0 billion. The loan and guarantee stock in financing for high-risk areas has over a period of one year increased by around EUR 0.7 billion and its share of the total portfolio by 3.1 percentage points.

**Figure 27.** Population change projections for individual municipalities from 2018 to 2030



Source: Statistics Finland

The concentration of population has been an ongoing trend in Finland for many years, and this has been reflected in the declining occupancy rates and payment problems of rental housing corporations, especially in sparsely populated areas, small rural municipalities and minor industrial towns. The trend seen before the onset of the COVID-19 crisis was the concentration of population focusing on fewer and fewer centres, which predicts increasing risks for rental housing corporations in areas outside growth centres. The coronavirus crisis has increased remote working and interest in areas outside growth centres, too. It is difficult to estimate at this point how the increasing new ways of working made more widespread by the crisis will, going forward, affect people's relocation and developments in the housing market.

Shown in Figure 27, the population projection prepared in 2019 indicates that besides the Helsinki region, population growth will focus on a handful of regional centres. Since population in growth centre areas is partly also clustered around the actual centres, any examination based on municipal boundaries does not give an entirely reliable picture of, for example, development in periphery areas merged with growing regional centres.

The risks of state-subsidised rental and right-of-occupancy housing financing are managed by the Housing Finance and Development Centre of Finland (ARA) and the State Treasury. In recent years, risk management has emphasised the importance of preventive plans and actions at the level of municipalities and corporate entities in which the municipality exercises control to ensure that the operators take into account the impacts of population development in the area when planning the housing stock. Restructuring measures for rental housing corporations laid down in special acts, the key ones of which are modification of loan terms, restriction and demolition remissions of debt, and rehabilitation and demolition grants, can be used to support risk management in social housing finance. The aim of restructuring measures is to minimise central government's credit losses and to ensure the orderly continuation of a rental housing corporation's operation, where this has been assessed to be viable.

In risk management related to social housing finance, the fact that the restructuring measures, excluding rehabilitation grants, specified in legislation are primarily only suitable for direct lending has emerged as a challenge. In financing provided through a guarantee liability, the loan agreement is concluded between a financial institution and a rental housing corporation. This makes it more challenging to undertake central government's risk management actions during the loans' life cycle than in direct financing, and central government is unable to participate in the debt arrangements.

Up till now, the credit and collateral risks have as a rule mainly concerned direct lending in housing finance, in other words the Arava loan portfolio, and only a small number of compensation claims concerning guarantees for corporate loans have been received. The

risks associated with these guarantee liabilities are increasing, however, and in the future the realisation of credit losses can also be anticipated in the portfolio of government-guaranteed loans. In addition to the occupancy rate gaps in properties, the risk is also increased by the fact that housing loans come with back-loaded payment schedules, and the largest repayments take place at a time when the buildings are often in need of renovation. Furthermore, the collateral and market values of properties located outside growth centres have also declined, and the trend can be anticipated to persist, which means that in insolvencies the collateral will not necessarily provide adequate cover for loan repayment.<sup>33</sup>

The operations of the Housing Fund of Finland are also associated with concentration risks. At the end of June 2021, the three largest customers accounted for 26.8% (2020: 26.1%), the 10 largest customers for 45.4% (44.1%) and the 20 largest customers for 55% (54%) of the liabilities in the Fund's loan and guarantee portfolio.<sup>34</sup>

A special feature of financing of right-of-occupancy housing is that it involves risks on account of restriction regulations. Permanent restrictions involve collateral challenges that make it more difficult to take out renovation loans and to realise the properties. A government proposal submitted in late 2020 for a new act on right-of-occupancy housing contained a proposal for the opportunity, on certain conditions, to grant relief from usage and assignment restrictions, but the proposed amendments were rejected by Parliament due to a statement by the Constitutional Law Committee.

Most state-subsidised housing finance is interest-subsidised financing, in which the loan relationships are between customers and financial institutions. The state pays interest subsidies for the part exceeding the self-financing share of the interest rate laid down in

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33 The declining trend was taken into account in a report completed in 2017 by the AAKE working group on development of housing stock and housing conditions outside growth centres. The report's proposals have been used as a basis for legislative amendments enabling more effective and proactive support and financing arrangement measures in areas affected by depopulation.

Issues of central government housing finance were also considered in the parliamentary Audit Committee's report on areas of development in housing policy, [TrVM 3/2018 vp](#) – Parliament of Finland. Parliament required that an eight-year housing policy development programme be prepared and submitted to Parliament as a government report. The working group submitted its proposal for a housing policy development programme to Minister of the Environment and Climate Mikkonen in December 2020.

34 The percentage of customer concentrations has been calculated from the combined loan and guarantee portfolio of rental housing and right-of-occupancy corporations. This total amounted to EUR 18.0 billion on 30 June 2021.

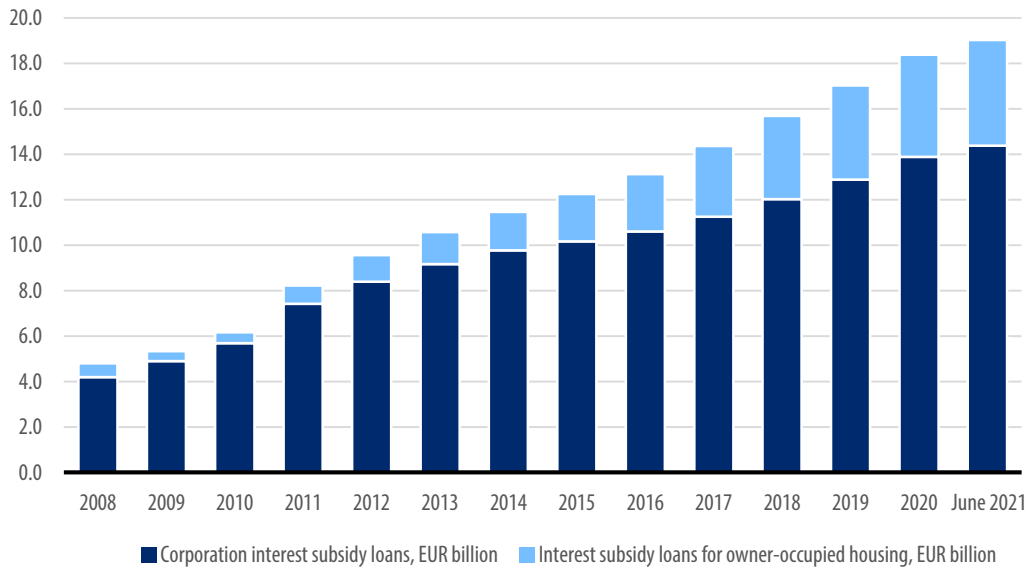
the law. In interest-subsidy loans, the self-financing share varies between 1.0% and 3.8%. Interest subsidies are paid for periods ranging from 10 to 24 years.

The loan portfolio of interest-subsidised housing finance has grown from EUR 6.2 billion at year-end 2010 to EUR 18.4 billion in 2020 and to EUR 19.0 billion at the end of June 2021 (see Figure 28). Because of the generally low interest rates, the interest subsidy payments for housing financing currently only amount to about EUR 2.7 million each year. In the long run, however, the substantial growth in interest-subsidised lending contains an interest rate risk for central government. A rise in interest rates and the low self-financing share of the interest rate paid in certain loan categories increase the risk that more interest-subsidy payments will have to be made. With an interest rate of 5% on an interest-subsidy loan, the annual interest-subsidy expenses would amount to approximately EUR 256 million.<sup>35</sup>

In recent years, growth in interest-subsidy housing loans has been particularly rapid in housing lending for private individuals who are first-time buyers (ASP loans). The loan portfolio has grown from EUR 346 million at year-end 2010 to EUR 4.5 billion at year-end 2020. At the end of June 2021, the ASP loan portfolio amounted to EUR 4.65 billion. The consistently large number of new ASP savings accounts opened during the past few years indicates that the interest-subsidised ASP loan portfolio will also continue to grow rapidly for the next few years when the loans are taken out after the savings periods. In 2013–2019, the annual number of new accounts opened averaged around 34,500. During the peak year in 2019, the figure was around 39,250 and in 2020 around 37,750. The number of accounts opened in the first half of 2021 was just under 20,500.

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35 Simulation of interest-subsidy payments by the State Treasury.

**Figure 28.** Development in interest-subsidised loan portfolio in housing financing, EUR billion

Source: State Treasury

### 5.1.3 Student loans

The state-guaranteed student loan portfolio has grown in recent years. This was underpinned by the student financial aid reform of 2017 which, among other things, increased the state guarantee amounts for student loans. The loan portfolio totalled EUR 4.5 billion at year-end 2020, whereas at the beginning of the 2010s the figure had been EUR 1.4 billion. In 2021, the guarantee portfolio has grown further and totalled just under EUR 4.8 billion at the end of June.

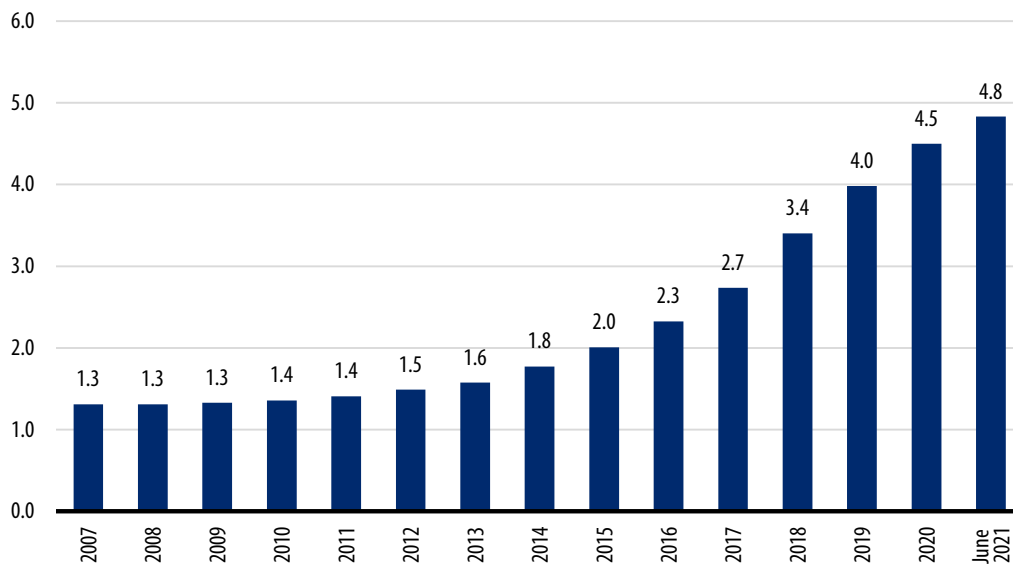
The strong growth in the student loan portfolio has so far not been seen as any growth in guarantee liability receivables related to student loans subject to recovery procedures. The guarantee receivables amounted to EUR 116.6 million in 2020, whereas the corresponding figure for 2016, for example, was EUR 131.7 million. The year-on-year increase from last year is, however, EUR 3.3 million. The loan amount remitted to the banks under the government guarantee liability has increased by a few million euros in recent years and amounted to EUR 24.9 million in 2020. The corresponding figure at year-end 2019 was EUR 19.5 million and at year-end 2018 EUR 16.5 million. The annual revenue from recovery procedures has been slightly lower than the annual guarantee liability expenditure. The revenue totalled EUR 14.7 million in 2020 and EUR 15.5 million in 2019. The payment



exemptions and depreciations associated with recovery procedures amounted to EUR 10.2 million in 2020.

The student loan portfolio has no risk concentrations related to individual customer groups. At year-end 2020, a total of 485,258 persons had a student loan and the average loan amount was EUR 9,425. Both the number of persons with a student loan and the average size of a student loan have increased from last year, when the figures were 457,860 and EUR 8,658 respectively.

**Figure 29.** Development in state guarantee portfolio for student loans, EUR billion



Source: Social Insurance Institution of Finland (Kela), State Treasury

### 5.1.4 European Financial Stability Facility (EFSF)

The European Financial Stability Facility (EFSF) is a limited liability company founded by the euro area Member States in Luxembourg in 2010. It served as a temporary crisis resolution mechanism by providing conditional financial assistance to Member States facing financing problems. The funding of EFSF is guaranteed by the euro area Member States. The guarantee also covers interest and over-guarantee, and no guarantee fees have been charged for it.

The maximum amount of the EFSF funding programme approved in February 2012 remains at EUR 241 billion, and it has been used to provide loans to Greece, Ireland and

Portugal. No new loans have been provided by the EFSF since 2013 and no financial assistance has been provided since 2014. Finland's share of guarantees in the funds raised by the EFSF, including interest and over-guarantees, totalled approximately EUR 6.8 billion at year-end 2020.<sup>36</sup> At the end of June 2021, the liability amounted to EUR 6.73 billion.

If a country has been granted financial aid and is unable to repay the loans provided by the EFSF or make interest payments, Finland will have to make a contribution to the EFSF in accordance with its share of the guarantees. The EFSF's funding strategy also involves operational risks as well as counterparty and market risks which may, to some extent, materialise regardless of the beneficiary's ability to pay.

Finland requested and received collateral to limit the risk associated with the loans provided as part of the second EFSF programme for Greece.<sup>37</sup> The value of the collateral arrangement represents 40% of Finland's imputed share of the loan. The market value of the collateral for this programme concerning Greece totals around EUR 902 million.

### 5.1.5 Bank of Finland

The state guarantees granted to the Bank of Finland by the Government are part of the financial arrangements of the International Monetary Fund (IMF). No guarantee fees have been charged for the state guarantees. The guarantee liabilities connected with IMF's financing comprise the member's quota, the New Arrangements to Borrow (NAB) and a bilateral loan, the total of which increased temporarily due to agreement amendments made in late 2020 from EUR 8.2 billion to EUR 9.3 billion and then dropped again to EUR 7.2 billion, which was the total at the end of June 2021. Around EUR 640 million of the financing granted by Finland to the IMF was in use at year-end 2020 and around EUR 720 million at the end of June 2021.

Government guarantees associated with the member's quota and the NAB are issued in the IMF's accounting currency, the Special Drawing Right (SDR). Any compensation to the Bank of Finland on the basis of the state guarantee would be paid in euros. Consequently, the euro-denominated value of the guarantee depends on the EUR/SDR exchange rate effective at the time.

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<sup>36</sup> For more detailed information on Finland's liabilities arising from the management of the euro area debt crisis, see the Ministry of Finance Overview of Central Government Risks and Liabilities published in 2018 <https://vm.fi/en/publication?pubid=27701>.

<sup>37</sup> Finland also received collateral for the programme concerning Spain, but the programme was financed via the European Stability Mechanism (ESM).

The IMF financing involves, first and foremost, credit risks associated with the beneficiary countries' solvency. To limit these credit risks, debt sustainability analyses are carried out before any financing is granted, various economic policy conditions are imposed on lending, and financing is provided in tranches, with disbursement tied to the implementation of an adjustment programme. The status of the IMF as a preferred creditor also reduces the credit risk associated with the financing granted by the institutions. During its history, the IMF has used debt write-downs mainly in the poorest member countries as part of more extensive debt relief programmes.

### 5.1.6 Other guarantees

The central government guarantee for loans taken out by the Saint Petersburg Foundation ended in 2017 when central government paid the remaining liabilities related to this guarantee to the bank. Based on the original guarantee of EUR 13.5 million, central government paid a total of EUR 11.9 million in guarantee compensations. In the bankruptcy proceedings that commenced in 2017, central government's receivables, including interest for late payment, was roughly EUR 12.5 million. There were no assets to be distributed in the bankruptcy proceedings of the St Petersburg Foundation completed in 2020, so central government incurred a credit loss on the guarantee compensation receivables.

In 2017, Parliament gave the Government authorisation to grant Terrafame Ltd an absolute government guarantee to a maximum amount of EUR 107 million. No counter collateral is required for this guarantee, which serves as a counter guarantee for environmental guarantees related to waste processing. Within this authorisation, the Government gave a EUR 68 million state guarantee as a counter guarantee for the bank guarantee obtained by Terrafame Ltd. Since then, collateral arrangements made in 2018 and 2019 have reduced central government guarantee liabilities in terms of both percentage and euros. At year-end 2020, the guarantee liability in effect was EUR 32 million. The guarantee liability expired in May 2021. One-off payments at the withdrawal date as well as annual guarantee fees have been paid for the guarantees. The guarantee authorisation will expire on 9 February 2022 at the latest.

As was noted at the beginning of section 5.1 above, the coronavirus crisis has increased central government guarantee liabilities. In April 2020, a guarantee programme of a maximum of EUR 600 million was granted under the second supplementary budget for shipping companies that are critical for security of supply. Under the authorisation in force until the end of 2020, three shipping companies were granted a total of EUR 139.5 million in guarantees under the guarantee programme for shipping companies. The amount of guarantees in effect was EUR 57.6 million at the end of June 2021 and EUR 138.6 million

at the end of September 2021 when all authorised guarantees had been drawn. Due to the exceptional situation caused by the coronavirus crisis, in March 2020 Parliament authorised a guarantee of a maximum of EUR 600 million for a loan taken out by Finnair Plc. In May 2020, the Government authorised a central government guarantee of EUR 540 million for the Finnair loan. The amount of guarantee in effect at the end of June 2021 was EUR 540 million. Guarantee fees were charged for the shipping company guarantees and the Finnair guarantees.

The COVID-19 pandemic has also resulted in a significant increase in unemployment security expenditure, which is why central government granted a EUR 880 million guarantee for Employment Fund loans in June 2020. According to a European Commission Communication, the duration of support measures in response to the COVID-19 outbreak granted in the form of new public guarantees is limited to a maximum of six years. The guarantee has yet to be exercised. No guarantee fee was charged for the guarantee.

Central government has also taken on new guarantee liabilities through the crisis management instruments established within the EU. To cover any losses of the European Investment Bank, a Pan-European Guarantee Fund in response to COVID-19 was created, with Finland's share of the liabilities amounting to EUR 371 million. To mitigate unemployment risks, the EU Member States established the SURE instrument, for which Finland's calculated guarantee liability totals EUR 432 million. In addition to these, Finland's liabilities will be increased by the recovery instrument. Loans taken out due to the recovery instrument will increase EU liabilities by EUR 750 billion (at 2018 prices). Finland's calculated share of this is estimated to be around EUR 13 billion. To be realised after 2027, Finland's payments relate to the recovery instrument's support in the form of grants, of which Finland's share is estimated to total EUR 6.6 billion.

## 5.2 Capital liabilities

Capital liabilities refer to callable capital remitted to international financial institutions (IFIs) in the event that capital is required to cover losses or to prevent their insolvency. By far the most significant capital liability is to do with the European Stability Mechanism (ESM). Finland's share of the callable ESM capital is EUR 11.14 billion.

**Table 3.** Central government capital liabilities, EUR billion

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Asian Development Bank (ASDB)*	0.41	0.40	0.38	0.41	0.44	0.44	0.49	0.42	0.42	0.40
African Development Bank (AfDB)*	0.35	0.35	0.33	0.35	0.38	0.38	0.35	0.36	0.36	0.78
Inter-American Development Bank (IDB)**	0.12	0.13	0.14	0.18	0.22	0.25	0.22	0.23	0.23	0.22
European Bank for Reconstruction and Development (EBRD)	0.30	0.30	0.30	0.30	0.18	0.30	0.30	0.30	0.3	0.30
World Bank Group (WBG) <sup>1**</sup>	0.76	0.79	0.87	0.97	1.15	1.29	1.09	1.13	1.2	1.07
European Investment Bank (EIB)	2.82	2.82	2.82	2.82	3.10	3.10	3.10	3.10	3.1	3.10
Council of Europe Development Bank (CEB)	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07
Nordic Investment Bank (NIB)	1.01	1.01	1.01	1.01	1.09	1.09	1.09	1.09	1.09	1.09
European Stability Mechanism (ESM)	0.00	11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14
<b>Total</b>	<b>5.83</b>	<b>17.01</b>	<b>17.06</b>	<b>17.25</b>	<b>17.77</b>	<b>18.05</b>	<b>17.85</b>	<b>17.84</b>	<b>17.91</b>	<b>18.17</b>

\* Capital expressed in SDR (\*\*USD), translated into euros at the closing exchange rate for the year.

\*\*\* Includes the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA).

Sources: Financial statements, Ministry of Finance, Ministry for Foreign Affairs

### 5.3 Other contingent contractual liabilities

Central government is responsible for the achievement of emissions targets in the Effort Sharing sector not covered by the EU Emissions Trading System (EU ETS). The main Effort Sharing sector emission sources are transport and agriculture, individual heating of buildings, work machinery, waste management and F gases. According to preliminary data, Finland will meet its current Effort Sharing sector emission reduction obligation for 2020 (-16% compared to the 2005 level by 2020). In 2020, emissions were reduced in particular by the stronger steering effect of emissions trading and by the COVID-19 pandemic.

In July 2021, the EU adopted the European Climate Law, which contains a decision to increase the EU emission reduction target set for 2030. Instead of the previous ambition level of 40%, the EU is to reduce its net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. On 14 July 2021, the European Commission adopted its Fit for 55 Package of legislative proposals. The key aim of the twelve legislative proposals is to deliver the transformational change needed to achieve the 55% emission reduction target set for 2030.

The Fit for 55 Package contains the Commission's proposal for the new emission reduction target for the Effort Sharing sector and for how each Member State will contribute to this collective target. The new Effort Sharing sector emission reduction obligation proposed by the Commission for Finland is 50% from the 2005 level by 2030 instead of the current target of 39%.

Reaching the new higher ambition level for the Effort Sharing sector emission reductions obligation would require additional Effort Sharing sector measures by Finland, as it has been estimated that the measures set out in the national Medium-Term Climate Change Policy Plan for 2030 would, when implemented, only be sufficient to reach the current 39% target. In addition, should the development of emissions levels be less favourable than expected in the 2020s, for example as a result of stronger than predicted economic growth, central government would be forced to adopt new actions aiming to cut emissions in the Effort Sharing sector even to meet its current obligation, let alone the higher ambition level. It would also be possible, but only to a limited extent, to use Kyoto Flexible Mechanisms to transfer ETS allowances or surplus Land Use, Land-Use Change and Forestry (LULUCF) sector allowances to the Effort Sharing sector to meet its obligation.

In addition to the obligation of the Effort Sharing sector, in the 2021–2030 period central government will be responsible for the achievement of the emissions obligation of the LULUCF sector. Central government has made a commitment to keeping the calculated greenhouse gas removals of the LULUCF sector at least at the level of its calculated emissions. Should the LULUCF sector turn into a net calculated emissions source by 2030, the calculated emissions of the LULUCF sector may need to be compensated for by additional emission reductions in the Effort Sharing sector. In addition, EU Member States may also trade with each other in LULUCF units.

In its Fit for 55 Package, the Commission also proposes changes to the EU's LULUCF Regulation, the net greenhouse gas emissions reduction target for 2030 included in it as well as the breakdown of this target into Member States' obligations. The Commission's proposal sets an EU-wide net reduction target that is greater than the actual average of the net reductions reported by Member States in 2016–2018. The target proposed for Finland is estimated to be largely in line with the 2035 carbon neutrality target adopted by

Finland. At the same time, the target is slightly more ambitious than assumed in scenario calculations supporting the preparations of climate measures for the LULUCF sector. Based on the scenario calculations, Finland's current measures would therefore not be sufficient to reach the proposed more ambitious net reduction obligation.

Additional measures to reach the Effort Sharing and LULUCF sector obligations are being planned and prepared as part of the ongoing preparation of the new medium-term climate change policy plan, climate and energy strategy as well as the climate plan for the land use sector set out in the Government Programme. Additional measures will be required to reach both the increased emissions obligations set for Finland for 2030 as well as the 2035 climate neutrality target of the Government Programme.

Another contingent contractual liability that is legally binding on central government concerns nuclear operations as set out in the Nuclear Liability Act (484/1972). Nuclear liability refers to the liability of the operator of a nuclear installation for damage to a third party by radiation resulting from a nuclear incident. The liability of an operator of a nuclear installation situated in Finland in respect of nuclear damage caused and suffered in Finland is unlimited. The Nuclear Liability Act is based on international conventions amended by protocols in 2004. The protocols and the resulting amendments to the Nuclear Liability Act are estimated to enter into force from the beginning of 2022. The relevant government proposal for amending the Nuclear Liability Act was submitted to Parliament in September 2021. The purpose of the legislative amendments is to increase the liability of operators of nuclear installations used in energy production for damage caused and suffered outside Finland from EUR 700 million to EUR 1.2 billion.

As regards transport liabilities and the liability of installations used for purposes other than energy production, the aim is to limit liability to EUR 80 million–EUR 250 million. In addition, the government proposal puts forward that provisions be laid down concerning a special insurance guarantee which the Government could, if the conditions laid down in the provisions are met, grant to cover such personal injury that presents later than 10 years but no later than 30 years from a nuclear incident.

Under the Nuclear Liability Act, the State of Finland has secondary liability for nuclear damage if those entitled to compensation cannot be compensated under the operator's insurance. Increasing the liability amounts of operators of nuclear installations used for energy production will reduce central government's share of liability as the operator's liability increases.

## 5.4 Implicit liabilities of the banking sector

Prudential and crisis resolution legislation imposes minimum obligations for banks. By fulfilling these obligations, banks are expected to either be able to continue their operations also through difficult circumstances in their operating environment or, if this is not possible for an individual credit institution, the continuation of society's critical functions could be ensured by employing an orderly crisis resolution procedure. Deposit guarantee legislation in turn safeguards enterprise and household access to deposits up to a specific limit in case of bank insolvency issues.

Central government has no statutory obligation to guarantee the continuity of banks' operations or their liabilities held by their creditors. The history of banking crises both in Finland and Europe has shown, however, that the direct and indirect societal costs of severe banking crises are, or they are considered to be, so high that the public sector has been forced to take support measures to ensure the continuity of financial services essential to society.<sup>38</sup> This has applied in particular to situations where multiple banks have experienced difficulties at the same time and the functioning of the entire financial system has been in jeopardy. Situations like this can be referred to as the realisation of implicit liabilities in the banking sector as costs for central government and taxpayers.

### 5.4.1 Situation of the banking sector in Finland

Finnish banks fared well through 2020. The feared wave of enterprise bankruptcies did not materialise<sup>39</sup>, and non-performing loans have remained at a moderate level as the economic slump was less severe than anticipated. The loan repayment holidays granted by banks, the sizeable direct financial support to enterprises provided by central government and the central government guarantees granted for banks' customers have played a key role in avoiding bankruptcies. Financial performance reported by banks was good in 2020 and in January–September of the current year, and the sector's average Common Equity Tier (CET) 1 ratio exceeded 18% at the end of June 2021 (17.6% at

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38 The literature contains plenty of research on the costs incurred by general government finances from financial crises, including [https://www.ecb.europa.eu/pub/economic-bulletin/focus/2018/html/ecb.ebbox201806\\_04.en.html](https://www.ecb.europa.eu/pub/economic-bulletin/focus/2018/html/ecb.ebbox201806_04.en.html).

39 Situation in October 2021. The last of the three derogations from bankruptcy regulations ended on 30 September 2021, which means no specific data on the situation is not yet available.



year-end 2020). All Finnish banks also fulfil the leverage ratio requirement in force since June and exceed the minimum liquidity coverage ratio (LCR) requirement<sup>40</sup>.

## 5.4.2 Risks and their management

The results of the EU-wide stress tests conducted by the European Banking Authority (EBA), the European Central Bank (ECB) and national competent authorities (CAs) were published at the end of July 2021. The EBA test group included Nordea and OP Group from Finland, both of which passed the stress scenario, too, without any solvency issues. The ECB in turn stress-tested Municipality Finance and the Financial Supervisory Authority (FIN-FSA) tested the resilience of smaller Finnish banks. According to FIN-FSA, the solvency of Finnish banks would withstand even a strong weakening in the operating environment.<sup>41</sup> The results indicate that the average risk tolerance of banks is good but there is variation between banks in stress test results and in resilience to negative macroeconomic shocks. More specific data on differences between banks is not publicly available, however.

In the EBA and ECB stress tests, the solvency of many European banks declined to a rather low level, although negative solvency was only seen for one bank (Monte dei Paschi di Siena). Regardless of the recent favourable economic development, there are weaknesses in the European banking sector that may, in a challenging economic scenario and following the end of public support measures, erupt as local difficulties. The effects of the COVID-19 crisis on balance sheet quality are still unclear and many banks have long-term profitability problems (heavy cost structure, non-diverse return structure, zero-interest environment, too many banks). The European economic outlook for the near term is rather favourable but involves clear downward risks as cyclical development becomes more subdued next year<sup>42</sup>, which may also be reflected in the development of European

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40 To read more about the financial performance and solvency of banks, see the Financial Supervisory Authority (FIN-FSA) reviews (in Finnish) (<https://www.finanssivalvonta.fi/markkinoiden-vakaus/valvottavien-taloudellinen-tila-ja-riskit/>).

41 To read about the results of the stress tests, visit: <https://www.finanssivalvonta.fi/en/publications-and-press-releases/Press-release/2021/results-of-the-eu-wide-stress-tests-finnish-banking-sectors-solvency-would-withstand-a-strong-weakening-in-the-operating-environment/>

42 For comprehensive coverage of the market situation and risks, see the joint report of the European supervisory authorities: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Reports/2021/1019147/JC%202021%2045%20-%20Joint%20Committee%20Autumn%202021%20Report%20on%20Risks%20and%20Vulnerabilities.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1019147/JC%202021%2045%20-%20Joint%20Committee%20Autumn%202021%20Report%20on%20Risks%20and%20Vulnerabilities.pdf)

banks. Without internal structural change in the sector leading to increased efficiency, the profitability challenges will persist.

The Single Resolution Board (SRB) is the resolution authority for the largest and most systemic banks operating in the Banking Union, whereas the national authorities play this role concerning smaller banks. In Finland, the Financial Stability Authority (FFSA) has primary competence over all deposit banks apart from Nordea and OP Group. However, the FFSA also participates in resolution planning concerning large banks, too.

The FFSA resolution tools include several tools for the management of banking crises. Resolution plans are drawn up for all banks to prepare in advance for a situation where the bank is failing. The plans are updated continuously and their functioning is tested against various crisis scenarios. The plans cover all of the key functions of the banks and involve the FFSA assessing the impacts of default on the market and other actors and deciding which resolution tools are best suited to each bank.

There are four actual resolution tools: write-down and conversion of liabilities into capital instruments (bail-in), sale of business, bridge institution and asset management vehicle. The SRB operates in a similar manner concerning systemic banks. Where resolution requires the use of external funds, the supranational Single Resolution Fund (SRF) can be called upon. The SRF is financed by stability contributions collected from banks. In addition to the SRF, Finland also has a small national Resolution Fund for resolution of investment firms.

If a bank is not placed under resolution, the FFSA must make a decision on either placing the institution into liquidation or filing a bankruptcy application with a court concerning the institution. In such cases, the deposit guarantee scheme is activated and guaranteed deposits will be compensated for. Details of which banks in Finland fall under resolution and which under liquidation or bankruptcy proceedings are not public information.

Recent years have seen major steps taken in banking crisis management. The financial crisis showed how costly banking crises can be for society and taxpayers. Tools available for the authorities to effectively minimise costs incurred by taxpayers have been added to legislation concerning credit institutions and their resolution.

Close cooperation and exchange of information between financial market authorities also plays a crucial role in the anticipation and management of crises. This was also noted by the National Audit Office of Finland (NAOF) in its 2020 audit report on the FFSA.<sup>43</sup>

In Finland, the FFSA is responsible for organising the deposit guarantee scheme for Finnish deposit banks. The size of the Deposit Guarantee Fund administered by the FFSA is around EUR 780 million and that of the Old Deposit Guarantee Fund (VTS Fund), to which the FFSA has access if necessary, was around EUR 620 million at year-end 2020. This means that the total amount of funds available for depositor compensation is around EUR 1.4 billion. Of the total of household and enterprise deposits, covered deposits accounted for around EUR 145 billion at year-end 2020. The Finnish Deposit Guarantee Fund covers around 1% of the amount of covered deposits, which is above the 0.8% target level laid down in the Deposit Guarantee Scheme Directive.

If the assets previously raised by the Deposit Guarantee Fund are insufficient for the payment of compensation, the FFSA may order deposit banks to pay an additional annual contribution or lend assets to the Fund. In addition, in spring 2020, Parliament provided the Government with an advance authorisation for a loan limit of EUR 2 billion for the Financial Stability Fund administered by the FFSA. Under the limit, the Government may, on terms and conditions determined by the Government, issue a loan for the Financial Stability Fund, which in practice consists of the Deposit Guarantee Fund.

In practice, the assets, extraordinary contributions, loans from banks and the loan limit provided by central government are enough to cover compensation payments for the covered deposits of 1–2 medium-sized banks in the event of the insolvency of a bank or banks. Concerning large institutions (Nordea and OP Group), the general rule is to apply the resolution procedure, whereby the deposit guarantee scheme need not be activated. The key resolution actor in Finland is the FFSA, which operates as part of a European network (in particular the Single Resolution Board, SRB) and in close cooperation with the Financial Supervisory Authority (FIN-FSA), the Bank of Finland and the Ministry of Finance.

## 5.5 Local government

Under section 121 of the Constitution of Finland (731/1999), Finnish municipalities have extensive self-government. Central government is not responsible for the municipalities' financial liabilities. Local government finances are, however, part of general government

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<sup>43</sup> <https://www.vtv.fi/en/publications/operations-of-the-financial-stability-authority-as-part-of-the-banking-unions-single-resolution-mechanism/>

finances and therefore also closely connected with central government finances. Any problems in local government finances would also impact central government finances in one way or another.

The coronavirus pandemic and the restrictions introduced by the Government in 2020 and 2021 have affected the revenue and expenditure of municipalities, too. In 2020, the Government supported the municipalities through multiple mutually supportive measures in supplementary budgets. The support package for municipalities and hospital districts totalled around EUR 2.2 billion. The support clearly exceeded the financial losses incurred in local government finances in 2020. The 2021 Budget contains EUR 1.6 billion for COVID-19 costs, of which around EUR 600 million is, however, estimated to be carried over to 2022.

The impacts of the coronavirus pandemic on individual municipalities have varied due to factors including their industrial and service structure, the number of COVID-19 cases and geographical location. The impacts of the pandemic focused in particular on municipalities in whose industrial structure the service, logistics, event and tourism sectors play a great role, in other words the large cities and smaller municipalities dependent on tourism.

The total combined annual contribution margin of municipalities has generally been positive but, apart from a few exceptional years, insufficient to cover depreciation and net investments. This has resulted in an increase in municipal indebtedness. The annual contribution for 2020 was exceptionally high and enough to clearly cover depreciations and net investments. Nevertheless, the municipal loan stock continued to grow almost at the level of the previous years.

At the same time, municipalities have been forced to increase their local tax rates. The weighted average local tax rate for all Finnish municipalities has risen from 18.12% in 2004 to 19.96% in 2021.

### **5.5.1 Municipal loan stock**

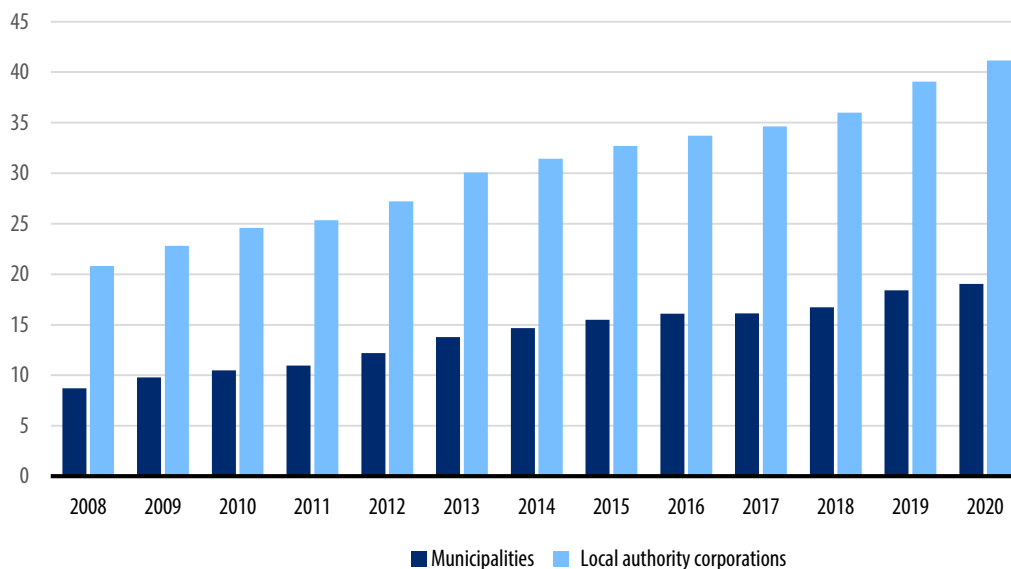
According to their final accounts for 2020, the municipalities' loan stock grew by over EUR 600 million, amounting to EUR 19.03 billion at year end (Figure 30). Just like in central government, municipal loan growth has been strong over the past couple of decades. In 2000, the municipal loan stock totalled EUR 3.85 billion.

At the end of 2020, the total loan stock of municipalities and joint municipal authorities stood at EUR 23.4 billion. The total local authority corporation<sup>44</sup> loan stock amounted to EUR 41.2 billion over the corresponding period.

Around 45%–55% of the municipalities' loans are provided by Municipality Finance Plc (MuniFin). Currently, approximately 65% of new municipal sector loans and 80% of financing for central government-subsidised social housing construction come from this company. MuniFin is a credit institution owned by the municipalities, municipal entities and the local government pension institution KeVa, with central government having a 16% stake in MuniFin. Other funding providers include commercial banks and the European Investment Bank.

The Municipal Guarantee Board guarantees the funding of MuniFin. Under the Act on the Municipal Guarantee Board (487/1996), the member municipalities are jointly and in proportion to their population figures responsible for the funding of such expenses and commitments which cannot be otherwise covered. The member municipalities of the Board comprise all of the municipalities of mainland Finland.

**Figure 30.** Development in municipal and local authority corporation loan stock, EUR billion



Source: Statistics Finland

<sup>44</sup> Under chapter 1, section 5, subsection 1 and chapter 1, section 6 of the Accounting Act, the group (corporation) relationship between a municipality and another entity is based on control. A group relationship may be formed on the basis of the majority of voting rights or some other type of effective control.

The guarantees provided by the Municipal Guarantee Board have grown on a par with the operations of MuniFin. Its guarantee portfolio has more than tripled in just over ten years, increasing from EUR 10.6 billion in 2008 to EUR 36.7 billion in 2020.

The mission of the joint funding system of MuniFin and the Municipal Guarantee Board is to ensure access to finance in all market conditions. The clean credit history of Finnish municipalities and legislation that addresses the financial problems of individual municipalities have supported the credit standing of the Finnish municipal sector in the financial market.

Consequently, there are no major differences between municipalities in the pricing of the loans taken out through the joint municipal funding system. This may involve risks as financially weaker municipalities can also borrow money on reasonable terms, and loans may then be used also to maintain liquidity rather than to make financially sound investments.

The risks are managed using an assessment procedure based on the final accounts of municipalities, which allows the Ministry of Finance to monitor the finances of individual municipalities and, if necessary, provide them with guidance. Very weak finances and lack of restructuring potential may result in a municipality being merged with another municipality with a more sustainable financial position.

However, the inability of a municipality to repay its loans is very unlikely and would be the result of highly exceptional circumstances. If a municipality were in such financial hardship that loan repayment is impossible, the lender would incur a credit loss regardless of whether it operated within the municipalities' joint funding scheme or as a private credit institution.

The increase in total municipal loans, coupled with growing indebtedness of the public sector as a whole, could pose problems when the markets assess Finland's credit rating but, on the whole, it is unlikely that the municipal loan portfolio would currently constitute a material risk factor for local government finances or, indirectly, for central government. However, it is the rate of growth in indebtedness that is a cause for concern. The increase in loans is already being translated into a decline in the municipal equity ratio and a weakening of the indicator measuring relative indebtedness.

The ability of the municipalities to borrow money regardless of their capacity to manage their finances may pose an additional risk to local government finances. Easy access to loans may lead to unnecessary investments and falsely optimistic estimates of the annual costs of investments. Investments are not limited by a deficit coverage requirement, and the coordination of investment projects is insufficient.

The Finnish health and social services reform will result in changes to the loan and asset amounts of the local government sector. The most significant entity will be the transfer of real estate assets relating to healthcare and medical care as well as related loan liabilities to the new wellbeing services counties. Their amount is anticipated to be around EUR 4.2 billion at the beginning of 2023. The loan stock transferred from hospital districts operating as joint municipal authorities will account for most of this amount.

### 5.5.2 Municipal guarantees

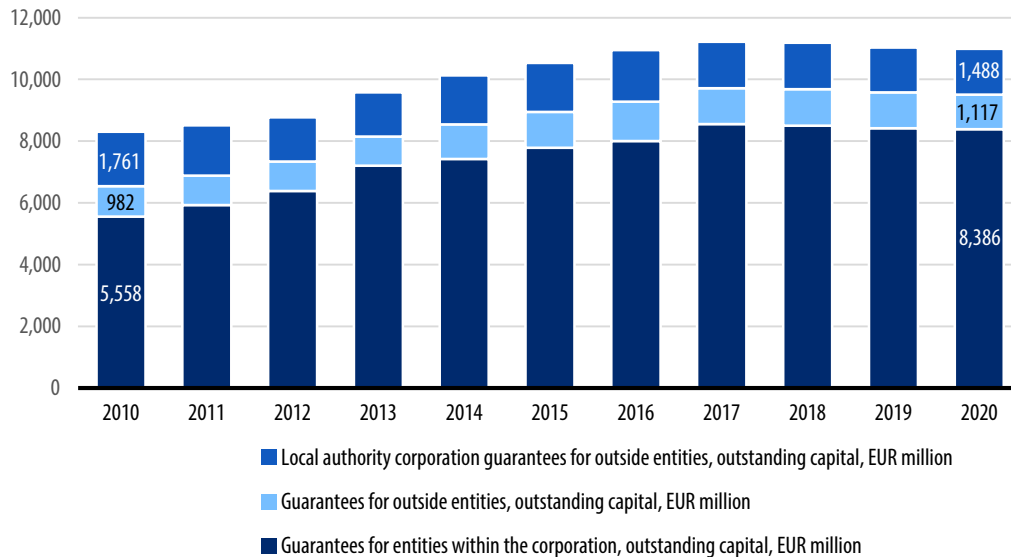
Financial statements for 2020 show that municipal guarantees totalled around EUR 8.4 billion, of which around EUR 1.1 billion was for entities outside the same local authority corporation (Figure 31).<sup>45</sup> Changes in municipal guarantees over the past three years have been minor, with a slight decrease in guarantees seen in 2020. In 2010, municipal guarantees totalled EUR 5.5 billion, of which EUR 0.9 billion was for entities outside the same local authority corporation.

The amount of guarantees provided by joint municipal authorities was significantly lower. In 2020, their guarantees for entities in the same local authority corporation totalled EUR 643 million and for others more than EUR 17 million. The corresponding figures a year earlier had been EUR 528 million and under EUR 6 million respectively.

An examination of municipalities' guarantee practices reveals that small municipalities, in particular, have given significant guarantees in relation to their fiscal capacity. Realisation of the guarantee liabilities could jeopardise the municipality's functions. In some municipalities, the guarantee liabilities equate as much as a full year's operating expenses in healthcare and social welfare. If a guarantee obligation is realised, municipalities typically cover the losses by taking out a loan.

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<sup>45</sup> The analysis above does not include the municipalities' liabilities arising from the guarantees issued by the Municipal Guarantee Board.

**Figure 31.** Development in municipal guarantee portfolio, EUR billion

Source: Statistics Finland

### 5.5.3 Municipal Public-Private Partnership (PPP) projects

In recent years, municipalities have made use of the Public-Private Partnership (PPP) model as an alternative procurement model for investments. In addition to loans, such projects have also often been financed through real estate leasing. The estimated value of PPP projects carried out under contracts concluded by municipalities and joint municipal authorities in 1997–2019 is almost EUR 1.7 billion. It is estimated that the use of the PPP model has become clearly more common in the last ten years.

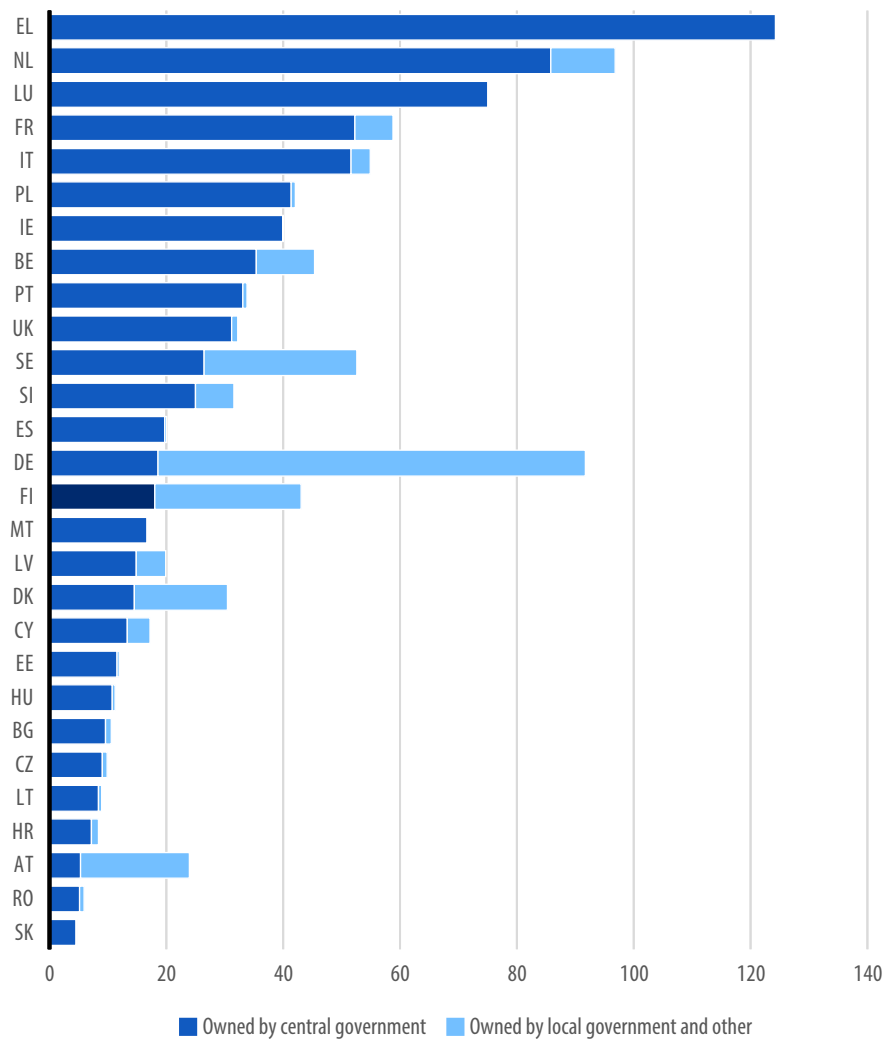
## 5.6 Liabilities of state-owned companies

State-owned companies are part of central government financial assets. However, they may also create financial liabilities for central government. Central government may need to provide loss-making companies or companies facing difficulties with capital injections or other financial support measures. Holdings in companies may also lead to the realisation of other types of liabilities, such as environmental damage. A recent example of liabilities arising for central government is the difficulties incurred by Finnair as a result of the COVID-19 pandemic, due to which central government has had to participate in many ways in the company's financing.



The State of Finland owns 66 companies directly.<sup>46</sup> According to enterprise statistics of Statistics Finland, the state had a direct or indirect controlling interest in 241 companies in 2019. The companies in which the state is a majority shareholder have a very low debt-to-GDP ratio compared with those in other countries (Figure 32). When the debts between state-owned public companies are consolidated, the debt-to-GDP ratio falls to around 11% or EUR 27 billion. Of this total, around EUR 11.5 billion is debts owed by state-owned financial institutions and around EUR 15.6 billion owed by companies operating in other sectors. Loss-making companies had debts amounting to around EUR 8 billion.

**Figure 32.** Debts of publicly-owned companies relative to GDP in 2019, %



Source: Eurostat, non-consolidated debt

## 5.7 Liabilities associated with environmental damage

The purpose of secondary environmental liability systems is to prepare for costs arising from environmental damage, the prevention and management of related risks and the implementation of environmental rehabilitation measures, and for the need to pay compensation for environmental damage to those incurring loss or damage in situations where the party causing the damage is insolvent or unknown or cannot be reached. In Finland, these systems comprise the compulsory insurance based on the Environmental Damage Insurance Act (81/1998) and the Oil Pollution Compensation Fund. In addition, central government budget financing is a last-resource source of financing. The systems also include a support system in accordance with a Budget appropriation for old contaminated areas to identify their degree of contamination and to decontaminate them. In addition, municipalities provide financing for the rehabilitation of old contaminated soil and groundwater sites.

Since 2013, central government budget financing has been provided for the management of serious environmental risks and prevention of dangerous situations relating to environmental contamination in eight different cases. All of the cases are related to financial difficulties of enterprises, and the enterprises have typically gone bankrupt. By the end of September 2021, financing granted from the central government budget had totalled around EUR 153 million. Of this, the amount granted due to environmental damage caused by the Talvivaara mine is clearly the most significant at around EUR 127 million.

This has shown that the existing secondary environmental liability systems and collateral do not cover all situations and are less than optimal. A legislative project launched by the Ministry of the Environment aims to create more comprehensive secondary liability systems for environmental damage. The aim is for operators' environmental obligations to be met as extensively as possible without central government intervention. The proposal for a government proposal is due to be submitted to Parliament in 2022.

## 6 Stress scenario

- Finland's capacity to withstand a negative macroeconomic shock has declined further due to the COVID-19 crisis. The recession caused by the coronavirus pandemic and the support measures taken to alleviate its impacts have resulted in a substantial general government deficit and rapid increases in general government indebtedness.
- In a situation examined by the stress test where the coronavirus pandemic worsens again and various restrictive measures will have to be imposed again to curb infections, a significant further decline is seen in Finland's general government finances. In the scenario examined, the general government debt-to-GDP ratio rises to around 78% by 2023. The partial realisation of central government guarantee liabilities would further increase general government deficit and the debt-to-GDP ratio.

The impacts of a sudden downturn on general government finances are simulated with a stress test. The stress test uses a scenario to examine the impacts of an economic downturn and realisation of contingent liabilities on general government key figures such as revenue, expenditure, budgetary position and indebtedness. In addition, the scenario examines impacts on central government assets and net debt.

The trend identified by the stress scenario is not a forecast. The purpose of the scenario is to illustrate the potential impacts of a serious economic and financial market shock on general government finances.

The stress test is based on the weak economic growth scenario provided in the macroeconomic projection of the European Central Bank (ECB).<sup>47</sup> The assumptions concerning the financial markets are from the scenario used by the European Banking Authority (EBA) in stress testing of banks.<sup>48</sup>

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47 ECB June 2021 macroeconomic projection

48 EBA scenario for 2021

## 6.1 Stress test assumptions

In the stress test, the COVID-19 pandemic worsens during 2021. The number of infections is assumed to increase due to new virus variants and as vaccine protection wanes. In the scenario, the pandemic and the measures taken to contain its spread weaken economic growth, increase unemployment and cause a decline in the value of financial and real assets. Major disruptions are seen in the financial markets in particular, with share prices plummeting and recovering slowly. Relaxation of restrictive measures is not possible until during 2023. The economic situation is worsened by bankruptcies caused by the recession, which increases household and enterprise debt servicing costs. Inflation slows, and so does the rise in wage and salary earnings. There is major decline in business profits. Interest payable on Finland's public debt, however, decreases as investor demand moves to countries whose indebtedness is proportionally lower.

**Table 4.** Baseline and risk scenario variables

	ECB stress scenario autumn 2021								
	Baseline growth %			Change to baseline, percentage points			Risk scenario growth %		
	2021	2022	2023	2021	2022	2023	2021	2022	2023
GDP volume*	3.3	2.9	1.4	-1.6	-2.4	0.2	1.7	0.5	1.6
Private consumption volume***	3.2	3.8	2.0	-1.6	-2.0	0.1	3.2	3.8	2.0
Inflation*	1.8	1.6	1.7	0.0	-0.3	-0.4	1.8	1.3	1.3
Index of wage and salary earnings***	2.3	3.0	2.5	-0.4	-0.7	-0.2	2.3	3.0	2.5
Unemployment rate, level*	7.8	6.8	6.4	0.3	1.1	1.2	8.1	7.9	7.6
Central government loans, 10-year interest, 0.0 level*	-0.1	-0.1	0.0	-0.5	-0.3	-0.4	-0.6	-0.4	-0.4
Residential real estate prices EBA, deviation from baseline**				-5.0	-8.3	-5.6			
Commercial real estate prices EBA, deviation from baseline**				-21.0	-16.0	-6.3			
Share prices EBA, deviation from baseline**				-50.0	-45.0	-35.0			

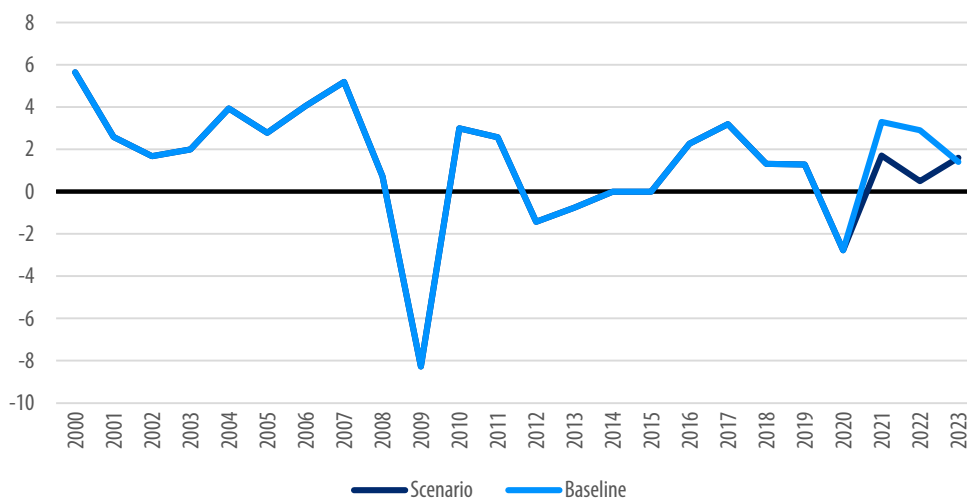
\*ECB, \*\* EBA, \*\*\* Ministry of Finance

In the scenario, Finnish GDP growth in 2021 is 1.6 percentage points weaker than the baseline. In 2022, growth is 2.4 percentage points weaker and in 2023 annual GDP growth rises above the baseline. Cumulative growth is just under 4% weaker than the baseline. The unemployment rate climbs 1.2 percentage points to 7.6%.

The biggest impacts of the crisis can be seen in the financial market. Share prices drop by 50% and recover slowly, still remaining at only a third of their peak levels in 2023. Residential and commercial real estate prices also stay low at around 6% compared with the baseline.

The baseline for the scenario is the projection provided by the Ministry of Finance in the Economic Survey of autumn 2021.

**Figure 33.** GDP growth, baseline and stress scenario



## 6.2 Impacts on general government finances indicated by the scenario

Economic development shown by the scenario indicates a weakening of general government finances.<sup>49</sup> Economic contraction reduces tax income. Benefit expenditure increases due to an increase in unemployment.

The scenario assumes that fiscal policy remains unchanged, that is, there will be no stimulation of general government finances through new decisions or policy changes, but automatic stabilisers are allowed to function unhindered. The scenario does not assume any new healthcare or business subsidies expenditure, either. Nor does the scenario examine the impact of the collapse of share prices on the solvency of earnings-related pension providers.

The sum of wages and salaries and, consequently, the income taxes and social security contributions received are reduced by the drop in employment and the slower growth of wage and salary earnings. The contraction of private consumption and prices in turn reduce revenue from indirect taxes, in particular value-added tax. Property income decreases as the interest rate level shrinks and share values collapse, particularly for pension providers. General government revenue is around EUR 5.1 billion below the baseline in 2023. The biggest impact on general government revenue arises from the reduction of around EUR 2.1 billion in property income, the second-largest impact from the reduction of more than EUR 1 billion in direct taxes and the reduction in indirect taxes by almost EUR 1 billion.

The scenario indicates divergent impacts on general government expenditure. When the interest rate level drops, interest expenses of public debt decrease despite the increase in the amount of debt. The decline in price levels as well as the level of wages and salaries reduces the payroll and operating costs of central and local government. Expenses in turn rise as unemployment expenditure and other social benefits increase by almost EUR 1 billion compared with the baseline in 2023. As other expenses decrease, expenses are reduced by around EUR 500 million compared with the baseline. The ratio of total consolidated general government expenditure to GDP grows as GDP contracts to around 56%, around 2.2 percentage points higher than the baseline.

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49 The impacts of the shock on general government finances have been estimated using a scenario model for general government finances developed by the Ministry of Finance relative to the projections provided in the autumn 2021 Economic Survey of the Ministry of Finance.

## 6.3 Contingent liabilities in the stress scenario

Central government has a significant amount of guarantees and other contingent liabilities. The COVID-19 crisis has also brought about new liabilities. The role of contingent liabilities is examined in the stress test by focusing on Finnvera and the Housing Fund of Finland. Liabilities relating to these account for the largest share of central government contingent liabilities.

The scenario assumes that the recession caused by the pandemic would cause problems in a sector for which Finnvera has granted guarantees, pushing two or three of the largest guarantee customers into insolvency. The purpose of the assumption is to illustrate the concentration risk associated with export financing exposures; it has nothing to do with the solvency of the largest customers.

According to the scenario, the collateral provided covers around half of the largest guarantee customers' guarantee receivables but, even then, the total losses would amount to EUR 1.4 billion. The losses would wipe out both of the export financing risk buffers (Finnvera's reserve for export credit and special guarantee operations and the State Guarantee Fund). If the State Guarantee Fund were depleted, this would increase the general government deficit, erode the cash assets and push up borrowing needs, as the State Guarantee Fund is linked to the central government's overall cash funds through a liaison account. The losses of Finnvera's reserve for export credit guarantee and special guarantee operations would have no repercussions on the general government deficit or cash funds, but the scenario assumes that Finnvera is provided with a capital injection totalling EUR 700 million to cover losses in 2021–2023.

As regards the Housing Fund of Finland, the scenario assumes that a fall in housing prices pushes a large individual customer with an exposure of EUR 1.4 billion into insolvency. Realisation of property collateral covers 50% of the liabilities, which means that credit losses total EUR 700 million. The Housing Fund has cash funds totalling EUR 2.7 billion; no budget funding is therefore required to cover the guarantee liabilities, nor is there any need for a capital injection. Although the realisation of the guarantee liabilities does not have direct budgetary implications, it results in a reduction in central government cash assets, as the cash reserves of the Housing Fund are also connected via the liaison account with the overall cash assets of central government, forcing central government to borrow EUR 700 million more to keep cash assets at a sufficient level.

In total, contingent liabilities would cause losses of EUR 2.1 billion at the 2023 level after the realisation of the collateral. Realisation of the contingent liabilities does not directly increase general government debt as the dissolution of the reserves does not have any debt impacts, and the cash flow required for the capitalisation of Finnvera can be covered

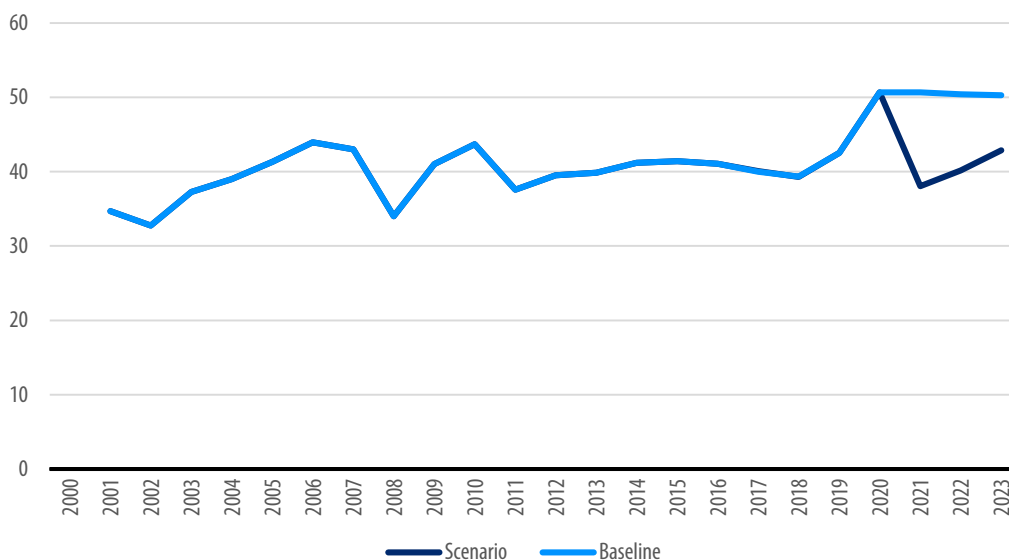
by realisation of the Housing Fund's property collateral. Keeping central government cash assets at baseline levels would, however, require additional borrowing totalling EUR 2.1 billion.

## 6.4 Impacts on central government financial assets indicated by the scenario

In an economic crisis, the development of central government assets also plays a role. Financial market uncertainty and price movements affect the value of central government holdings. At year-end 2020, central government had financial assets totalling EUR 119.4 billion, of which EUR 20.9 billion was held by the State Pension Fund of Finland<sup>50</sup> and the remainder by other central government units.

In the baseline, the ratio of central government share assets to GDP is assumed to remain unchanged. Central government held listed shares and equity fund units to a total of EUR 48 billion at year-end 2020.

**Figure 34.** Development in central government financial assets in the stress scenario, % of GDP



<sup>50</sup> In the sectoral classification of the national accounts, the State Pension Fund (VER) belongs to earnings related pension providers, not central government. In this examination the Fund's assets are regarded as central government funds.



In the scenario, central government financial assets decrease due to a collapse in share assets by EUR 33 billion or around 26% relative to the baseline in 2021 (Figure 34). Stock markets recover only partly in 2023 in the scenario, with central government financial assets still remaining at around EUR 25 billion or around 18% below the baseline. The shock is not assumed to affect other central government receivables, including loans granted during the euro crisis, the value of real estate companies, universities' assets, the book value of unlisted state-owned companies or other receivables.

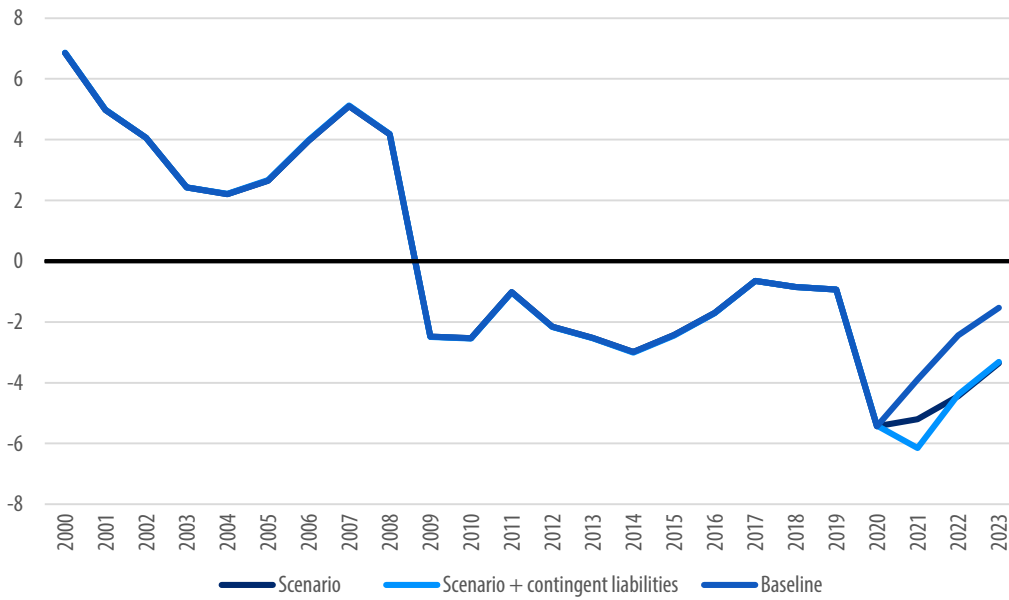
## 6.5 Development of general government finances in the stress scenario

The status of Finland's general government finances in near future is already weakened in the baseline. The economy experienced a significant shock in 2020. The recession caused by the pandemic and the measures taken to alleviate its impacts have resulted in a substantial general government deficit, and indebtedness is increasing rapidly. General government debt-to-GDP ratio is 10 percentage points higher than the pre-crisis projection and on an upward trajectory.

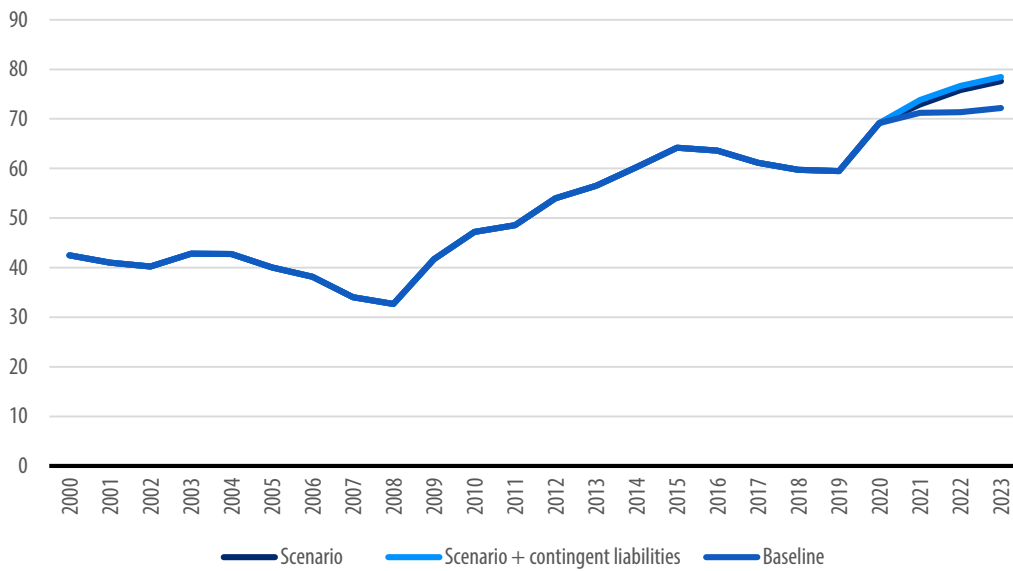
The status of general government finances declines further in the stress scenario (Figure 35). Compared with the baseline, general government budgetary position weakens by around 1.8 percentage points relative to GDP. The debt-to-GDP ratio rises to almost 78%, which is around 5 percentage points above the baseline (Figure 36). The impacts of the crisis are not reflected that strongly in debt, because a great deal of the impact focuses on the earnings-related pensions sector, with the crisis having a significant impact on its funds. In the scenario, the rise in expenditure is curbed by the lowering of interest rates, but the increased amount of debt also increases the risk of interest rate fluctuations in the future. The realisation of guarantee liabilities would weaken the situation further by worsening the deficit and increasing the debt-to-GDP ratio. This scenario does not assume any discretionary support measures, which weakened general government finances in 2020 and 2021.

Central government net debt was negative before the 2008 financial crisis, which means financial assets exceeded debt. Since the crisis, the net debt-to-GDP ratio has risen to around 15%–20%. In the scenario, large value fluctuations in the financial market have major impacts on central government assets, and central government net debt grows to 30% (Figure 37). The value of financial assets remains, at least in the short term, clearly below the baseline.

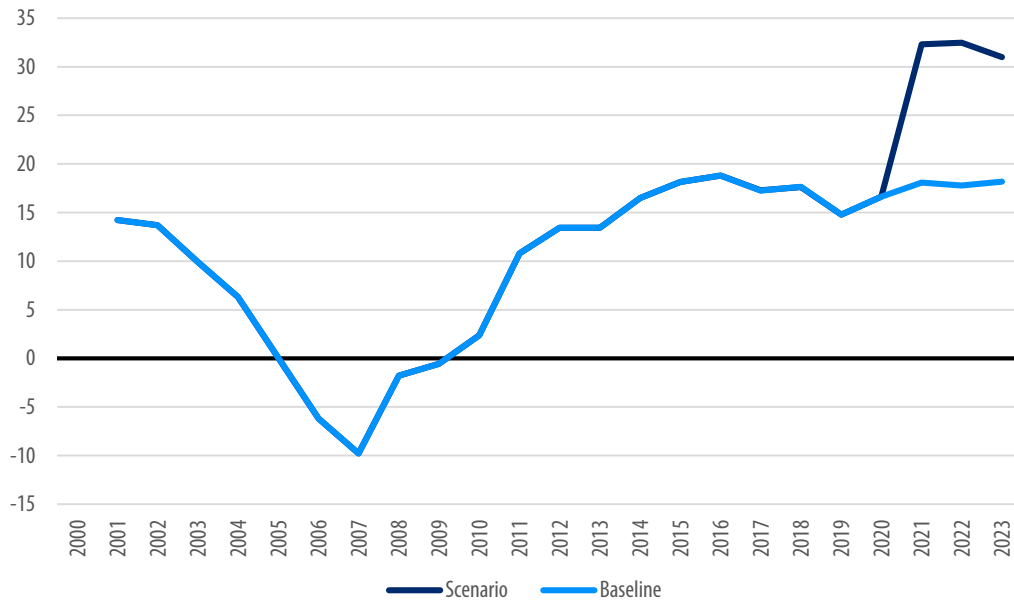
**Figure 35.** Impacts of shock on general government budgetary position, % of GDP



**Figure 36.** Impacts of shock on general government debt, % of GDP



**Figure 37.** Impact of shock on central government net debt, % of GDP



## Appendices

### Appendix 1 Classification of central government financial liabilities

Liability/obligation	Direct Obligation in any event	Contingent Obligation if a particular event occurs
<b>Explicit</b> Legally binding	<ul style="list-style-type: none"> <li>• budgetary expenditure</li> <li>• loan, interest</li> <li>• service fees under the PPP model</li> <li>• other statutory or contractual obligations</li> </ul>	<ul style="list-style-type: none"> <li>• central government guarantee (including export credit guarantee)</li> <li>• callable capital in international financial institutions</li> <li>• climate liabilities</li> <li>• nuclear liability</li> </ul>
<b>Implicit</b> Societally / politically obliging	<ul style="list-style-type: none"> <li>• citizens' basic social security</li> </ul>	<ul style="list-style-type: none"> <li>• deposit guarantee and other support to the banking sector</li> <li>• capitalisation of state-owned companies or ensuring their solvency</li> <li>• financial aid to the municipal sector</li> <li>• environmental liabilities, catastrophes, external and internal security</li> </ul>

Source: Ministry of Finance

## Appendix 2 Breakdown of central government guarantees in effect 2010–2020, EUR billion

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Change 2019– 2020
<b>Finnvera*</b>	<b>12.8</b>	<b>14.0</b>	<b>14.8</b>	<b>14.6</b>	<b>17.5</b>	<b>22.6</b>	<b>22.6</b>	<b>27.7</b>	<b>30.3</b>	<b>32.6</b>	<b>31.6</b>	<b>-3.1%</b>
<i>Export credit guarantee operations</i>	8.9	10.4	11.2	11.0	12.6	16.3	15.3	19.0	19.7	20.9	19.5	-6.7%
<i>Domestic liability portfolio</i>	2.8	2.8	2.7	2.5	2.3	2.3	2.2	2.1	2.0	1.9	2.4	26.3%
<i>Central government guarantees for funding</i>	1.0	0.9	0.9	1.1	2.6	3.9	4.9	6.5	8.7	9.7	9.7	0%
<b>Student loans</b>	<b>1.4</b>	<b>1.4</b>	<b>1.5</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>	<b>2.3</b>	<b>2.7</b>	<b>3.4</b>	<b>4.0</b>	<b>4.5</b>	<b>12.5%</b>
<b>EFSF</b>	<b>-</b>	<b>0.5</b>	<b>5.1</b>	<b>6.2</b>	<b>6.6</b>	<b>6.2</b>	<b>6.3</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>6.8</b>	<b>-2.9%</b>
<b>Bank of Finland</b>	<b>0.4</b>	<b>0.6</b>	<b>0.8</b>	<b>0.7</b>	<b>0.6</b>	<b>0.5</b>	<b>0.6</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>0%</b>
<b>Central government funds</b>	<b>7.9</b>	<b>9.2</b>	<b>10.2</b>	<b>11.2</b>	<b>11.8</b>	<b>12.3</b>	<b>13.2</b>	<b>13.8</b>	<b>14.6</b>	<b>15.5</b>	<b>16.5</b>	<b>6.5%</b>
<i>Housing Fund of Finland</i>	7.9	9.1	10.2	11.1	11.8	12.3	13.1	13.7	14.5	15.3	16.4	6.7%
<i>Development Fund of Agriculture and Forestry</i>	0.0	0.0	0.0	0.0	.0	0.0	0.1	0.1	0.1	0.1	0.1	2.3%
<i>State Guarantee Fund</i>	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-
<i>COVID-19 support measures</i>											1.4	-
<b>Other</b>	<b>0.7</b>	<b>1.0</b>	<b>1.2</b>	<b>0.8</b>	<b>0.9</b>	<b>0.6</b>	<b>1.1</b>	<b>0.5</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0%</b>
<b>Total</b>	<b>23.2</b>	<b>26.8</b>	<b>33.7</b>	<b>35.0</b>	<b>39.2</b>	<b>44.2</b>	<b>46.1</b>	<b>52.1</b>	<b>56.6</b>	<b>60.2</b>	<b>62.0</b>	<b>3.0%</b>

\* The liabilities in effect (used and unused) have been included in the guarantee and liability amounts related to export credit guarantee and special guarantee operations. The risk arising from repayments of export credits granted by Finnish Export Credit Ltd is covered by an export credit guarantee granted by the parent company, Finnvera. Finnvera's funding within the framework of the EMTN and ECP loan programmes has a central government guarantee. To the extent that the loan guaranteed by the central government has been used to finance export credits, central government's liability for export guarantees and government guarantees for funding is not doubled but, as a result of various factors, these could be realised at different times.

Sources: State Treasury, Ministry of Finance and Ministry of Economic Affairs and Employment



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