Central government debt management

12/2021

Audit report

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Translation of audit report 12/2021

Audit report of the National Audit Office of Finland

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The National Audit Office of Finland has completed the audit Central government debt management, which was included in its audit plan. The audit combines the perspectives of performance audit and financial audit. The audit was conducted according to the National Audit Office's manual for compliance audit, performance audit, and fiscal policy audit.

Based on the audit, the National Audit Office has issued an audit report, which is sent to the Ministry of Finance and the State Treasury and cc'd to the Parliamentary Audit Committee, Finance Committee and Commerce Committee, and to the Government Financial Controller's Function.

Before the audit report was issued, the Ministry of Finance and the State Treasury were given an opportunity to ensure that the report did not contain any factual errors and to express their views on the conclusions and recommendations of the National Audit Office presented therein.

In the follow-up of the audit, the National Audit Office will examine what measures have been taken on the basis of the conclusions and recommendations presented in the audit report. The follow-up will be conducted in 2023.

Helsinki, 22 September 2021

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Conclusions and recommendations of the National Audit Office

The audit was targeted at central government debt management. Debt management refers to the borrowing of central government on-budget entities, central government cash management, and the associated risk management. Through borrowing, the state repays government debt that is maturing and covers any deficit in the budget.

At the end of 2020, central government debt amounted to EUR 124.8 billion, and at the end of 2021, it is expected to amount to approximately EUR 139.3 billion. In 2020, government net debt grew by EUR 19.0 billion. The government debt portfolio undergoes more changes than can be concluded from the increase in net debt: during the year, central government takes on new debt, which also matures during the fiscal year, and transactions in derivatives and related collateral used in the management of the debt portfolio, as well as cash management operations, take place on a daily basis. If the short-term financial instruments that have matured during the fiscal year are taken into account, the new debt taken on by the central government in 2020 amounted to EUR 53.9 billion, while amortizations, i.e. repayments of matured debt, amounted to EUR 35.6 billion. The significance of central government debt management can also be assessed by means of the costs of debt. The central government pays interest on debt annually. In 2020, interest expenses totalled approximately EUR 900 million.

The purpose of the audit was to ensure the appropriateness of the debt management, i.e. to assess the arrangements and risk management of the debt management, as well as the prerequisites for economic, efficient, and effective operations.

From the perspective of economic, efficient, and effective operations, central government debt management has two main objectives: first, to safeguard the state's liquidity in all circumstances and, second, to safeguard this at an acceptable, optimal cost-risk level. Debt management is a critical function both for safeguarding the state's liquidity and for society's general crisis resilience.

It is important to assess the debt management strategy regularly

The two cornerstones of central government debt management strategy are safeguarding liquidity and managing the interest rate risk position of debt. Liquidity is safeguarded by means of a funding strategy where the good liquidity of euro-denominated debt issued on the capital market is based on benchmark-size stock of debt and the primary dealer system. In addition, the objectives of funding include the diversification of instruments and investors.

The chosen strategy has succeeded in saving interest expenses. The State Treasury estimates that the interest expenses on debt would have been approximately EUR 3.5 billion higher in 2001–2019 if the interest rate risk position of the debt had not been managed.

The Covid-19 pandemic had the greatest impact on Finland's debt management, especially at the early stages of the crisis when there were widespread disruptions in the financial markets. The State Treasury responded quickly to the crisis and, for example, decided not to take some of the planned debt management measures. The Ministry of Finance also authorized the State Treasury to temporarily exceed the interest rate risk limits according to the debt management provision, i.e. the limits within which debt management should normally remain. This enabled the State Treasury to raise funding in an appropriate manner.

Finland's debt management strategy has proved to be effective, even in times of crisis. However, it has not been possible to act in accordance with the strategy in all circumstances. The regulation applied to debt management and the flexibility of steering have enabled rapid adjustment to sudden shocks, and it has always been possible to safeguard the funding for central government measures.

On the other hand, changes in the interest rate environment have long posed a challenge in the annual reviews of the analysis and selection of the strategic interest rate risk objective set for debt management. The interest rate models on which the analyses are based do not function as desired in a negative interest rates environment.

The current strategic selection of an interest rate risk position is based on the so-called partial portfolio approach, which consists of on-budget entities' debt and central government cash reserves. It would be well-founded to have a more comprehensive strategy which, in addition to the variation in the interest payable and receivable on the debt and cash reserves, takes into account central government assets and changes in central government revenue under different economic circumstances.

Exceptional measures were resorted to in the midst of the Covid-19 crisis

The Covid-19 crisis was reflected in the financial markets as significant uncertainty. Governments needed large amounts of new debt to survive the crisis. Interest rates on long-term government bonds increased momentarily, and market liquidity deteriorated. This hampered the acquisition of new long-term funding, as it was uncertain whether large lots could be traded cost-effectively.

The State Treasury responded to the situation and began to carry out so-called private placements, i.e. bilateral taps on benchmark bonds. Funding was raised through bilateral negotiations with several primary dealer banks. In the end, the State Treasury made 46 taps during the spring, managing thereby to take on EUR 7.35 billion of new long-term debt for the state.

The procedure had not been defined in the continuity plan, nor had it been included in preparedness exercises, but it was a reactive action in the midst of a crisis. Once the situation calmed down in the financial markets, the State Treasury quickly gave up private placements. The procedure proved successful, and the state received additional debt financing with a desired maturity. However, the private placements were partly incompletely documented.

Attention should be paid to the clarity and informative nature of the budget

As regards central government debt management, the main focus in the budget process is on net debt and changes in it. The absolute amount of debt in euros and changes in it are so high that other essential information may remain invisible. However, it is important that the budget reflects the cash flows in sufficient detail and that the information can be easily found and interpreted.

As a result of changes in interest rates and operational debt management, some budget items have become very large or no longer correspond to the content of the relevant main title. Following the general fall in interest rates, the taps on benchmark bond issues have begun to yield significant issue premiums: almost EUR 650 million already in 2020. However, according to established practice, they are budgeted according to the net principle under issue discounts at EUR 40 million. Capital losses are also budgeted according to established practice at EUR 10 million, although they have not been realized in ten years, and their realization would require active decisions. The budget does not provide a clear picture of the fees that are paid by the state to banks and that are, in principle, significant: due to the budget structure, they are mixed with the expenses payable and receivable for the cash collateral for derivative contracts. In recent years, the collateral has generated significant revenue in practice and, therefore, the outturn of the fee item has been clearly lower than the fees paid. Changes in debt management practices have thus not been fully reflected in the budget process, and the costs of operations have remained difficult to interpret.

Reporting to the steering body of debt management would strengthen risk management

All debt management operations are carried out by the State Treasury, which is steered and overseen by the Ministry of Finance. Cooperation between the steering unit and the steered unit has been effective and close. Debt management is thus a unified process involving both the Ministry of Finance and the State Treasury. However, both of these actors address risk management only within the scope of their own tasks. This has led to a situation where no one manages the risks related to the debt management process as a whole. In processes extending across organizational and unit boundaries, particular attention should be paid to situations where responsibility is transferred between actors. If risks are not described, monitored, or managed otherwise, it is possible that, in case the risks materialized, they would jeopardize the continuity of operations or that the objectives set for the activities are not met.

In the overall risk management associated with debt management, a challenge is posed by the fact that the State Treasury's internal audit reports on its findings only to the State Treasury's executive management. Unlike in the business world, the central government internal audit function does not report its findings to a higher level than the agency's management. A clear objective set for central government debt management is to act, where applicable, in accordance with the financial sector standards and best practices. In view of this objective and the fact that debt management involves cross-organizational activities, it would be justified for the State Treasury's internal audit to report its findings without exception also to the Financial Markets Department of the Ministry of Finance. The steering unit would then be immediately informed of the findings of the internal audit, which would support risk management.

Scarce resources are a risk to continuity

The most significant operational risk in debt management is caused by the organization, resourcing, and management of ICT solutions. In a multisectoral government agency, ICT is perceived as a support function, whereas in debt management, it is a core function. In addition, centralized central government functions may not be the best solution for critical ICT functions. Dual-channel performance and substance management also poses challenges to the availability and timely allocation of resources.

Another significant operational risk in the debt management process is various personal risks. Debt management tasks have been concentrated partly on certain individuals, they have not been separated from each other, and human resources in general are scarce, which could jeopardize continuity. According to the audit findings, the scarcity of human resources can lead to situations where the most acute issues are prioritized, several minor errors are made in haste, documentation remains to be done later on, and instructions and regulations are not updated regularly. In view of the critical nature of debt management for safeguarding the state's liquidity and general crisis resilience, particular attention should be paid to the human resources in the process, both in performance management and in the internal resourcing of government agencies.

Recommendations of the National Audit Office

1. In the current economic environment, it is important to review the interest rate risk strategy of debt management. The Ministry of Finance and the State Treasury should do this regularly.
2. The State Treasury should carry out private placement issues only in exceptional circumstances. In addition, the private placement process should be developed to ensure adequate documentation and process controls.
3. In the budget process, the Ministry of Finance and the State Treasury should ensure that revenue and expenditure flows are budgeted according to the nature of the activity and the changed operating environment. Capital losses should only be budgeted if necessary. The significance of issue premiums and discounts should be described in more detail in the budget and in financial reporting. The fees paid to banks should be presented more clearly in the budget.
4. The Ministry of Finance should introduce appropriate and adequate risk management procedures in the debt management process and draw up a risk management description.
5. The Ministry of Finance and the State Treasury should solve the problems in the interest rate models used in debt management, and the analysis on which the selection of a strategic interest rate risk position is based should be further developed with sufficient resources.
6. The Ministry of Finance and the State Treasury should ensure that the internal audit reports of the State Treasury are submitted to the Ministry of Finance, which steers and oversees debt management.
7. The Ministry of Finance and the State Treasury should strengthen the prerequisites for risk management and ensure the continuity of the activities.

Contents

1 Scope of the audit

The audit was targeted at central government debt management. Debt management refers to the borrowing of central government on-budget entities, central government cash management, and the associated risk management. Debt management is a critical function for the funding of central government activities. By means of borrowing, the central government repays overdue central government debt and covers any deficit in the state budget.

The economic significance or extent of central government debt management can be described in different ways. At the end of 2020, central government debt amounted to EUR 124.8 billion. Due to the costs caused by the Covid-19 crisis and the economic stimulus measures, the amount of debt increased exceptionally in 2020: by EUR 19.0 billion. Gross borrowing amounted to EUR 39.3 billion (Figure 1). The year 2020 was exceptional, as net borrowing had been budgeted at EUR 2 billion, while gross borrowing had been budgeted at EUR 23.2 billion.

Central government **net borrowing** refers to the amount by which central government debt increases from the previous year, i.e. how much more debt the central government takes on. In addition, the state takes on new debt during the year to replace maturing debt to be repaid. Central government **gross borrowing** is the sum of these two phenomena.

The effects of the Covid-19 crisis will continue to be seen as a higher borrowing need even in the next few years. Net borrowing in 2021 is estimated to amount to around EUR 14,4 billion (HE 95/2021) and central government debt is estimated to be around EUR 139,3 billion at the end of the year.

The strategic framework of central government funding is composed of serial bonds, which the state issues once or more often annually. Long-term funding may also be carried out in non-euro currencies within the framework of the Euro Medium Term Note (EMTN) programme. Its use depends on the market situation. Bond issues within the EMTN programme mainly aim at diversifying the investor base.

In addition to long-term serial bonds, the state also takes short-term debt (with a maturity of less than one year). This takes place through treasury bills. According to the final central government accounts, 86% of the debt stock was long-term and 14% short-term in 2020. According to the final accounts, treasury bills totalled EUR 18.1 billion.

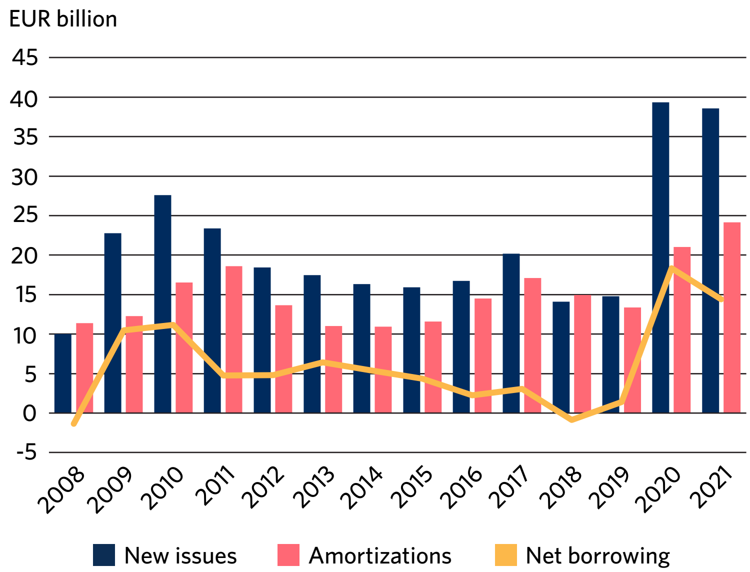

Figure 1: Amortizations and net borrowing of on-budget entities

Short-term debt supports the management of the central government debt portfolio and is an important means of cash management. In 2020, the state had to build up its cash reserves in order to secure liquidity in the uncertain circumstances. The state's cash reserves amounted to EUR 7.6 billion at the end of the year. The cash reserves varied during the year: they were at their lowest, EUR 4.9 billion, at the beginning of the year and at their highest, EUR 17.6 billion, in May.

The significance of central government debt management can also be assessed by means of the costs of debt. Despite the increase in debt, interest expenses have been declining for the past ten years. Interest expenses totalled EUR 1.9 billion in 2011 and around EUR 0.9 billion last year.

The purpose of the audit was to ensure the appropriateness of debt management, i.e. to assess the arrangements and risk management of debt management, as well as the prerequisites for economic, efficient, and effective operations.

From the perspective of such operations, central government debt management has two objectives: first, to safeguard the state's liquidity in all circumstances and, second, to safeguard this at an acceptable optimal cost–risk level. The importance of risk management is emphasized in debt management: risks are always taken into account at first – even when costs are to be minimized. Therefore, lower costs are pursued only with a prudent degree of risk.

The audit assessed the following questions:

- Has the selected debt management strategy been followed effectively?
- Are the debt management arrangements appropriate?
- Has the risk management related to debt management been implemented appropriately?

The audit did not assess the selection of the debt management strategy but its implementation. Nor did the audit examine the state's indebtedness as a policy issue or take a position on the amount of debt.

The most important sources for the audit criteria were the State Budget Act and Decree, the provision issued by the Ministry of Finance on debt management in on-budget activities, the central government's guidelines on ensuring continuity, the recommendation of the Government Financial Controller's Function on risk management, and their application.

2 Has the central government debt management strategy been implemented effectively?

Based on the audit, the debt management strategy has been implemented effectively. Thanks to the selected funding strategy and adhering to it, central government's access to debt and liquidity have been safeguarded. In addition, the selected strategic interest rate risk position, together with the declining general level of interest rates, has reduced interest expenses.

The exceptional circumstances in 2020 led to exceptional operations. The interest rate risk limit of the debt management provision had to be exceeded temporarily as it was not possible to carry out interest rate swaps as normal because of the market situation. The central government resorted in its long-term funding exceptionally to a significant degree to bilateral taps to benchmark bond issues (private placements), in which additional debt was taken on through negotiations with individual primary dealers. As the high need for borrowing emerged suddenly in spring 2020, these measures were partly insufficiently documented. When the process is developed, attention should be paid to documentation and process controls.

Changes in debt management practices have not been fully reflected in the budget process. The costs of operations are partly difficult to interpret, and therefore the known direct costs should be reported more accurately.

Finland's debt strategy has proved to be effective already in two serious crises: the current Covid-19 crisis and the financial crisis of 2008. However, the operations have not managed to comply with the strategy in all circumstances, but reasonably small and easy-to-implement measures have made it possible to adapt to the situation and to safeguard the funding of central government measures.

2.1 The strategy has resulted in savings in interest expenses

The objective of central government debt management is to meet the borrowing needs of on-budget activities and to minimize the costs of the debt in the long term with a prudent degree of risk.[1] The need for borrowing arises from the refinancing of old debt, any new net debt, and cash management. Old debt matures annually, and usually it is not possible to repay it otherwise than by replacing it with new debt. Completely new net borrowing, i.e. debt-increasing borrowing, is needed in a situation where central government finances are in deficit, i.e. when expenditure exceeds revenue. In addition, the central government must always have enough cash reserves to settle various central government payments. It should therefore be noted that the state borrows significantly more money during the year than could be deduced from examining merely the increase in central government debt.

> The state borrows more during the year than could be deduced by looking at the increase in debt.

The framework for decision-making is clear, but the steering is complicated

According to the Constitution of Finland (731/1999, section 82), government borrowing and related debt management measures are carried out with the consent of Parliament. Parliament makes separate decisions on the maximum amount of long-term and short-term government debt.[2] At present, the maximum nominal value of central government debt is EUR 150 billion, of which no more than EUR 25 billion can be short-term debt with a maturity of less than 12 months. In the annual state budget, Parliament sets a maximum for new net debt. The debt management is steered by the Ministry of Finance and implemented by the State Treasury.

In the Ministry of Finance, which steers the debt management, it is the Financial Markets Department that is responsible for the preparatory tasks and monitoring. One of the key tools in the steering is the debt management provision, in which the Ministry of Finance defines the debt management strategy, the available debt instruments, and the framework, i.e. the various limits within which the debt management shall remain. In addition, the provision sets reporting obligations for the State Treasury and specifies the monitoring to be carried out by the Financial Markets Department.

The State Treasury conducts debt management operations in compliance with the provision issued by the Ministry of Finance. In the State Treasury, the operations are delegated entirely to the Financing Division. The debt management task is clear and, since it is the responsibility of the State Treasury's Financing Division, the Division must perform the task independently. In addition to debt management, the Financing Division also produces the information needed for monitoring.

There are close contacts and cooperation between the Financial Markets Department of the Ministry of Finance and the Financing Division of the State Treasury. In addition to weekly contacts, the Financing Division reports to the Financial Markets Department in a specified form on a monthly basis, and quarterly meetings are also held between the management of the Financing Division and that of the Financial Markets Department.

As regards performance management, the Ministry of Finance steers the agency under its authority, i.e. the State Treasury as a whole. Several departments of the Ministry participate in the steering, as the State Treasury has several tasks. On the other hand, as regards debt management, the Financial Markets Department of the Ministry of Finance steers the Financing Division of the State Treasury directly. The latter steering is considerably closer than the actual performance management and related processes.

Within the State Treasury, the tasks of the Financing Division are delegated fully to the responsibility of the Head of the Division, which means that the Division has a relatively independent position within the organization. In spring 2020, it was considered whether the budget appropriation for the State Treasury should be changed so that the Financing Division would have its own budget allocation scheme within the operating expense appropriation of the State Treasury. This option was abandoned because it would have prevented transfers of appropriations within the State Treasury and reduced flexibility. The separation of the Financing Division into its own entity has also been examined. One of the solutions proposed has been the establishment of a separate debt office[3], but the idea has been abandoned. The problem caused by the two channels in the steering and resourcing is well known, but for various reasons, no satisfactory solution has been found.

The main objective of the debt management strategy is clear

The main objective of central government debt management is clear. The primary objective is to meet the borrowing needs of on-budget activities, i.e. to safeguard the refinancing of old government debt, the availability of any new debt, and liquidity in all situations. The objective to minimize costs with a prudent degree of risk comes only after this.

> Safeguarding liquidity is the main objective of debt management.

In the funding strategy, the most essential role is played by central government benchmark bonds (serial bonds) denominated in the euro. A benchmark bond is a large, multi-billion loan, usually with a long payback period and an annual interest rate. The effective yield is determined in the issuance of the bond on the basis of bids from investors and primary dealers. The primary dealers are 14 banks, from among which lead managers are selected for syndicated benchmark bond issues, and which have the right to participate in the auctions of benchmark bonds. To counterweight these rights, the primary dealers are obliged to guarantee the liquidity of the secondary market by providing bids and offers for the benchmark bonds. This makes it possible to trade with bonds and increases investors' interest in them.

The state issues new benchmark bonds in so-called syndicated issues, which are based on investors' bids, and the issues can be expanded later via auctions (Figure 6). In addition to benchmark bonds, the State Treasury may issue bonds denominated in other currencies within the framework of the EMTN bond programme, which it does from time to time. The state takes on short-term debt maturing in less than one year through treasury bills. In order to manage liquidity, it is possible to invest cash reserves at low risk and for a short period of time.

To ensure the targeted funding, the central government aims from the outset to have a sufficiently broad and balanced investor base for its benchmark bonds and to safeguard the functioning of the secondary market. This is important in view of access to new debt; the bonds should remain interesting to investors. The aim is to offer new bonds in a steady and predictable manner. In addition, the maturity of the bonds, i.e. their payback, is planned in such a way that there will not be any high peaks of debt to be refinanced during certain years.

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> A diverse investor base safeguards access to borrowing.

So far, the debt management strategy has managed to safeguard the state's funding needs. During both the financial crisis and the Covid-19 crisis, the state has succeeded in meeting the objectives of the strategy in this respect and has taken on debt on normal terms.

Risks related to debt management and government borrowing

Financial risks are risks associated with the availability of funding. They are divided into **liquidity and refinancing risks**. Due to the liquidity risk, the state maintains sufficiently large cash reserves and strives to anticipate the amount of cash reserves needed by a cash-flow forecast system. The refinancing risk concerns debt with a maturity of more than 12 months. An important method of managing the refinancing risk is to diversify the funding so that the maturity of the debt and the borrowing instruments used vary, and the investor base is sufficiently broad. In addition, the central government strives to keep the repayment schedule stable so that no large individual refinancing needs arise.

Market risks include **interest rate and exchange rate risks**. Interest rate risk refers to a negative deviation from the expected long-term interest expenses due to interest rate changes. In government borrowing, the management of the interest rate risk position has been separated from funding by means of derivative instruments. The strategic interest rate risk position has been defined by means of a benchmark portfolio, from which the State Treasury's Financing Division may only deviate within the limits defined by the Ministry of Finance. In practice, the interest rate risk position is adjusted to be in line with the objective through derivatives. No exchange rate risk, i.e. a risk arising from changes in exchange rates, is taken in central government debt management. All new debt denominated in foreign currency is converted into the euro.

Operational risks refer to risks associated with operating practices, human resources, or IT systems. They may be risks arising from the actors' own activities or from outside.

Credit risks refer to the risk of loss arising from the insolvency of counterparties to contracts. This is managed by selecting counterparties of high creditworthiness, by limiting the number of contracts with an individual counterparty, or by concluding collateralized contracts.

Legal risks are related to the legality and appropriateness of contracts.

Debt interest expenses have decreased

The objective of debt management is to meet the need for central government borrowing cost-effectively in all circumstances and to minimize the costs of debt and debt management with a prudent degree of risk. To achieve this objective, the central government uses derivative instruments in debt management.

In practice, derivatives have shortened the average repricing period of central government debt. This reduces the average expected costs of the debt, as the interest rate curve is typically rising, i.e. short-term rates are lower on the interest rate curve than long-term rates. When the interest rates have been declining, the use of derivatives has brought significant savings in the interest expenses on central government debt (Figure 2). According to the State Treasury's latest estimate, which extended to 2019, the cost benefit has amounted to EUR 3.5 billion in the 2000s[4].

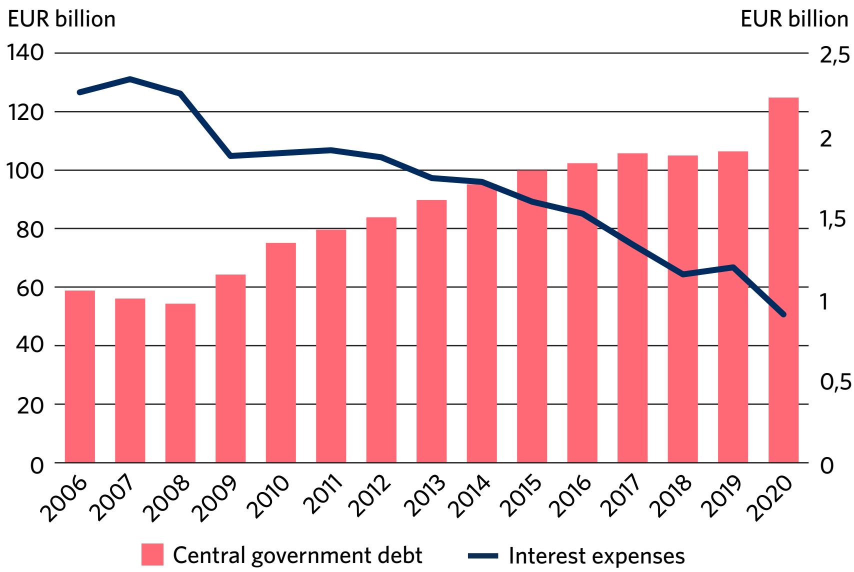

Figure 2: Development of central government debt and interest expenses (in euros) 2006–2020

The analysis model for the interest rate risk of central government debt applies a model-based approach. By means of the analysis model, it is possible to calculate the costs and cost-related risk figures of alternative interest rate risk strategies. The information produced by the analysis model on the cost–risk ratios of different strategies and their optimized efficient frontier are utilized in the selection of the central government's strategic interest rate risk position. If the objective is to achieve the lowest possible interest expenses, a large part of the interest rate risk is linked to very short-term interest rates. However, short-term interest rates involve a greater degree of uncertainty, i.e. risk. To reduce the risk, interest rate risk can be diversified by linking debt to longer-term interest rates as well. The current analysis model and the interest rate models used in it, as well as the approach to the analysis of the interest rate risk, have been applied by the Ministry of Finance since 2005.

The targeted interest rate risk position has remained unchanged for a long time. Making frequent changes to it would cause costs as such, as the changes would be reflected in the entire central government debt portfolio and mean that the derivative portfolio would also have to be adjusted according to the new interest rate risk position. It is understandable that the decision on the interest rate risk position is not revised frequently. The decision is a selection made under many kinds of uncertainties.

The year 2020 led to derogations in debt management

The year 2020 was exceptional from the perspective of debt management. The activities set out in the original plan were unable to provide the budget funding required by the financial crisis resulting from Covid-19. However, the state managed to obtain the necessary funding through supplementary budgets and by modifying the funding plan. The range of instruments included in the funding strategy was not changed, but as the amounts of funding increased in the budget and market uncertainty grew, conventional syndications and auctions were supplemented with bilateral tap issues, i.e. private placements. In March 2020, the state also prepared for crisis management by increasing its cash reserves to a considerably higher level than normal (Figure 3).

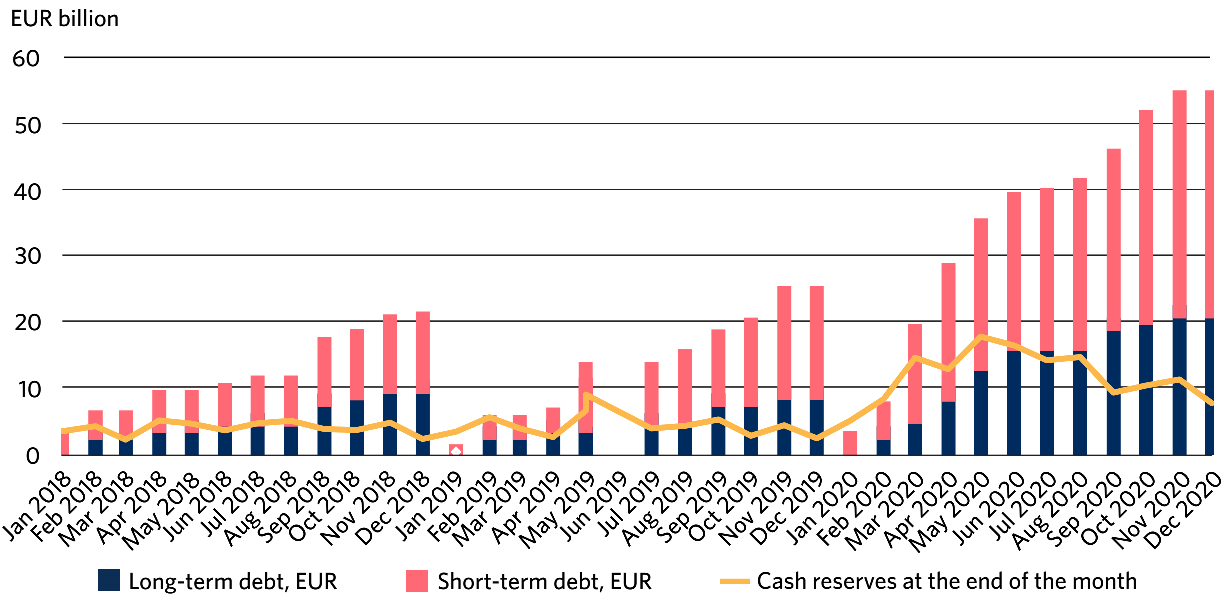

Figure 3: Annual development of gross borrowing and the state's liquid funds in 2018–2020

Considerations related to private placements are discussed in section 2.3 below. In addition, the number of treasury bills, i.e. short-term bonds, was exceptionally high.

Especially in the early stages of the crisis, the derivatives market was not functioning well. In practice, all interest rate risk management measures under the strategy could not be taken or were not worth taking.

In March 2020, the Ministry of Finance decided that the interest rate risk limits set by the provision could be exceeded.[5] The problems in the derivatives market were short lived and, in the end, the average interest rate risk exceeded the limit set in the provision only marginally. The temporary authorization to exceed the limits was revoked at the end of 2020, which means that debt management has already returned to normal compliance with the limits. Even after the financial crisis of 2008, it was necessary to make some changes to the strategy selected .

Finland's debt strategy has already proved to be effective in two severe crises. It has not been possible to follow the strategy in all circumstances, but reasonably small and easy-to-implement measures have, however, made it possible to adapt to the situation and to safeguard the funding of central government measures.

Historically low interest rates create pressures to review the strategy

From the point of view of safeguarding the state's funding, the main objective of the central government debt management strategy has been effective. The market has been functioning and, even in very difficult circumstances, the state has been able to take on debt cost-effectively through liquid benchmark bonds. Diversification of the stock of benchmark bonds and the investor base has improved liquidity.

The objective of minimizing interest expenses and a prudent risk objective are extremely difficult questions. The assumption underlying the strategy is that the interest rate curve is rising. This has been realized in highly varying circumstances and also, for example, during the 2008 financial crisis and the Covid-19 crisis. On the other hand, short-term interest rates have been negative for several years, which is extremely exceptional; for example, in the analysis model used in debt management, interest rates are assumed to be positive. It has therefore been necessary to adapt the model in order to meet the positive assumption. In addition, the interest rate trend has been declining, which means that in recent decades, interest rates have mainly been falling. This is also contrary to the model, which assumes that interest rates tend to be restored to the average. Problems related to the model are discussed in section 3.3.

> It is difficult to select the costs and risks.

The current strategy is also debt-based and, with the exception of central government cash reserves, does not take into account changes in central government revenue in different economic situations. A more comprehensive strategy might be justified. Moreover, the central government bond and interest rate markets have been functioning exceptionally since the financial crisis. The European Central Bank has carried out quantitative easing, and a large number of central government bonds have fallen into the hands of central banks.

A working group of the Ministry of Finance is currently assessing the present debt management model and its development needs. The assessment is both timely and justified in the current situation.

Financial instruments

Serial bonds are fixed-rate bullet loans on which the State Treasury pays coupon interest once a year. New serial bonds are issued in *syndicated issues*, where lead managers are selected from among the 14 primary dealers that are the central government's contracting parties. The size of serial bonds is typically a few billion euros. With the help of lead managers, the central government seeks investors' bids for the bond. The objective is usually to obtain a diverse range of investors for the bond: on the one hand, long-term investors and, on the other hand, even shorter-term investors due to the secondary market. Serial bonds are targeted at the wholesale market, i.e. major institutional investors such as pension companies, banks, and funds. In addition to arranging the loan, the primary dealers also undertake to maintain active trading on the secondary market. Serial bonds totalling at least EUR 3 billion are called **benchmark bonds**.

Existing serial bonds can be expanded by tap issues, i.e. by selling additional bonds to them. Only primary dealers can participate in *auctions*. Taps are smaller than new serial bonds.

Through bilateral taps, or *private placements*, serial bonds can be expanded with an individual primary dealer bank. The lots sold in taps are smaller than those sold in auctions. The State Treasury selects the bonds to be sold on the basis of its own needs and the feedback from banks/investors. The pricing is based on secondary market prices but does not include a multilateral bidding process such as auctions.

Large issues in currencies other than the euro are made within the framework of the **Euro Medium Term Note** programme. They can be used to broaden the investor base, but they are always hedged by the state through cross-currency swaps, because the state takes no currency risk.

The state takes on short-term debt maturing in less than one year through **treasury bills**. They are zero-coupon instruments denominated in the euro or some other currency. The State Treasury uses cross-currency swaps to convert treasury bills in foreign currency into euros. The State Treasury issues new treasury bills either in auctions or on other occasions, depending on the financing needs, in which case the State State Treasury defines the reference price for the issue.

2.2 Private placement taps supported the state's liquidity

As a result of the Covid-19 crisis, the central government's need for funding grew unexpectedly. The epidemic became more serious in March 2020, which was reflected as uncertainty in the financial market. The interest rates on long-term government bonds in the euro area rose sharply. In the difficult market situation, liquidity also decreased or, in some cases, vanished from the derivatives market. The situation was highly challenging in many ways for a small operator such as the Finnish State, which is active in the market and utilizes derivatives in its portfolio management.

Liquidity deteriorated in the government bond market. Because of the general uncertainty, the opportunities of implementing large trading lots in a cost-effective manner had diminished. The need for funding continued to grow. However, increasing merely short-term funding would not have brought the desired solution – and this would not even have been possible for a long time within the limits of debt management. The uncertain market situation was not considered favourable to the syndication of new bonds or traditional auctions – issuance of large lots would probably have led to lower pricing.

The Financing Division of the State Treasury responded to the exceptional circumstances and issued benchmark bonds denominated in the euro by conducting private placement taps (see Figure 4). These bond tranches sold to one or more investors through the primary dealers complemented the state's long-term funding, and the trading lots were larger than in market-making but smaller than in auctions. This procedure had not been defined in the debt management continuity plan, and it had not been considered in the preparedness exercises held on a regular basis to practise for different social and economic crises. Instead, resorting to the procedure was a reactive action in the midst of the crisis.

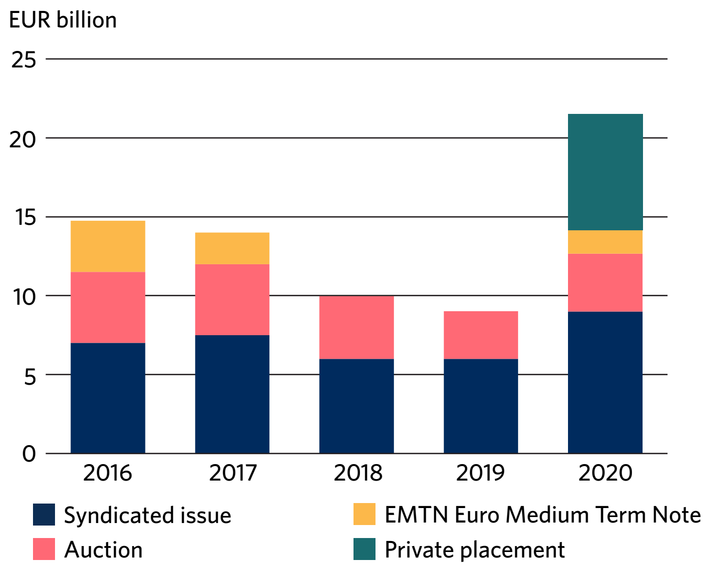

Figure 4: Long-term debt, new issues 2016–2020

In the end, 34% of long-term funding was implemented through private placement taps (Figure 5). They were issued between March and May 2020, during which period a total of 46 taps were issued from existing benchmark bonds. The individual taps issued were between EUR 50 million and EUR 350 million. The state took on new long-term debt amounting to a total of EUR 7.35 billion through private placement taps.

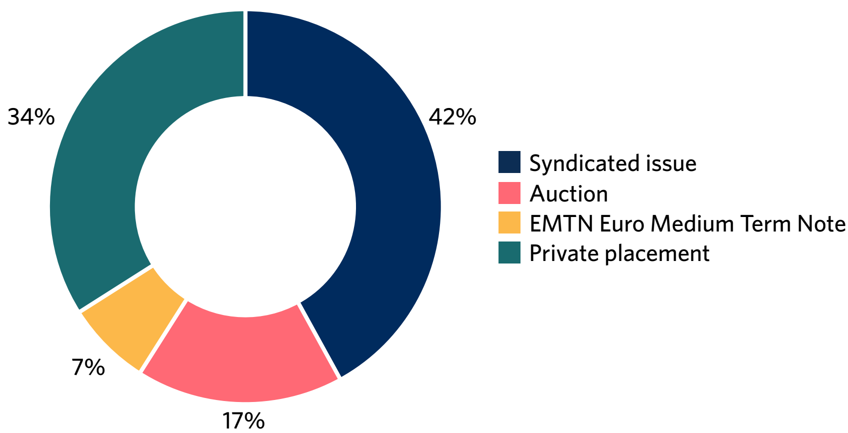

Figure 5: Long-term debt, new issues in 2020

The process of issuing private placement taps differs slightly from other long-term funding processes. The negotiations are bilateral, i.e. they did not include a multilateral bidding process unlike auctions or syndicated issues of benchmark bonds. On the other hand, no fees were paid for bilateral tap issues in the same way as for syndications, although the total amount of funding equalled that of syndications. The pricing of private placement taps was based on the observed secondary market price, but information on the transactions was not published until afterwards, which reduced market transparency. However, this may have been in the interest of the issuer, i.e. the state, when borrowing increased.

It should be noted that the conditions in the financial markets were extremely exceptional in the spring of 2020. In retrospect, it is impossible to assess whether another instrument than private placement would have been a more cost-effective way of obtaining funding for the state. In any case, other instruments of long-term funding involved greater risks than the private placement procedure.

Syndications and auctions are used to obtain large amounts of funding by a single operation. In spring 2020, the greatest uncertainty concerned market liquidity, i.e. it was not known at the time whether it would be possible to trade large lots cost-effectively. Maintaining liquidity, in turn, plays an important role in long-term cost-effectiveness. The main objective of central government debt management is to maintain liquidity in all circumstances. In crisis situations, it is therefore important to look further into the future and find analytical solutions that support long-term liquidity.

> It is important that government bonds are traded actively.

15 Sept 2029 RFGB 0.50% EUR 3 billion.

On 5 February 2019, the State Treasury issues a euro-denominated benchmark bond in a syndicated issue. The size of the bond is EUR 3 billion, the coupon rate 0.50%.

The primary dealer banks organize the syndication, and investors submit bids through the bank's sales group. The final price is determined by the order book.

The final issue price is 99.6% and the yield 0.539%.

Central government debt increases by EUR 3 billion in nominal terms, and the central government receives EUR 2.988 billion on its account from investors. The issue discount amounts to EUR 12 million.

5 Jun 2019 auction EUR 972 billion & 22 Apr 2020 auction EUR 1.001 billion.

The State Treasury expands the original bond through auctions by issuing taps on the original serial bond.

In an audit held on 5 June 2019, the nominal value of the bond increases by EUR 972 million. The issue price is 104.07%, and thus the central government receives EUR 1.012 billion on its account. The issue premium amounts to EUR 39.56 million.

In an audit held on 22 April 2020, the nominal value of the bond increases by EUR 1,001 million. The issue price is 105.04 %, and thus the central government receives EUR 1.051 billion on its account. The issue premium amounts to EUR 50.45 million.

7 private placement issues between 15 Apr 2020 and 18 May 2020. Individual taps EUR 150–200 million.

The State Treasury expands the original bond by issuing private placement taps to the RFGB 0.50% instrument which matures on 15 September 2029. The sizes of individual taps vary between EUR 150 and 200 million.

Nominal debt grows by a total of EUR 1.3 billion. The central government receives EUR 1.369 billion on its account. The issue premium amounts to EUR 69 million.

At the end of 2020, the nominal value of the EUR 3 billion benchmark bond is EUR 6.273 billion. The issue premium totals EUR 159 million, while the issue discount totals EUR 12 million (total issue difference EUR 147 million).

RFGB 0.50% matures on 15 Sep 2029.

The stock of debt can be expanded in different ways until 2029. The bond will be amortized on the due date, i.e. the state will pay the nominal debt capital back to the investors.

An annual fixed interest rate of 0.50% is paid on the bond. However, the central government uses interest rate derivatives, which means that, in the end, interest expenses will not be quite as straightforward.

The return for investors is determined by several factors, which are impacted by, for example, the issue price (i.e. issue premiums and discounts) and the secondary market and its liquidity.

Figure 6: Life cycle of an RFGB 0.50% benchmark bond (partly fictitious)

Private placements have not become part of the normal activities of the State Treasury but are a mechanism of exceptional circumstances. The audit found that the activities in 2020 had been partly insufficiently documented. It is important that the Financing Division finalizes the product description and process chart of private placements, ensuring thus for its part that the required document templates and process are available in the future.

The National Audit Office is of the opinion that there should be a high threshold for the use of private placements and that they should only be resorted to in exceptional circumstances. When the process is developed, it is important to ensure that adequate process controls are implemented. In addition, it is recommended on the basis of the audit that the Financing Division of the State Treasury should specify its financial reporting with regard to private placements. The Financing Division of the State Treasury has developed its operations actively and has already during the audit taken measures to develop the private placement process and finalize its guidelines.

> Private placement taps were a means of obtaining funding under the exceptional circumstances.

2.3 The budget process should produce more comprehensive information

The audit assessed the budgeting procedures related to central government debt management. It is important for policymakers and users of budget information that the budget process provides true and fair information on the efficiency, economy and effectiveness of central government debt management.

In the budget proposal, central government debt is included as a revenue estimate under main title 15. Borrowings. Debt interest payments are included in the budget proposal as variable appropriations under main title 36. Debt interest payments. In the budget, these items are budgeted according to the net principle in accordance with section 3a of the State Budget Act. When the net principle is applied, the budget includes the revenue estimates or appropriations corresponding to the difference between revenue and expenditure.

The state budget for 2020 with its supplementary budgets was exceptional. A total of seven supplementary budgets were made. As a result of the supplementary budgets, estimated central government net borrowing was up from EUR 2.2 billion to EUR 19.7 billion. Actual net borrowing amounted to EUR 19 billion.

Table 1: Budget outturn statement 2020: revenue estimate accounts

Financial account	Name of the account	Budget 2020 (incl. suppl. budgets) EUR million	Annual Report 2020 EUR million	Annual Report 2019 EUR million
15	Borrowings	19,664	18,976	1,793
15.03	Central government borrowing and debt management	19,651	18,962	1,793
15.03.01	Net borrowing and debt management	19,651	18,962	1,793
15.03.01.1	Nominal net borrowing (net) (accounting office)	19,701	18,315	1,399
15.03.01.1.1	New bonds denominated in the euro (accounting office)	19,701	53,880	23,978
15.03.01.1.2	New bonds denominated in foreign currency (accounting office)	0	0	0
15.03.01.1.3	Amortization of bonds denominated in the euro (accounting office)	0	-35,565	-22,579
15.03.01.1.4	Amortization of bonds denominated in foreign currency (accounting office)	0	0	0
15.03.01.2	Issue discounts (net) (accounting office)	-40	647	394
15.03.01.2.1	Issue premiums (accounting office)		686	406
15.03.01.2.2	Issue discounts (accounting office)	-40	-38	-12
15.03.01.3	Capital losses (net) (accounting office)	-10	0	0
15.03.01.3.1	Capital losses (accounting office)	-10	0	0

In the budget, the items related to central government debt generally have an informative and clear structure. A detailed subdivision enables sufficient monitoring. However, the current budgeting leaves certain items that are significant in euro terms partly hidden. In addition, the changes that have taken place in debt management practices have not been fully reflected in the budget process, and the costs of operations have therefore remained difficult to interpret. The exceptionally high increase in indebtedness during 2020 further highlighted these deficiencies, which had already been identified before.

Supplementary budgets should disclose issue discounts and premiums

Of the budgeting of items related to central government debt, the audit examined the longer-term outturns. It appeared that under some items, expenditure is routinely budgeted annually mainly based on an informed guess. For example, in the subdivisions of net borrowing, the issue discounts are annually budgeted at EUR 40 million and capital losses at EUR 10 million.

Issue difference is the difference between the amount receivable when a bond is issued and the amount repayable under the bond agreement. Issue difference may be either an issue discount or an issue premium, depending on whether the yield of the bond (effective yield) is higher or lower than the coupon rate. The interest rate of a benchmark bond is fixed and specified in advance. In the issuance, the price is determined on the basis of the effective yield.

Example:

The state issues a serial bond with a nominal value of EUR 4 billion and with

- a coupon rate of 4.25%,
- an effective yield of 4.339%,
- an issue price, i.e. the price received by the state, of 99.605%.
    - » Central government debt increases by EUR 4 billion, and the state receives EUR 3.984 billion on its account. The central government's issue discount amounts to EUR 15.8 million.
    - » If the issue price exceeds 100%, the central government receives an issue premium for the bond.

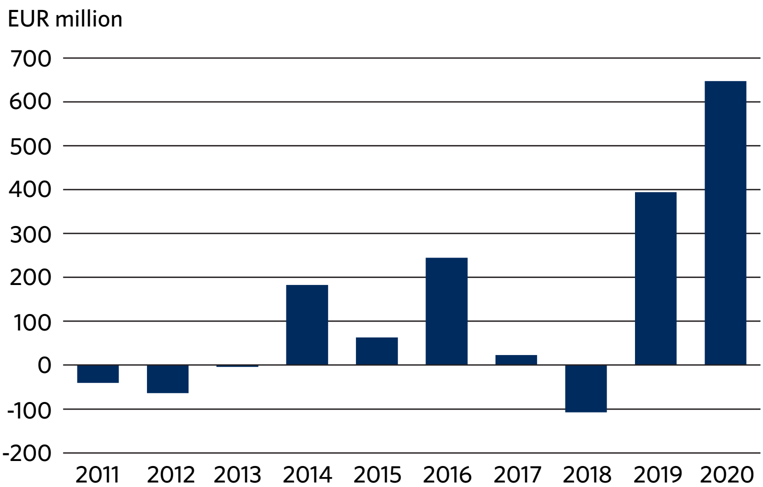

Figure 7: Total premiums and discounts on bond issues (net) 2011–2020

Issue premiums and discounts vary annually in amount (Figure 7). They reflect the general market developments and, for example, the yield of the auctions of benchmark bonds and private placements conducted in 2020. Issue differences should be highlighted in the budgeting, as this would improve the transparency of the assessment of the effectiveness of debt management. The significance of issue premiums and discounts should be described more clearly both in the budget and in the financial reporting. In addition, supplementary budgets should present the cumulative outturn of issue differences at the time the supplementary budget is prepared.

Issue differences reflect general market developments.

Expenditure should be budgeted under the capital losses item only if necessary

The audit found that there had been no capital losses during the period under review, i.e. 2011–2020. The state would incur capital losses if it were to extinguish bonds prior to the maturity date, for example, in order to replace old high-interest bonds with new lower-interest ones. As a rule, such early buybacks would apply to serial bonds, all of which are subject to a buyback condition. In practice, however, the central government does not apply this procedure, as buyback causes direct costs to it. The state may buy its own bonds on the secondary market only at market price. In this case, investors include a compensation for lost (future) coupon yields in the prices of the bonds to be sold.

Routine budgeting of capital losses should therefore be abandoned. The use of the capital losses item should be based on a realistic estimate, and expenditure should be budgeted under this item only if necessary.

Fees paid to banks should be presented more clearly

Debt interest payments are presented as expenditure estimates, i.e. as appropriations, under main title 36. Debt interest payments. In 2020, issuance, sales and marketing costs amounted to EUR 20.4 million instead of the budgeted EUR 11 million. The costs of the cash collateral received amounted to EUR 10.3 million instead of the budgeted EUR 1 million.

Table 2: Budget outturn statement 2020: expenditure estimate accounts

Item	Name of the item	Budget 2020 (incl. suppl. budgets) EUR million	Final accounts 2020 EUR million	Final accounts 2019 EUR million
36	Debt interest payments	911	903	1,193
36.01	Debt interest payment	898	891	1,191
36.01.90	Debt interest payment	898	891	1,191
36.01.90.1	Debt interest payment (accounting office)	898	927	1,208
36.01.90.1.1	Yield bonds (accounting office)			0.02
36.01.90.1.2	Serial bonds (accounting office)	947	992	0
36.01.90.1.3	Other bonds, category 1 (accounting office)	-1	7	-0.7
36.01.90.1.4	Other bonds, category 2 (accounting office)	1	-0.7	-4
36.01.90.1.5	Treasury bills (accounting office)	-49	-71	-27
36.01.90.1.6	Bonds and other loans (accounting office)		-0.1	0.04
36.01.90.1.7	Bonds denominated in foreign currency (accounting office)		0	0
36.01.90.2	Accrued interest (accounting office)		-36	-17
36.09	Other costs for central government debt	13	12	1
36.09.20	Fees and other costs for central government debt	13	12	1
36.09.20.1	Issuance, sales and marketing costs (accounting office)	11	20	9
36.09.20.2	Redemption and agent fees (accounting office)	0.01	0	0
36.09.20.3	Costs for cash collateral received (accounting office)	1	-10	-9
36.09.20.4	Other expenses (accounting office)	1	2	2

Item 36.09.20.3 Costs for cash collateral received has turned out to be revenue since 2015. This is explained by the development of the general level of interest rates. However, this item has also undergone a considerable substantive change, as the State Treasury has been able to conclude two-way collateral agreements since 2019. In debt management, it was previously possible to conclude only one-way credit support agreements, where only the counterparty was obliged to provide collateral. The receiving party, i.e. the state, then paid interest on the cash collateral to the provider of the collateral. As a result of negative interest rates, the counterparties have had to pay interest to the state for the cash collateral they have provided. Two-way agreements differ from the previous ones in that, instead of simply accepting collateral, the state also provides collateral to its counterparties – and thus also both pays and receives interest on cash collateral.

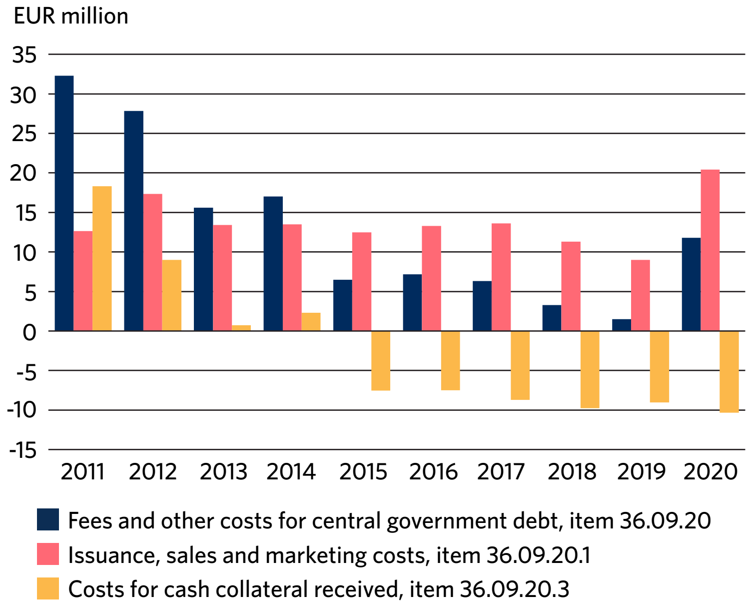

Figure 8: Fees and other costs for central government debt, development in 2011–2020. The items are expenditure items, and thus negative figures represent revenue.

Figure 8 shows that, from 2015 onwards, the net amounts in item 36.09.20 Fees and other costs for central government debt have consisted of items whose revenue and expenditure partly offset each other. The net amounts therefore no longer give a good picture of the fees and other costs for central government debt. Although the appropriations are quite small in relation to the debt, the fees paid by the state to banks should, however, also appear from the budget. When the fees are mixed with the expenditure – and, at present, also revenue – arising from collateral, it is more difficult to get a true picture of the matter.

In order to clearly separate the fees paid to banks and other direct costs for central government debt and to highlight actual expenditure in budgeting, item 36.09.20.3 Costs for cash collateral received should be removed from main item 36.09.20 Fees and other costs for central central government debt and transferred to item 36.01.90.1 Debt interest payment (accounting office), for example, as item 36.01.90.1.8. Interest on cash collateral. In this way, the change in the general level of interest rates will be equally reflected in the whole, and the fees paid to banks as well as other costs will appear clearly from the budget.

The Financing Division of the State Treasury and the Budget Department of the Ministry of Finance have already taken corrective measures during the audit.

3 Are the debt management arrangements appropriate?

The debt management process is uniform, and it also crosses organizational boundaries. Central government structures do not provide the best support for risk management in the case of cross-organizational overall processes, such as debt management.

The audit found that the Ministry of Finance does not have common Ministry-level risk management principles and that there are no common guidelines or provisions on risk management, although there should be. Therefore, the Financial Markets Department of the Ministry of Finance should independently pay particular attention to appropriate and adequate risk management procedures as part of the overall debt management process.

For the risk management of the debt management process, it would be good if the internal audit of the State Treasury reported on its findings in accordance with the principles applied in the financial sector. In the opinion of the National Audit Office, the internal audit of the State Treasury should submit its reports straight to the Financial Markets Department of the Ministry of Finance, which steers and oversees the debt management.

The most significant operational risks are ICT and personal risks. The importance of both of these was further emphasized in the Covid-19 crisis. ICT is a core function in debt management, and therefore it is necessary to allocate sufficient resources to it. The dual-channel steering and multi-level decision-making of ICT solutions are well-known challenges to be solved.

> The debt management process is uniform and crosses organizational boundaries.

Personal risks may arise, for example, from the fact that the duties are concentrated on individual employees or that they are not sufficiently clearly separated from each other. In the worst case, scarce human resources could be realized particularly in crisis situations. Special attention should therefore be paid to them, both in performance management and in the internal resourcing of the agency.

However, the debt management arrangements are, overall, clearly in line with international best practices.

3.1 Debt management is in line with best international practices

In order to assess the appropriateness and effectiveness of the debt management arrangements, the operations must be examined not only in the light of legislation and lower-level regulation and guidelines but also in the light of internationally verified best practices. The International Monetary Fund (IMF), together with the World Bank, has prepared good guidelines for public debt management.[6] In addition, the EU, for example, has its own cooperation bodies related to debt management, and the OECD has its own working group focusing on debt management issues.

Internationally, the most widely used guidelines for debt management are the aforementioned IMF and World Bank guidelines. They are designed to assist policymakers in considering reforms to strengthen their public debt management. According to the IMF, the interpretation of and compliance with the guidelines vary according to the debt situation and debt management needs of the country.[7]

According to the IMF's guidelines, the main objective of public debt management is to ensure that the government's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run with a prudent degree of risk. According to the IMF, governments should also seek to ensure that both the level and rate of growth in their public debt are on a sustainable path and that the debt can be serviced under a wide range of economic conditions while meeting cost and risk objectives.

> The main objective of public debt management is to ensure that the government's financing needs and its payment obligations are met over the medium to long run.

Central government debt management is of great economic significance. A well-functioning debt management strategy and successful debt management arrangements play a key role when the central government is dealing with economic or other social shocks (Figure 9). At best, high-quality debt management enables economic policy steering to operate independently of the debt portfolio. At worst, risky debt management practices increase the vulnerability of the economy to economic and financial shocks and reduce the opportunities of economic policy steering to a minimum.

In general, the central government debt management in Finland has been successful. The debt management strategy, together with the institutional structures, advanced risk management, active development, transparent communication, and a well-functioning legal basis, can be considered to have ensured access to funding and the state's liquidity even in crisis situations. On the basis of the audit, it can be concluded that central government debt management and its practices are in line with international best practices.

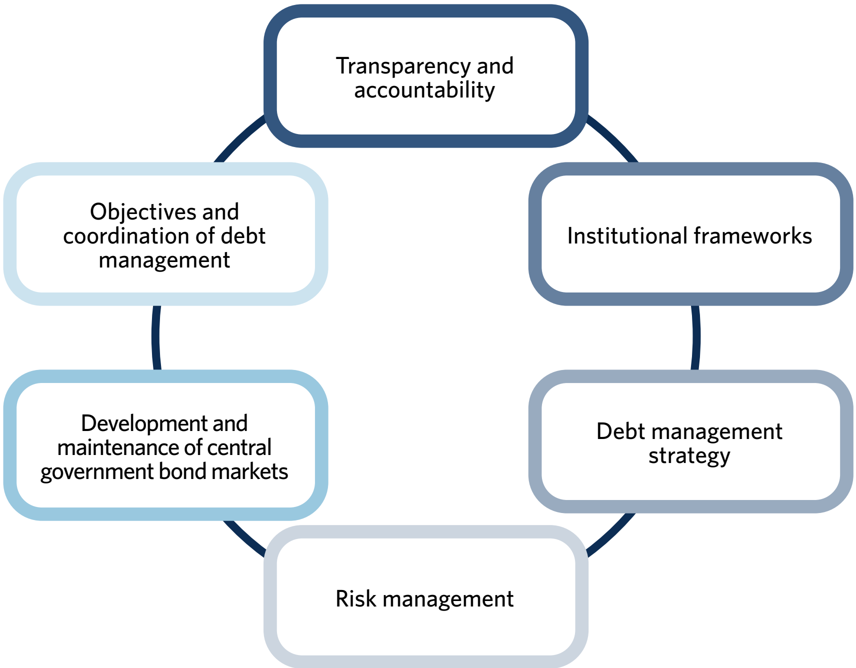

Figure 9: Key elements of debt management according to the IMF

3.2 The debt management process should be managed as a whole

The central government debt management carried out by the Financial Markets Department of the Ministry of Finance and the Financing Division of the State Treasury constitutes a clear overall process. Government borrowing is based on Parliament's decision on the maximum amount of debt. Parliament has authorized the Government to take on the actual debt. The Financial Markets Department of the Ministry of Finance prepares a debt management provision to instruct the Financing Division of the State Treasury. The Financing Division, on the other hand, is the operational actor in debt management. The Ministry of Finance also monitors and oversees debt management and has the possibility of inspecting the activities.

The Ministry of Finance steers debt management through two channels: it steers the debt management operations through the provision it issues and influences the allocation of resources through regular performance management.

Central government debt management is a critical and central function, and it would be good to document the overall process consistently in writing. It would be important to describe, in essence, the process steps, the responsible parties and their tasks, as well as the interdependencies between the different parties, and the risky parts of the process.

There is no description of debt management that would cover the overall debt management process and thereby make the process transparent and lay the foundation for the review, development, and risk management of the process.

Lack of understanding of the overall debt management process and its steps and responsibilities expose the operations to risks and uncoordinated and inefficient practices, as well as risks that have not been identified in the process. In addition, changes and development in activities or actors, and their impact on the overall process, may be overlooked in essential respects and thereby pose unexpected risks.

> The overall debt management process should be described.

The Ministry of Finance should improve the risk management of the overall debt management

Organizing risk management as part of the internal control is a statutory task of each ministry and agency. The objective of risk management is to identify and manage potential events affecting processes and organizations and to keep risks within such limits that it is simultaneously possible to achieve the objectives set and to ensure that the operations or their continuity are not threatened. Risk management is part of the management and daily activities of organizations and has to be open and transparent. This means that all levels of organizations must have an adequate understanding of risks and the means of managing them, which must be regularly assessed and updated.

The Ministry of Finance and the State Treasury are both independently responsible for organizing the risk management related to debt management in their own activities. However, in the debt management provision issued to the State Treasury, the Ministry of Finance defines the risks that the State Treasury shall manage. The State Treasury also has written risk management principles and separate supplementary risk management guidelines for each sector.

The Financial Markets Department of the Ministry of Finance does not have Ministry-level risk management principles, shared guidelines, or a provision on the organization of risk management. Thus, in practice, the Ministry's departments are responsible for organizing their risk management independently, and no information has been collected on the organization, coverage, or existence of risk management.

> Inadequate risk management may jeopardize the continuity of operations.

The Financial Markets Department of the Ministry of Finance has identified risks related to debt management. Some of these risks are related to its own activities in the drafting of the provision and the oversight of compliance with the provision. However, the risks have not been systematically recorded, described, monitored, or managed otherwise. Inadequate risk management may lead to realized risks jeopardizing the continuity of operations or to failure to meet the objectives set for the operations.

The Financial Markets Department of the Ministry of Finance should introduce appropriate and adequate risk management procedures to define responsibilities, to identify, assess and monitor risks, and to regularly assess the risk management procedures. According to the audit findings, debt management in central government is an exceptionally uniform process involving mutual interdependencies. Therefore, it would be justified to take the overall process and its dependencies into account in the risk management procedures related to debt management. The Ministry of Finance has started to develop its risk management at the Ministry level. The development of the risk management carried out by the Financial Markets Department should be linked to this, where appropriate.

The administrative structure does not support the auditing and monitoring of the debt management process

Internal audit is an operationally independent function that should be separate from the rest of the organization. In the central government, internal audit is carried out by the government agencies and institutions that have considered it necessary. The internal audit function usually reports to the management of the relevant agency or institution.

The current role and place of internal audit in central government organizations does not support the audit and monitoring of processes such as debt management in the best possible way. In the financial sector, internal audit reporting is carried out in such a manner that critical audit findings are not to be submitted to the organization's executive management but to the Government or the Audit Committee. The administrative structure of the central government does not directly enable such a procedure.

> The audit and monitoring should be targeted at the entire process.

Debt management is a uniform process extending across organizational and unit boundaries. Therefore, particular attention should be paid to those parts of the process where the responsibility is transferred between actors. The audit and monitoring should be organized so that they cover the entire process. It would be possible for the internal audit function of the Ministry of Finance to audit the entire debt management process, including the activities of the Financing Division of the State Treasury, as the Ministry is responsible for overseeing the administration in its sector.

A measure that could be taken quickly to improve the overall management would be submitting the State Treasury's internal audit reports directly to the Financial Markets Department of the Ministry of Finance. This was also recommended by the expert group that assessed the development needs of central government debt management.[8]

The ultimate purpose of the internal audit reporting practices in the financial sector is to ensure that internal audit reports are submitted immediately (without being separately approved by the Director General) to the body overseeing and steering the activities, in this case to the Ministry of Finance. This ensures that critical audit findings are reported without delay. This also promotes and strengthens the independence of the internal audit function.

The external auditor of the ministries and government agencies is the National Audit Office. It is the only actor that has the opportunity to audit cross-sectional and cross-sectoral processes within the central government. Credible, regular and transparent auditing is an essential part of the organization of debt management. According to the IMF, an external auditor should audit the debt management functions annually. The audit should focus not only on the financial statements but also on the IT systems and risk management.[9]

3.3 Debt management is implemented with scarce resources

As regards its risk management and ICT dependency, central government debt management corresponds to the business activities in the financial sector. For this reason, it is natural for debt management to strive to comply, where appropriate, not only with international best practices and guidelines but also with the standards and guidelines of the financial sector. The activities are essentially influenced by the national and international regulation and guidelines of the financial market. It is important that the Financing Division of the State Treasury continues to strive to comply, where appropriate, with the principles commonly applied in the financial sector.

Based on the findings of the audit, the most significant operational risks of central government debt management are caused by human resources and ICT. Resources should be allocated in such a way that it is possible to ensure the continuity of critical functions without interruptions.

> The functioning of IT systems must be safeguarded in all circumstances.

IT systems as a core function of debt management

The debt management provision states that the IT systems and communications of debt management shall support the main strategic objectives of debt management. According to the provision, they shall not have to compete for resources with other functions of the State Treasury, but sufficient resources shall always be safeguarded for them. The State Treasury is a multisectoral agency, and ICT is a centralized support function which provides services to all government agencies in all sectors according to their needs. However, central government debt management is a process where the ICT architecture and IT systems are part of the strategic core of operations, and their functioning must be safeguarded in all circumstances. This poses considerable problems for the organization of the ICT solutions related to debt management.

The most significant individual risk in debt management is ICT architecture and IT systems, and their functionality. This has also been repeatedly highlighted in various reports on debt management arrangements. The final report of the expert group that assessed the development needs of central government debt management states, among other things, that the organization and management of the ICT solutions of debt management clearly pose an operational risk to central government debt management.[10]

The Government ICT Centre Valtori provides the State Treasury and the central government in general with sector-independent ICT services and with ICT services that meet the requirements set by high preparedness and security. Some solutions, such as centralized functions, may not be optimal for such processes as debt management. It is of utmost importance that the service solutions offered operate without interruptions and that any deficiencies detected in the services can be responded to immediately. In a situation where the service provider is unable to provide services of sufficiently high quality, government agencies and institutions may, by a derogation, disengage themselves from the centralized services. However, this has not been done so far; instead, efforts have been made to solve the problems detected in such a manner that the special needs of the Financing Division of the State Treasury are taken into account adequately.

Performance management is carried out over a different channel than the actual steering of debt management. The Ministry of Finance is responsible for the performance management of the State Treasury. However, within the State Treasury, debt management is fully delegated to the Financing Division, which in turn is steered by the Financial Markets Department of the Ministry of Finance except as regards resources. This dual-channel steering poses challenges to the timeliness and availability of resources.

> ICT architecture is part of the strategic core of debt management.

The development of operations, the automation and modernization of processes, and other kinds of essential investments in ICT solutions require appropriations allocated to them. From the point of view of performance management, the needs for appropriations should be specified and presented as part of the annual financial planning and, if the need concerns long-term development, the actors should provide the steering body with a long-term development plan. In reality, ICT development projects are often carried out alongside other activities, and their implementation may be delayed. However, performance management has more precise expectations, which are tied to both time and appropriations. The performance management and the ICT investments required for debt management have not been reconciled in the best possible way.

In its own risk management, the State Treasury has identified operational risks and highlighted the need for significant resource inputs in order to be able to develop major systems and processes successfully in the future. It is important to maintain a dialogue between the performance management and the Financing Division of the State Treasury so that all actors are aware of both short-term and long-term resource needs. ICT architecture and IT systems are core functions of debt management, and therefore it is necessary to allocate sufficient resources to them in order to minimize operational risks.

The model underlying the selection of the strategic interest rate risk position does not work in the current circumstances

Under the Act on Credit Institutions, a credit institution shall have adequate, secure and reliable payment, security, and other IT systems. According to the Financial Supervisory Authority, financial sector actors must ensure that their IT systems are adequate and appropriate vis-à-vis the nature and scope of their business activities. In addition, the Financial Supervisory Authority recommends that the supervised entity put in place an operating model to ensure cooperation between business units and IT service units. However, the actors should separate system development and production tasks from each other.[11]

The audit identified dangerous combinations of work and processes where tasks had not been separated from each other. The problems identified relate to the management of ICT and personal risks, particularly to the maintenance and development of an analysis model. The analysis model is a key tool on which the selection of the interest rate risk position is based. It makes it possible to determine an 'efficient frontier', from which it is possible to select the prudent degree of risk with the associated interest expenses.

External auditing has shown that the interest rate models used in the current analysis and the selected interest modelling methods involve significant risks and uncertainties, which are partly related to the current interest rate environment but also to the inherent interest rate modelling problems of the selected method.[12]

In practice, the modelling of nominal interest rates has not provided reliable results since 2015, and it is not necessarily possible to find reliable and effective remedies for the modelling. The main problem associated with the selected partial portfolio approach is that the selections made in the modelling are based on highly practice-oriented solutions for which no theoretical basis can be found, and there is no extensive expertise in this area in the whole world. As a result, the implementation of the modelling is not transparent or easy to understand, and the interpretation of the modelling results presents challenges. In addition, the arrangements of the model risk management are deficient. The model is used, updated and developed by a very small number of experts, and the responsibilities have not been separated from each other. Moreover, the model has not been comprehensively documented.

As the problems with the modelling and the reliability of the results have long been widely recognized by both the evaluators and the creators, it would be important to allocate the necessary resources to the development and renewal of the modelling. As regards the development of the modelling, it is essential to ensure that the selections are transparent and assessable, that there is sufficient competence, and that the results are comprehensible and easy-to-interpret.

> The purpose of the analysis model is to support the actors' decision-making.

Investment in human resources is essential for the management of the continuity of processes

In addition to ICT architecture and IT systems, another significant operational risk in the debt management process is personal risks. According to the guidelines of the Financial Supervisory Authority, the executive management of an organization shall ensure that there are sufficient human resources to handle all the tasks involved. In order to ensure business continuity, particularly the employees performing key duties shall have deputies who can act in their stead in case of sudden termination or interruption of employment.[13]

The audit found that the tasks of the central government debt management process are partly concentrated in the hands of certain individuals and that human resources in general are scarce, which may jeopardize the continuity of operations. According to the audit findings, the scarcity of human resources can lead to situations where the most acute issues are prioritized, several small errors are made in haste, documentation remains to be done later on, and instructions and regulations are not updated regularly. In most cases, minor individual deficiencies do not cause direct financial losses, but overall, resourcing must be sufficient to avoid the accumulation or concentration of risks.

Another critical area related to human resources is the competence risk. Competence risk refers to a situation where critical competence is possessed by only one person. The concentration of critical competence in the hands of only a few or, in the worst case, only one person poses a very significant risk to the continuity of operations. Deputy arrangements are an integral part of the risk management of processes, such as central government debt management, that are critical to society's functions. Executive management should continue to pay attention to the creation of an environment that encourages open discussion and competence sharing within the organization or operating unit. Competence sharing, team work, and an atmosphere that welcomes conversation are part of risk management.

> Resourcing must be at a sufficient level.

At worst, the risks associated with scarce human resources may materialize in situations such as the Covid-19 crisis. In the past few years, the trend in the central government has been towards decreasing resources and centralizing activities. Comprehensive preparedness is not necessary or possible with all processes. However, in view of the critical nature of debt management as regards safeguarding the state's liquidity and general crisis resilience, particular attention should be paid to its human resources, both in performance management and in the internal resourcing within the agency.

Appendix: Audit methods

This appendix describes how the audit results have been achieved and the restrictions associated with them.

Purpose and objective of the audit

The purpose of the audit is to verify and assess the appropriateness of central government debt management and to verify and assess the prerequisites for efficient, economic and effective operations. The objective of the audit is to determine whether the selected debt management strategy is efficient, economic and effective, and whether the implementation and risk management of the debt management based on the strategy have been implemented appropriately.

The results of the audit can be utilized in decision-making both in Parliament, which decides on the organization of the overall debt management, and in the Ministry of Finance and the State Treasury, which decide on the implementation of debt management.

Target of the audit

The audit was targeted at central government debt management. The Ministry of Finance is responsible for organizing the debt management, whereas the State Treasury is responsible for the practical implementation. In the State Treasury, debt management has been delegated to the Financing Division. Debt management covers central government borrowing, investment of central government cash reserves, and the risk management related to debt and invested cash reserves. The Financing Division of the State Treasury has also some other tasks, but they were not audited.

The National Audit Office requested opinions on the draft audit report from the Ministry of Finance and the State Treasury, both of which provided an opinion. The feedback given in the opinions was taken into account in the final audit report. The opinions and a summary of them can be found on the website of the National Audit Office.

Audit questions and criteria

Audit question 1: Has the selected debt management strategy been implemented effectively?

Sources for the criteria:

- Provision issued by the Ministry of Finance on debt management and compliance with it
- The State Budget Decree and the provision issued by the Ministry of Finance on operational and financial planning require the provision of performance data. Planning and reporting data on the financial process and their assessment

Audit question 2: Are the debt management arrangements appropriate?

Sources for the criteria:

- The general requirements for the operations are defined in the State Budget Act (423/1988), the Administrative Procedure Act (434/2003), and the State Budget Decree (1234/1998)
- The objective of debt management is also to comply with the financial standards, and therefore they have served as the operational criteria
- Recommendations given in the assessments made in the past few years and their implementation

Audit question 3: Has the risk management related to central government debt management been implemented appropriately?

Sources for the criteria:

- Guidelines of the Public Sector Digital Security Management Board (VAHTI) on continuity and risk management
- Recommendation of the Government Financial Controller's Function concerning the risk management policy
- Risk management recommendations and standards (COSO-ERM, ISO 31000)
- State Budget Act and Decree
- Provision issued by the Ministry of Finance on debt management
- European Central Bank guide to internal models

During the planning phase of the audit, the Ministry of Finance and the State Treasury were heard on the audit design and the audit criteria. The hearing did not give rise to changing the selected audit questions and criteria. The audited entities would have wanted the audit to also assess the selected debt management strategy and its success.

Audit data and methods

The audit data included debt management steering documents, risk and continuity management documents, process descriptions, product descriptions, monitoring and oversight reports, external assessments, internal audit reports, and accounting data and financial statements for 2020, in particular. The written data were supplemented with interviews. A key role in the analysis was played by a comparison of the activities carried out with the activities defined in regulations and guidelines. The audit examined the long-term debt in 2020 as regards private placements and assessed their success. In addition, sample-based tests of controls were made on private placement taps.

Time of the audit

The audit began on 13 January 2021, and the examination of the data and the interviews were mainly carried out between 13 January 2021 and 15 April 2021. The financial audit findings are based on the accounting data and financial statements for 2020. The audit ended on 6 September 2021.

Auditors

The audit was conducted by Senior Auditor Jonna Carlson (Project Manager), Performance Audit Counsellor Visa Paajanen, Principal Performance Auditor Sanni Hellman, and Senior Auditor Hanna Surakka. The owner of the audit project was Deputy Director Vesa Koivunen.

Limitations and reservations related to the audit results

The audit focused on central government debt management and did not examine the central government's indebtedness. Nor did the audit assess the selected debt management strategy but only the implementation of the strategy. However, an issue that is addressed as part of the audit of risk management is how central government debt management is prepared to act in an environment of interest rate assumptions that differ from those of the current debt management strategy. In this audit, the term "debt" refers to the debt that is serviced by the State Treasury and that comprises the debt of on-budget central government activities. Cash management was audited mainly from the perspective of risk management.

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