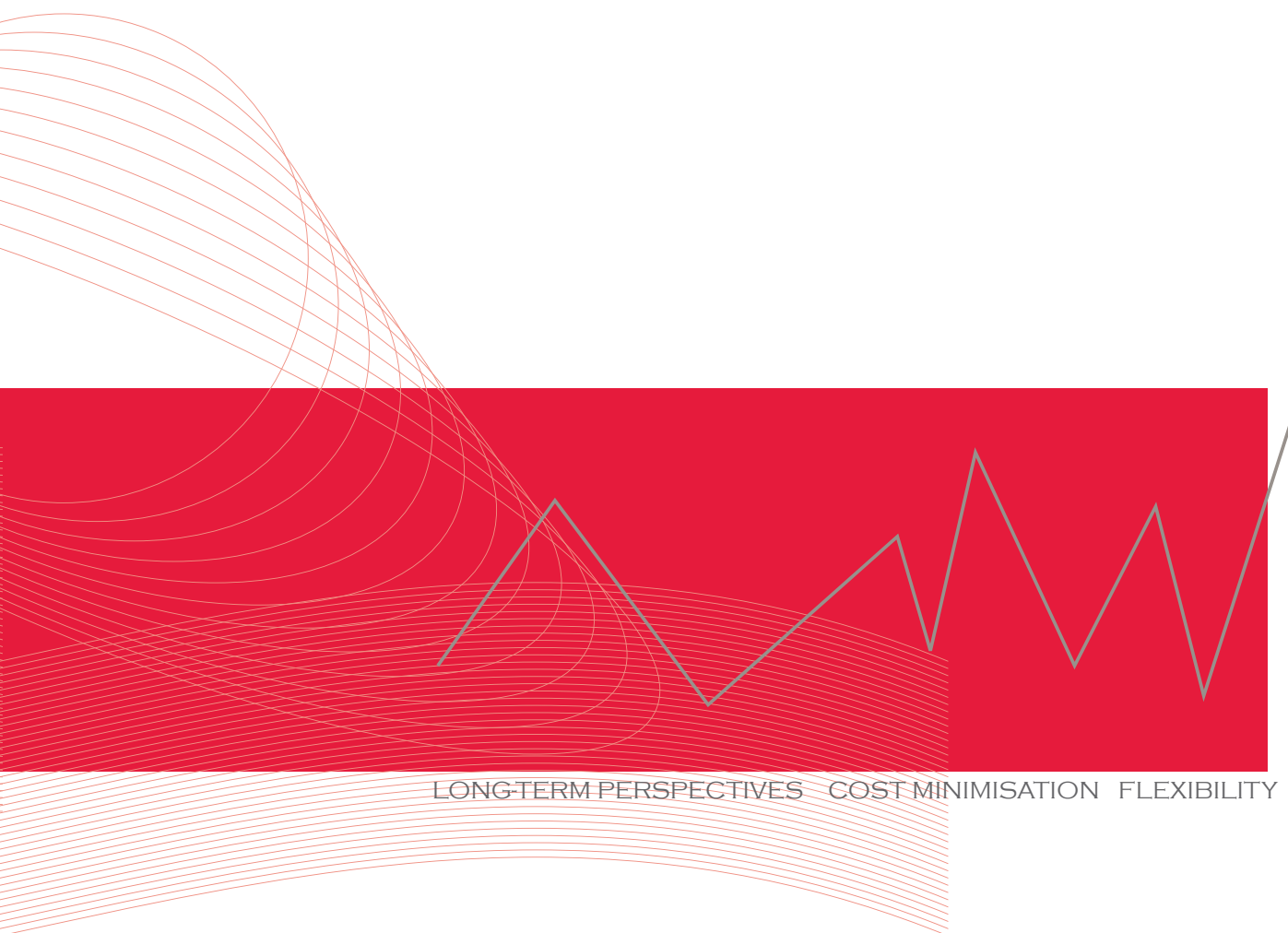


2018

# GUIDELINES FOR CENTRAL GOVERNMENT DEBT MANAGEMENT 2018

Decision taken at the Cabinet meeting  
November 9 2017



LONG-TERM PERSPECTIVES COST MINIMISATION FLEXIBILITY



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# Summary

## *Direction of central government debt policy*

The guidelines decision for 2018 extends the maturity of the nominal krona debt slightly. This reduces the future cost variation of the central government debt and can be done at a low cost since term premiums are still low. Technical changes are also made to the maturity steering of the nominal krona debt. The previous volume benchmark is removed and replaced by a maturity interval for the whole of the nominal krona debt.

The steering of the maturity of the other types of debt is left unchanged, as is the steering of the composition of the central government debt.

## *The maturity (in terms of duration) of the three types of debt is to be steered towards*

- Foreign currency debt: 0–1 years
- Inflation-linked krona debt: 6–9 years
- Nominal krona debt: 4.3–5.5 years.

## *The composition of the central government debt is to be steered towards:*

- Foreign currency debt: A reduction of up to SEK 30 billion per year
- Inflation-linked krona debt: 20 per cent (in the long term)
- The nominal krona debt is to make up the remaining share.

## *Extended maturity of the central government debt*

In this year's proposed guidelines the Debt Office has again analysed the maturity of the central government debt. Its maturity is one of several factors that affect the expected cost of and risk in the central government debt. This analysis shows that the cost advantage of short-term borrowing has decreased. The Debt Office therefore proposes extending the maturity of the nominal krona debt by 0.3 years. The Government's shares the Debt Office's view and makes its decision in accordance with its proposal. The slightly longer maturity means

that the cost of the nominal krona debt will vary less. The steering of the maturity of the foreign currency debt and the inflation-linked krona debt are left unchanged.

## *A common maturity measure for the steering of the nominal krona debt*

A common maturity target (interval) is introduced for the whole of nominal krona debt. The previous volume-based maturity target of SEK 70 billion for instruments with more than twelve years to maturity is removed. As a result of the inclusion of the long bonds in maturity steering, the steering interval is extended from 2.9–3.9 years to 4.0–5.2 years. In addition to this technical increase (on account of the inclusion of long bonds in maturity steering), there is an actual extension of maturity of 0.3 years. The reason for the widening of the interval by 0.2 years is that duration will vary more when the long bonds are included in the maturity measure.

## *Clarification regarding the main cost measure*

In autumn 2016 the Debt Office carried out an investigation, as a commission from the Government, of whether the evaluation of the overall objective for central government debt management can be facilitated (Fi2016:01559). In this year's proposed guidelines the Debt Office proposes forms of clarifying wording for the same purpose. The Government considers that the forms of wording proposed improve the link between the guidelines for the management of the central government debt and its evaluation and therefore approves the Debt Office's proposal.

## *Objective, division of responsibility and process*

The objective of central government debt policy is to manage the central government debt in such a way as to minimise the long-term cost of the debt while taking account of the risk in its management. The management of the debt shall be conducted within the framework of monetary

policy requirements (Chapter 5, Section 5 of the Budget Act [2011:203]).

Responsibility for attaining the objective is divided between the Government and the Debt Office. The Government steers the overall level of risk in its annual guideline decisions while the Debt Office is responsible for borrowing and management being conducted within the framework of the guidelines and in accordance with the objective. The guideline decision has to be taken by the Government no later than 15 November each year. This decision is based, in part, on the Debt Office's proposed guidelines. In connection with the preparation of the proposed guidelines from the Debt Office the Riksbank is given the opportunity to state an opinion.

The Government makes a report on the attainment of the objective to the Riksdag in an evaluation communication every other year. In the intervening years the Government presents a preliminary evaluation of the management of the central government debt in the Budget Bill.

# 1 Decision on guidelines for central government debt management in 2018

**Summary:** The guidelines decision for the management of the central government debt in 2018 means a slight extension of the maturity of the central government debt. At the same time, the steering of the maturity of the nominal krona debt is changed. A common maturity target for the nominal krona debt replaces the previous steering that was divided up into instruments with less and more than twelve years to maturity. The new maturity target for the nominal krona debt is the interval 4.3–5.5 years, which corresponds to an extension by 0.3 years. The maturity intervals for the foreign currency debt and the inflation-linked krona debt of 0–1 years and 6–9 years respectively are left unchanged. Maturity is steered in terms of duration.

The steering of the composition of the central government debt is left unchanged. The share of inflation-linked krona debt is to be steered towards 20 per cent in the long term. As in the preceding year, the foreign currency debt is to decrease by no more than SEK 30 billion per year, excluding changes in the krona exchange rate. In addition, some clarifying forms of wording are inserted regarding the main cost measure for the management of the central government debt.

The current steering of the central government debt portfolio builds on a large number of analyses and discussions conducted over the years. The current process for the steering and evaluation of central government debt policy has been applied since 1998.

The guidelines for 2018–2020 are set out below; 2020 being the horizon for calculations applied in the Budget Bill for 2018. As in the case for the Budget Bill, the decisions for 2019–2020 are to be regarded as preliminary. In cases where individual points in the guidelines differ from the Debt Office's proposal or from earlier guideline decisions this is stated. In order to provide an overview of the regulations that govern the management of the central government debt, the relevant parts of the Budget Act (2011:203) and the Ordinance (2007:1447) containing Instructions for the National Debt Office are presented here.

## 1.1 The objective for the management of central government debt

1. The central government debt shall be managed in such a way as to minimise the cost of the debt in the long-term while taking risk in its management into account. The management of the debt shall be conducted within the framework of monetary policy requirements. *Budget Act (2011:203)*.

## 1.2 The task of the Debt Office and the purpose of borrowing

2. The task of the Debt Office is to raise and manage loans for the central government in accordance with the Budget Act. *Ordinance (2007:1447) containing Instructions for the National Debt Office*.

3. Under the Budget Act the Debt Office may raise loans for the central government to:
  1. finance current deficits in the central government budget and other expenditure based on decisions of the Riksdag (the Swedish Parliament);
  2. provide credits and perform guarantees decided by the Riksdag;
  3. amortise, redeem and buy back central government loans;
  4. meet the need for central government loans at different maturities in consultation with the Riksbank; and
  5. satisfy the Riksbank's need for foreign currency reserves.

### 1.3 The guidelines process

4. The Debt Office shall submit proposed guidelines for central government debt management to the Government no later than 1 October each year. *Ordinance containing Instructions for the National Debt Office.*
5. The Government shall request on opinion from the Riksbank on opinion on the Debt Office's proposal. *Budget Act.*
6. The Government shall adopt guidelines for the Debt Office's management of the central government debt no later than 15 November each year. *Budget Act.*
7. The Debt Office shall submit information for the evaluation of the management of the central government debt to the Government no later than 22 February each year. *Ordinance containing Instructions for the National Debt Office.*
8. The Government shall evaluate the management of the central government debt every other year. The evaluation shall be presented to the Riksdag no later than 25 April. *Budget Act.*
9. The Debt Office shall establish principles for the implementation of the guidelines for central government debt management established by the Government. *Ordinance containing Instructions for the National Debt Office.*
10. The Debt Office shall establish internal guidelines based on the Government's guidelines. These decisions are to concern the use of the position mandate, the foreign currency distribution in the foreign currency debt and principles for its market and debt commitment.

### 1.4 Composition of central government debt – debt shares

The Government's decision	Debt Office proposal	Comment
<p>11. The share of <i>inflation-linked krona debt</i> in the central government debt is to be 20 per cent in the long term.</p> <p>The shares of the debt types in the central government debt are to be calculated as nominal amounts at the present exchange rate including accrued compensation for inflation.</p>	In line with the Government's decision.	Corresponds to current guideline.

12. The foreign currency exposure of the central government debt shall decrease. The decrease is to be no more than SEK 30 billion per year. The exposure shall be calculated in a way that excludes changes in the krona exchange rate.	In line with the Government's decision.	Corresponds to current guideline.
13. The Debt Office is to set a benchmark for the distribution of the foreign currency debt among different currencies.	In line with the Government's decision.	Corresponds to current guideline.
14. In addition to inflation-linked krona debt and foreign currency debt, central government debt is to be composed of <i>nominal krona debt</i> .	In line with the Government's decision.	Corresponds to current guideline.

### 1.5 Maturity of the central government debt

The Government's decision	Debt Office proposal	Comment
15. The maturity of the nominal krona debt is to be between 4.3 and 5.5 years.	In line with the Government's decision.	A common maturity target for the nominal krona debt is introduced and the previous volume benchmark is removed. In addition the interval is increased by 0.3 years, see sections 3.3 and 3.4.
16. The maturity of the inflation-linked krona debt is to be between 6 and 9 years.	In line with the Government's decision.	Corresponds to current guideline.
17. The maturity of the foreign currency debt is to be between 0 and 1 year.	In line with the Government's decision.	Corresponds to current guideline.
18. The maturity of the types of debt may deviate temporarily from the maturities given in points 15, 16 and 17.	In line with the Government's decision.	Corresponds to current guideline.
19. Maturity is to be measured as duration.	In line with the Government's decision.	Corresponds to current guideline.

## 1.6 Cost and risk

The Government's decision	Debt Office proposal	Comment
20. The trade-off between expected cost and risk is primarily to be made through the choice of the composition and maturity of the central government debt.	In line with the Government's decision.	Corresponds to current guideline.
21. The main cost measure is to be the average issue yield. The cost is to be calculated using the valuation principle of amortised cost with continuous revaluation of inflation and exchange rate fluctuations.	In line with the Government's decision.	Clarification of how to calculate the cost; see section 3.5.
22. The main risk measure is to be the variation of the average issue yield.	In line with the Government's decision.	Clarification that the risk measure refers to the variation of the average issue yield, see section 3.5.
23. The Debt Office shall take account of refinancing risks in the management of the central government debt, including by issuing instruments with more than twelve years to maturity.	In line with the Government's decision.	This guideline is supplemented against the background of the removal of the volume benchmark, see section 3.4.
24. Borrowing shall be conducted in such a way as to ensure a broad investor base and diversification in a range of funding currencies in order to maintain good borrowing preparedness.	In line with the Government's decision.	Corresponds to current guideline.
25. Positions are not to be included in the calculation of debt shares and maturities.	In line with the Government's decision.	Corresponds to current guideline.
26. When taking positions, market values are to be used as the measure of the costs and risks in the management of the debt.	In line with the Government's decision.	Corresponds to current guideline.

## 1.7 Market and debt commitment

The Government's decision	Debt Office proposal	Comment
27. The Debt Office is to contribute, through its market and debt commitment, to the effective functioning of the government securities market in order to achieve the long-term cost minimisation objective while taking account of risk.	In line with the Government's decision.	Corresponds to current guideline.



28. The Debt Office is to adopt principles for its market and debt commitment.	In line with the Government's decision.	Corresponds to current guideline.
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## 1.8 Position-taking

The Government's decision	Debt Office proposal	Comment
<p>29. The Debt Office may take positions in <i>foreign currency</i> and the <i>krona exchange rate</i>.</p> <p>Positions in foreign currency may only be taken using derivative instruments.</p> <p>Positions may not be taken in the Swedish fixed income market.</p> <p>Positions refer to transactions that are intended to reduce the costs of the central government debt while taking account of risk, or to reduce the risks for the central government debt while taking account of cost, and that are not motivated by underlying borrowing or investment requirements.</p> <p>Positions may only be taken in markets that permit the management of market risk through liquid and otherwise well-developed derivative instruments and that are potentially a borrowing currency in the context of debt management.</p>	In line with the Government's decision.	Corresponds to current guideline.
<p>30. Positions in <i>foreign currency</i> are limited to SEK 300 million, measured as daily Value-at-Risk at 95 per cent probability.</p> <p>The Debt Office is to decide how much of this scope may be used at most in its ongoing management.</p>	In line with the Government's decision.	Corresponds to current guideline.
<p>31. Positions in the <i>krona exchange rate</i> may not exceed a maximum of SEK 7.5 billion. When the positions are built up or wound down, this is to be done gradually and announced in advance.</p> <p>The Debt Office is to decide how much of this volume may be used at most in ongoing management in connection with</p>	In line with the Government's decision.	Corresponds to current guideline.

exchanges between the krona and other currencies. This volume shall be of a limited size and the positions do not need to be announced in advance.		
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## 1.9 Retail market borrowing

The Government's decision	Debt Office proposal	Comment
32. The Debt Office is to contribute through retail market borrowing to reducing the costs of central government debt compared with equivalent borrowing in the institutional market in the long term.	In line with the Government's decision.	Corresponds to current guideline.

## 1.10 Borrowing to meet the need for central government loans

The Government's decision	Debt Office proposal	Comment
33. The possibility of raising loans to meet the need for central government loans under Chapter 5, Section 1 of the Budget Act may only be used if required on account of threats to the functioning of the financial market.  The Debt Office may have outstanding loans with a maximum nominal value of SEK 200 billion for this purpose.	In line with the Government's decision.	Corresponds to current guideline.
34. Investment of funds raised through loans to meet the need for central government loans should be guided by the principles set out in the Preventive Government Support to Credit Institutions Act (2015:1017).	In line with the Government's decision.	Corresponds to current guideline.

## 1.11 Management of funds etc.

35. The Debt Office shall place its funds, to the extent that they are not needed for payments, in an account at the Riksbank, a bank or a credit market company, or in government securities or other debt instruments with a low credit risk. Investments may be made abroad and in foreign currency. *Ordinance containing Instructions for the National Debt Office.*
36. The Debt Office shall cover the deficits that occur in the Government central account. *Ordinance containing Instructions for the National Debt Office.*

37. The management of exchanges between Swedish and foreign currency (currency exchanges) shall be predictable and transparent. *Ordinance containing Instructions for the National Debt Office.*

## **1.12 Consultation and collaboration**

38. The Debt Office shall consult with the Riksbank on matters concerning the components of its borrowing operations that may be assumed to be of major importance for monetary policy. *Ordinance containing Instructions for the National Debt Office.*
39. The Debt Office shall collaborate with the National Institute of Economic Research and the National Financial Management Authority on matters concerning the Debt Office's forecasts of the central government borrowing requirement. *Ordinance containing Instructions for the National Debt Office.*
40. The Debt Office should obtain the Riksbank's views on how the funds borrowed to meet the need for central government loans under the Budget Act are to be invested.

## **1.13 Evaluation**

41. Evaluation of the management of the central government debt is to be carried out in qualitative terms in the light of the knowledge available at the time of the decision. Where possible, the evaluation shall also include quantitative measures. The evaluation shall cover five-year periods.
42. The evaluation of the operational management shall include borrowing in and management of the different types of debt, market and debt commitment measures and management of currency exchanges.
43. The realised cost difference between inflation-linked and nominal borrowing is to be reported for inflation-linked borrowing.
44. The cost saving compared with alternative borrowing is to be reported for retail market borrowing.
45. Positions within a position mandate given are to be recorded continuously in income, and evaluated in terms of market values.

## 2 Basis for the Government's guidelines

**Summary:** The basis for the Government's guidelines decision is that the central government debt is to be managed in such a way as to minimise the long-term cost of the debt while taking account of the risk in its management. The management of the debt shall be conducted within the framework of monetary policy requirements.

A further consideration is the size of the central government debt and its expected development. At the end of 2016 the unconsolidated central government debt was SEK 1 347 billion (31 per cent of GDP). Forecasts indicate that at the end of 2020 the corresponding debt will be between SEK 1 010 and 1 211 billion (19 and 23 per cent of GDP). The size and expected development of the central government debt do not change the Government's view of the scope for risk-taking in the management of the central government debt compared with the preceding year. The extension of the maturity of the nominal krona debt is justified by continuing low term premiums.

In its annual guideline decisions the Government steers the trade-off between cost and risk in the management of the central government debt at a general level. This steering of management is based on the statutory objective for central government debt policy.

The trade-off is mainly made by choosing the maturity of the central government debt. If a shorter maturity is chosen, the average cost is expected to be lower, while the risk in management rises (and the other way round). This is because it is assumed that the slope of the yield curve is positive over time while short-term interest rates vary more. So, when the interest rate on a greater part of the debt is refixed in every period, the variation of the total interest rate costs for the central government debt increases. In general, strong government finances and low central government debt mean that the scope for risk-taking increases in return for lower expected costs. In exceptional cases the absolute level of interest rates can also be taken into account, as can the situation in loan markets and the Swedish krona exchange rate.

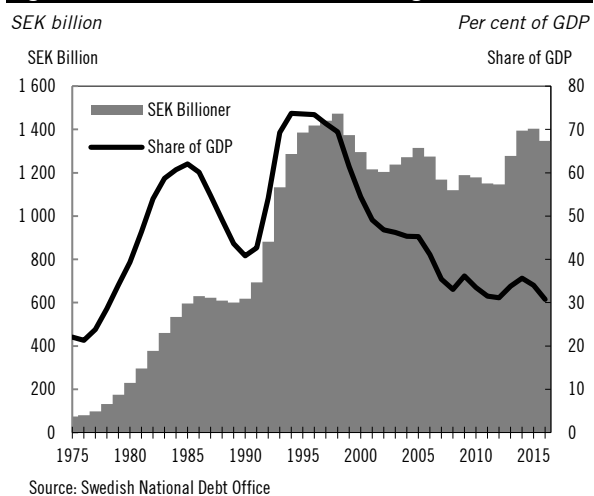
The Debt Office is able to decide on deviations from the benchmarks within the mandates it has been given. Derivatives are used for these deviations, which are defined as positions. These positions are evaluated separately and must not be taken in the Swedish fixed income market.

### 2.1 Central government debt

#### *Development from a historical perspective*

The central government debt has arisen because, historically, the central government budget has shown larger deficits than surpluses. Budget deficits are financed by new borrowing, while budget surpluses are used to amortise the existing debt. The central government debt is very much affected by the development of the economy and by decisions on economic policy.

**Figure 2.1 Unconsolidated central government debt**



In some years one-time events affect the development of the central government debt. Examples of this are sales of shares in state-

owned companies and on-lending to the Riksbank.

Figure 2.1 shows the development of the unconsolidated central government debt since 1975.<sup>1</sup> The figure shows that the central government debt has increased sharply as a share of GDP in two periods. The first period was between 1976 and 1985, when the central government debt increased as a share of GDP from 22 to 65 per cent. The second period was between 1990 and 1995, when the central government debt increased as a share of GDP from 43 to 77 per cent. As shown in the figure, the central government debt has decreased gradually as a share of GDP since the mid-1990s, reaching 31 per cent at the end of 2016. The increase in the central government debt in 2009 and 2013 is largely explained by foreign currency borrowing by the Debt Office on behalf of the Riksbank corresponding to SEK 100 billion in each of these years. This borrowing was carried out following a request by the Riksbank in order to strengthen the currency reserve. At the end of 2016 on-lending to the Riksbank amounted to SEK 257 billion of the unconsolidated central government debt. This on-lending to the Riksbank is a receivable for central government, so it does not affect the steering of the central government debt.

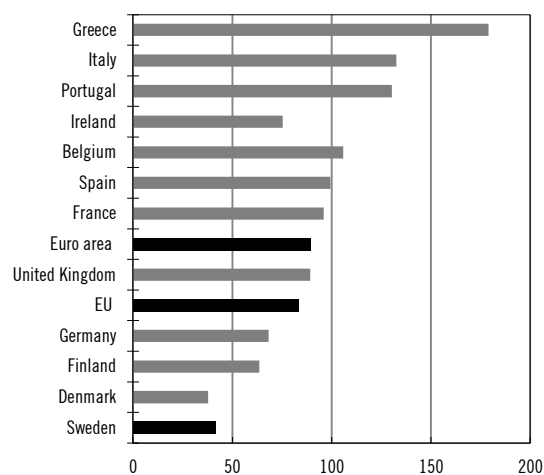
#### *Comparison from an international perspective*

Comparisons of general government sector debt in different EU countries use the ‘Maastricht debt’. This measure of debt refers to the consolidated gross debt of the whole of the general government sector, which, for Sweden, means that the central government debt and the local government sector’s capital market debts are added together while the National Swedish Pension Funds’ holdings of government securities are deducted. The reason for using this broader measure of debt in EU contexts is that the public sector is organised in different ways in

different countries. The Maastricht debt thus makes it possible to increase comparability between countries.

For Sweden the Maastricht debt was 42 per cent of GDP at the end of 2016. At the same point in time the corresponding share for the EU as a whole was 84 per cent and for the euro area it was 89 per cent.

**Figure 2.2** Maastricht debt in 2016 as a share of GDP



Source: Eurostat, data last updated 15 Sep. 2017

#### *Forecasts of the future development of the central government debt*

The development of the central government debt is affected by a large number of factors. So, it goes without saying that it is difficult to forecast the development of the central government debt over a number of years. Several forecasts of the development of the central government debt are therefore presented below. In addition to the Government, the National Financial Management Authority (ESV), the National Institute of Economic Research (NIER) and the Debt Office make forecasts of public finances. These forecasts are made for different purposes. The forecasting methods and time horizons also differ.

The Government’s forecasts are an important part of the political process since they form the basis for Riksdag decisions on taxes and expenditure. The Government’s forecast has been taken from the Budget Bill for 2018 (Govt Bill 2017/18:1).

<sup>1</sup> The Budget Bill mainly reports the consolidated central government debt. The difference between the consolidated and unconsolidated debt is made up of government agency holdings of government securities (SEK 55 billion at the end of 2016).

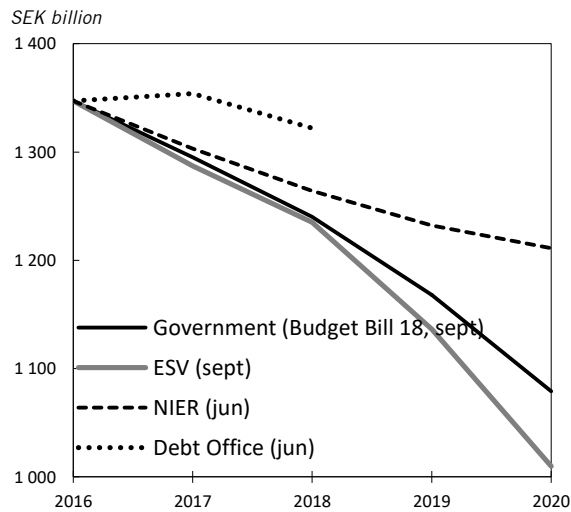
NIER forecasts focus on the development of the real economy in national accounts terms. NIER forecasts also estimate the development of the consolidated central government debt.<sup>2</sup> The NIER forecast has been taken from the publication *The Swedish Economy [Konjunkturläget]* in June 2017.

The National Financial Management Authority's forecasts provide supporting information for decisions and discussions in fiscal policy. Its forecasts are based on decisions taken and legislative proposals as well as, in some cases, measures announced by the Government and the Riksdag. The National Financial Management Authority's forecast has been taken from the publication *Forecast of the central government budget and public finances [Prognos Statens budget och de offentliga finanserna]* from September 2017. Both the Government's and the National Financial Management Authority's forecasts are based on impact assessments given proposed or unchanged regulations and on a particular development of the macroeconomy. One difference is that the Government makes a technical assumption for its calculations of sales income of SEK 5 billion per year during the forecast period.

The Debt Office's forecasts are made in cash terms and form the basis for its issue planning. Its reporting of planned borrowing by loan instrument makes the government securities market more predictable. In the long term this contributes to lower costs for the central government debt. The Debt Office's forecast has been taken from the publication *Central Government Borrowing: Forecast and analysis 2017:2* from June 2017. However its forecast of the unconsolidated central government debt in 2018 has been adjusted upwards by SEK 106 billion. In its forecast the Debt Office assumed that foreign currency borrowing on behalf of the Riksbank would stop at the end of 2017. This assumption no longer applies since the Government has communicated that the preparation of the matter has been transferred to

the Riksbank Committee of Inquiry, which means that no proposal will be presented in 2017.

**Figure 2.3** Forecasts of unconsolidated central government debt



Source: National Financial Management Authority (ESV), National Institute of Economic Research (NIER), Government and Debt Office.

Figure 2.3 presents the forecasts made by the various agencies of the unconsolidated central government debt until the end of the calculation period in 2020, apart from the Debt Office, whose forecast extends to 2018. The forecasts show a range for the unconsolidated central government debt at the end of 2020 of between SEK 1 010 and 1 211 billion (19 and 23 per cent of GDP). At the end of 2016 the corresponding debt was SEK 1 347 billion, or 31 per cent of GDP. On-lending to the Riksbank, which was SEK 257 billion at the end of 2016, is included in the forecasts.

#### *Prospects for the development of the Swedish economy according to the Budget Bill for 2018*

Economic developments in Sweden are of great importance for the development of the central government debt. When the economy is strong and employment high, central government receives more taxes at the same time as the pressure on social security systems decreases when unemployment falls. A rapidly growing economy therefore generally results in stronger central government finances and a lower central government debt.

The Budget Bill for 2018 presents a strong picture of the Swedish economy. In the past two years Sweden has had among the highest rates of GDP growth in Europe. Both households and

<sup>2</sup> The National Financial Management Authority's forecast of government agencies' holdings of government bonds has been used to calculate the unconsolidated central government debt. The unconsolidated central government debt is SEK 56–59 billion higher than the consolidated central government debt in the period 2017–2020.

businesses are optimistic about the future, and in 2017 GDP growth is expected to be 3.1 per cent. In 2017 resource utilisation is judged to be higher than normal and a further slight rise is expected in 2018. After this the economy is expected to gradually return to a more balanced situation (see table 2.1).

**Table 2.1. GDP forecast (according to Budget Bill for 2018)**

	2016	2017	2018	2019	2020
GDP <sup>1</sup>	3.2	3.1	2.5	2.0	2.3

<sup>1</sup> Constant prices

Source: Budget Bill for 2018 (Govt Bill 2017/18:1)

There is, however, still great uncertainty about international developments. Sweden is a small and open economy with a large export sector (exports make up about 45 per cent of Sweden's GDP) and Sweden's economic development is highly dependent on global developments. One factor that could weaken these development is the outcome of the negotiations on the UK's announced exit from the EU. Another factor is the direction of the US Administration's economic policy and security policy and what the consequences would be if the country left the Paris Agreement. The effects of climate change and extreme weather events are also a risk, both for individual households and for society as a whole. In addition, there are still risks for an abrupt slowdown of the Chinese economy, as well as of a rapid correction of global asset prices.

In Sweden high household debt and rising house prices are still a macroeconomic risk. If there is a sharp fall in house prices or if interest rates rise, highly indebted households may reduce their consumption. This might, in turn, have a negative impact on both growth and employment. The current high level of housing construction is an important part of the explanation for the strong growth of the Swedish economy.

### Conclusion

The forecasts of the unconsolidated central government debt indicate that in 2020 the debt will be lower as a share of GDP than it is today. But these forecasts are associated with uncertainty. The scope for risk-taking in the management of the central government debt is therefore judged to be largely the same as before.

## 2.2 Loan markets

### *The yield curve slope*

The slope of the yield curve affects the trade-off between cost and risk. When the yield curve has a steep positive slope, the cost saving from borrowing at shorter maturities increases and the other way round. Shorter borrowing means that an interest rate rise has a quicker impact on interest costs since the debt is refinanced more often. This increases the risk of variations in interest costs.

Historically the yield curve has generally had a positive slope, i.e. long interest rates have been higher than short interest rates. This could be explained by market participants expecting, on average, that interest rates will rise (the expectations hypothesis) but it is more likely that they want compensation for binding money if it turns out that they are wrong or if they want to reinvest the funds before the bond matures (term premium).

In this year's proposed guidelines the Debt Office has again analysed the maturity of the central government debt. This analysis points to the same conclusions as were presented in the proposed guidelines for 2016 and for 2017. The analysis shows that term premiums have fallen over time and are now close to zero. Even though it is not possible to rule out a rise in these premiums in coming years, the Debt Office makes the assessment that the cost advantage of short-term borrowing is smaller than it used to be (see section 3.3).

### *The level of the yield curve*

The level of the yield curve is not normally of importance for the choice of maturity. Considering that increases and decreases in the interest rate offset each other in the long run, the gain from having a long-term debt when interest rates rise is reduced by a loss that can be said to arise when interest rates fall again. However, in certain extraordinary cases, the interest rate level has affected the steering of maturities. This happened, for example, in spring 2009 when the Debt Office was given the possibility of issuing a 30-year bond, partly with the aim of locking in low interest rates.

In recent years the Riksbank has pursued an expansive monetary policy in order to achieve the monetary policy target of inflation of 2 per cent. Since July 2014 the repo rate has been

reduced from 0.75 per cent to -0.50 per cent in February 2016; after that the repo rate has remained unchanged. For monetary policy reasons the Riksbank has also bought government bonds, the volume of these is planned to be SEK 290 billion at the end of 2017.

**Figure 2.4 Swedish government interest rates**

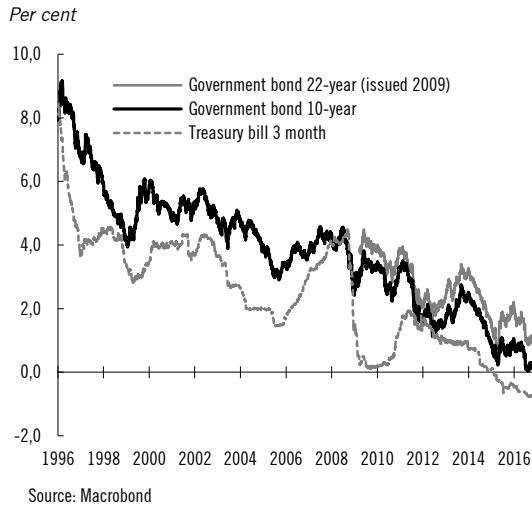
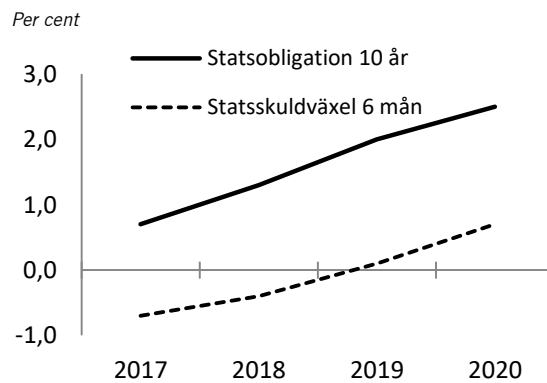


Figure 2.4 shows that both short and long government interest rates have fallen sharply since 2014. The short interest rate, which follows the direction of the repo rate, has continued downwards while longer interest rates have risen slightly in periods. At the end of September 2017 the interest rate was -0.66 per cent for three-month T-bills, 0.91 per cent for the ten-year government bond and 1.62 per cent for the twenty two-year government bond.

#### *Government forecast of interest rate developments*

In the Budget Bill for 2018 the Government expects interest rates to rise gradually during the forecast horizon up until the end of 2020. The average annual interest rate for T-bills with a maturity of six months is expected to rise from -0.7 per cent in 2017 to 0.7 per cent in 2020. The annual average for government bonds with a maturity of ten years is expected to rise from 0.5 per cent to 2.5 per cent in the same period, see figure 2.5.

**Figure 2.5 Government forecast of Swedish government interest rates, annual average 2017–2020**



#### *Conclusion*

Term premiums have continued to fall in recent years, and they are expected to be low for the foreseeable future. The trade-off between the expected cost saving from short-term borrowing in relation to the increased risk this entails has therefore shifted slightly, see section 3.3.

## 2.3 The Swedish krona

The size of the currency debt expressed in Swedish kronor is affected by the value of the Swedish krona in relation to the currencies against which the currency debt has exposure. In exceptional cases the guidelines for central government debt management have been affected by the expected development of the Swedish krona. The last time this happened was in May 2009, when the krona was judged to be severely undervalued in connection with the financial crisis. The mandate for positions in the krona exchange rate was raised at that time from SEK 15 billion to SEK 50 billion.

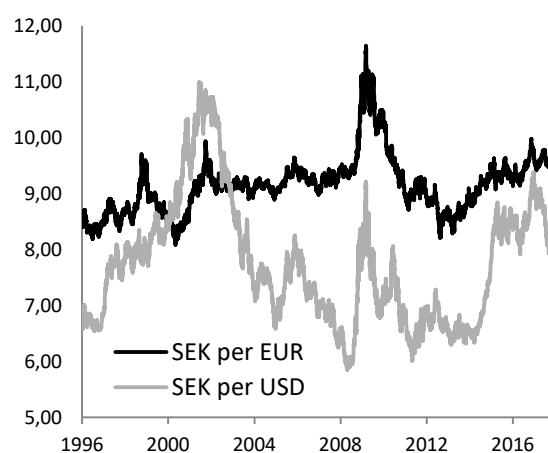
#### *The historical development of the Swedish krona*

In the case of countries with a floating exchange rate (like Sweden), their exchange rate is affected by demand in the international currency market. This demand is affected, in turn, by a large number of factors, including expectations regarding the country's economic growth, future level of interest rates and inflation. In periods of financial unrest larger currencies, such as the US dollar and euro, tend to get stronger, while smaller currencies often fall in value. This became clear during the financial crisis in 2008



and 2009 when the value of the Swedish krona weakened sharply against both the euro and the US dollar. As financial markets stabilised and when signals about economic developments became more positive, the Swedish krona strengthened. Since 2011 the krona has weakened slightly against the euro. In the latter part of 2014 and in spring 2015 the US dollar strengthened considerably, before it began to weaken just before the end of 2016. In 2017 the US dollar has continued to weaken.

**Figure 2.6** Development of the Swedish krona

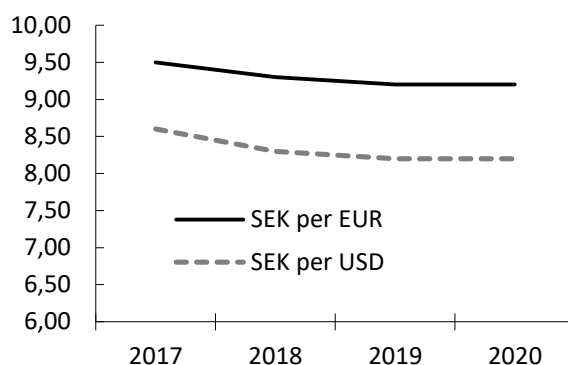


Source: Macrobond/Riksbank

#### *Government forecast of the development of the krona*

In the Budget Bill for 2018 the Government expects the krona to strengthen slightly up to the end of the forecasting horizon against both the euro and US dollar. The annual average EUR/SEK exchange rate is estimated at 9.50 in 2017 and at 9.20 in 2020. Correspondingly, in the same period the krona is expected to strengthen from 8.60 to 8.20 against the US dollar, see figure 2.7

**Figure 2.7** Government forecast of the Swedish krona exchange rate, annual average 2017–2020



Source: Budget Bill for 2018 (Govt Bill 2017/18:1)

#### *Conclusion*

Assessments of the development of the krona do not affect this year's guidelines. The mandate for positions in the Swedish krona is left unchanged (see point 31 of the guidelines).

## 2.4 The Riksbank's comments on the Debt Office's proposal

Under the Budget Act the Government shall request an opinion from the Riksbank on the proposal of the Debt Office for guidelines for the management of the central government debt (Chapter 5, Section 6). The opinion of the Riksbank on the proposal of the Debt Office for guidelines for the management of the central government debt in 2018–2021 is set out below.

“The Riksbank considers that the proposals put forward by the Debt Office in its guidelines for the management of the central government debt in 2018–2021 are compatible with the requirements set by monetary policy.”

## 3 Reasons for the Government's decision

### 3.1 Trade-off between cost and risk in debt management

The trade-off between cost and risk is set in the annual guidelines and shall, according to them, primarily be made through the choice of the composition and maturity of the debt (point 20). The guidelines state that the main cost measure is the average issue yield (point 21) and that the main risk measure refers to the variation of this measure (point 22).

#### *The size and expected development of the central government debt*

The trade-off between cost and risk takes account of the size and expected development of the central government debt. A low central government debt and strong government finances increase the scope for risk-taking in return for lower expected costs. In exceptional cases the absolute level of interest rates can also affect the guidelines, as can the situation in loan markets and the Swedish krona exchange rate.

At the end of 2016 the unconsolidated central government debt was SEK 1 347 billion, corresponding to 31 per cent of GDP. This debt included on-lending of SEK 257 billion to the Riksbank. At the end of 2020 the unconsolidated central government debt is expected to be between SEK 1 010 and 1 211 billion (19 and 23 per cent of GDP). However, risks associated with the forecasts (see section 2.1) mean that the scope for risk-taking in the management of the central government debt is judged to be unchanged compared with the previous year.

#### *Costs of the central government debt*

Central government finances in good order and a low central government debt are important factors in ensuring a low cost for the central government debt. Interest rate levels in the Swedish and global interest rate markets are also of great importance for borrowing costs. Exchange rate movements also affect the cost of the central government debt since part of the debt is exposed to foreign currencies. Similarly, the costs of the inflation-linked debt are affected by the development of inflation (CPI).

The downturn in global and Swedish interest rates since the financial crisis has contributed to substantially reduced costs for the central government debt. In 2016 the interest on the central government debt (in cost terms) was only SEK 6 billion and in the Budget Bill for 2018 the corresponding interest costs are estimated at SEK 9.5 billion for 2017. For 2018–2020 the interest costs are expected to rise successively and reach SEK 15.5 billion at the end of the period. The rise is due to expectations of higher market interest rates.

#### *Risks in the management of the central government debt*

The risk in the central government debt is defined at a general level as its contribution to variations in the budget balance and the central government debt. A lower central government debt, which results in lower costs, contributes to a lower risk since the variation of the costs (expressed in kronor) decreases. A lower central government debt initially also makes it easier for central government to borrow large sums in a

crisis situation without a sharp rise in interest rates.

There is no single measure that describes the overall risk in the management of the central government debt. Instead different types of risk are reported, the most important being interest rate refixing risk, refinancing risk, financing risk and counterparty risk.

The interest rate refixing risk means the risk that the interest costs on the debt will rise rapidly if market interest rates move upwards. The greater the share of the debt that consists of short and floating-rate loans, the more sensitive is the debt to changes in market interest rates. Short borrowing is generally cheaper than long borrowing, which means that a trade-off must be made between expected cost and risk. In recent years term premiums, i.e. the compensation investors demand to invest in government securities with longer maturities, have decreased. Term premiums are expected to be low for the foreseeable future so there has been a slight change in the trade-off between shorter and longer maturities. In view of this, the maturity of the nominal krona debt was extended by 0.25 years (3 months) for 2016.<sup>3</sup> The corresponding maturity was extended by 0.3 years for 2017 and is being extended by a further 0.3 years for 2018. By extending the maturity of the central government debt, the risks (the cost variation) can be reduced at a low or no cost, see section 3.3.

The refinancing risk refers to the risk that it will turn out to be difficult or expensive to replace maturing loans with new ones. In general, the refinancing risk appears at the same time as the need for new borrowing rises sharply (financing risk). The refinancing risk reflects the time remaining to maturity, i.e. when the debt needs to be refinanced. The guidelines state that the Debt Office is to take account of refinancing risks in the management of the central government debt (point 23) and that the Debt Office is to ensure good borrowing preparedness in foreign currencies (point 24).

The refinancing risk is taken into account in several different ways in the Debt Office's strategies for borrowing and market commitment. It is done by, for example, ensuring infrastructure, an investor base and liquidity in the loan market. The bulk of its borrowing is done in government bonds that are spread over several loans with different maturity dates. The borrowing is spread continuously across small, regularly held auctions. A large part of the borrowing is carried out in the 10-year government bond, where the investor base is largest. Since 2009 the Debt Office also has nominal krona borrowing at longer maturities than twelve years, which means that the dates when the central government debt reaches maturity are spread over a longer period of time. Moreover, the Debt Office's borrowing in foreign currency reduces the refinancing and the financing risk since the channel to the international capital markets is kept open. The international capital market makes it possible to borrow large volumes in a short space of time.

In its annual evaluation of the management of the central government debt the Debt Office has to report on how the requirements concerning refinancing risks have been met. Finally, it should be underlined that strong and sustainable central government finances are the most important factors in limiting the refinancing risk and the financing risk in the central government debt.

### **3.2 The steering of the composition of the central government debt is left unchanged**

The Government sees no reason to alter the steering of the composition of the central government debt. Last year's guidelines decision gave the reasons that still apply (section 3.2). This steering means that the share of inflation-linked krona debt is to be steered towards 20 per cent in the long term and that the foreign currency debt is to be amortised by up to SEK 30 billion per year. The remainder of the central government debt (currently around 65 per cent) is to consist of nominal krona debt.

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Relates to instruments in the nominal krona debt with maturities of up to twelve years. The maturity of instruments in the nominal krona debt with maturities of more than twelve years was steered by a target for their outstanding volume. This target is not affected by the extended maturity.

### 3.3 Extended maturity of the nominal krona debt

The maturity of the nominal krona debt is to be between 4.3 and 5.5 years (point 15). This corresponds to an extension of maturity of 0.3 years after the technical effects that follow from the merging of maturity steering for instruments whose maturity is shorter and longer than twelve years (see section 3.4).

In this year's proposed guidelines the Debt Office has again analysed the maturity of the central government debt. Its maturity is one of several factors that affect the expected cost of and risk in the central government debt. Historically the yield curve has generally had a positive slope, i.e. short interest rates have been lower than long interest rates. For many years the analysis behind the choice of maturity assumed that the difference between short and long interest rates was largely due to market participants demanding compensation to bind their money (term premium). The difference in term interest rates is also explained by market participants expecting, on average, that interest rates will rise (the expectations hypothesis).

It is not possible to observe how much of the difference in term interest rates consists of term premiums and expectations. Different methods and models have therefore been developed to estimate the size of the two components separately. For some years the Debt Office has been using an interest rate model developed at the Federal Reserve Bank of New York. Calculations of the term premium in Swedish government bonds have used 1–10-year Swedish swap interest rates for the period 1995–2017. Analyses made in recent years have shown that the term premium has fallen over time and that it appears to have been close to zero for a number of years. One explanation why term premiums have decreased since the mid-1990s is that the inflation target has gained credibility. In recent years the Riksbank's expansive monetary policy, which includes purchases of government bonds, and new regulations requiring insurance companies to match their long-term commitments to a higher degree have probably contributed to the decrease of the term premium. A further explanation is probably also that more and more mortgage borrowers are choosing floating rate mortgages. When the

demand for short-term loans rises, term premiums fall.

Even though term premiums can vary greatly over time and it is not possible to rule out term premiums rising once again, the Government shares the view of the Debt Office that the reasons for short-term borrowing have been weakened and that the maturity of the central government debt should be extended. The steering of the maturity of the foreign currency debt and the inflation-linked krona debt is left unchanged.

### 3.4 New steering of the nominal krona debt

A common maturity target (interval) is introduced for the whole of nominal krona debt. The previous volume-based maturity target of SEK 70 billion for instruments with more than twelve years to maturity is removed. As a result of the inclusion of the long bonds in maturity steering, the steering interval is extended from 2.9–3.9 years to 4.0–5.2 years. The reason for the widening of the interval by 0.2 years is that duration will vary more when the long bonds are included in the maturity measure. In addition to this technical increase (on account of the inclusion of long bonds in maturity steering), there is an actual extension of maturity of 0.3 years (see section 3.3).

#### *Background*

The background to the maturity steering that is now being replaced is to be found in the financial crisis in 2008–2009. At that time the Government made it possible for the Debt Office to issue a long-maturity government bond by cancelling the former maturity benchmark for the nominal krona debt (reg. no Fi2009/2510). The main reason was to enable the Debt Office to lock in interest rates that appeared low from a long-term perspective. An argument was also made about the need to spread borrowing across more maturities in a situation of deteriorating prospects for central government finances and rising uncertainty. The decision stated that in the event that a government bond with a long maturity was issued, the Debt Office was to submit a proposal

for a new benchmark for the nominal krona debt.

At the end of March 2009 the Debt Office issued a 30-year nominal government bond. As a consequence of this the Debt Office's proposed guidelines for 2010 contained a model in which the maturity steering of the nominal krona debt was divided into instruments with less than and more than twelve years to maturity. The Government decided to implement maturity steering in accordance with the Debt Office's proposal. The new model for steering meant that instruments with a maturity of up to twelve years were to be steered towards a maturity benchmark of three years while instruments with a maturity of more than twelve years would be limited by a volume ceiling of SEK 60 billion. Since then maturity steering has been adjusted on several occasions and in the period 2013–2017 a benchmark of SEK 70 billion was applied for instruments with more than twelve years to maturity. The guidelines for 2014 made a clarification that the benchmark for the outstanding volume is intended to be a long-term benchmark.

#### *Conversion to a common maturity target*

The common maturity target (the interval) for the nominal krona debt is to be steered and measured by Macaulay duration, as is the case for maturity steering today. The difference from before is that the new target also covers instruments with more than twelve years to maturity – which means that all SEK loan instruments and all SEK derivatives that the Debt Office has outstanding are covered by the target (with the exception of inflation-linked bonds). Previously the volumes of the two longest government bonds, SGB 1053 and SGB 1056, were not included. On 30 June 2017 these two bonds had outstanding maturities of 22 years and 15 years respectively and their aggregate loan volume was SEK 59 billion. This corresponded to nine per cent of the total nominal krona stock, which amounted to SEK 659 billion at the same time. Overall, the duration of the two bonds is just under 16 years.

The Debt Office's proposed guidelines present assumptions for the calculations that lead to the proposal of a common maturity target for the nominal krona debt. These assumptions are largely based on information from the Debt Office's report *Central*

*government borrowing –Forecast and analysis 2017:2* from June 2017. Forecasts of the primary borrowing requirement and issue plans have been taken from that report. In addition to this previously published information the Debt Office has also outlined four different interest rate scenarios. Their purpose is to capture the extent to which duration is affected by changes in interest rates (a higher interest rate leads to lower duration). The base scenario builds on cut-off interest rates on 30 June 2017. In the other three scenarios the entire interest rate curve is shifted downwards by one percentage point and also up by one and two percentage points.

The calculations in the base scenario give an average maturity of 4.8 years. As the long bonds shorten, duration falls downwards to 4.5 years in 2021. As long as the Debt Office does not introduce a new long bond, the maturity interval ought to be able to accommodate such a mechanical decrease in duration. The probability distribution of the future development of interest rates also indicates that the mid-point of the interval should be slightly lower. There ought to be higher probability of higher rather than lower interest rates. If interest rates rise, duration falls.

In all, the Debt Office's proposal means that the steering interval should be increased for technical reasons from 2.9–3.9 years to 4.0–5.2 years. The Government shares the Debt Office's view as to why the mid-point of the interval (4.6 years) should be slightly lower than shown in the base scenario (4.8 years). The Government also shares the Debt Office's view concerning why the steering interval should be widened by 0.2 years. When the long bonds are included in the steering measure, the duration measure will vary 10–20 per cent more than it does today. In addition to this technical increase, there is an actual extension of maturity of 0.3 years. The reasons for extending maturity are given in section 3.3.

#### *Refinancing risk and long bonds*

The Debt Office's proposed guidelines for central government debt management 2013 and the Government's decision for the same year contained detailed discussions about how to limit the refinancing risk. The background was a commission to the Debt Office to make a review of how the guidelines can take more account of

the refinancing risk in central government debt management. A new point (the present point 23) was introduced in the guidelines for 2013 stating that the Debt Office is to take account of refinancing risks in the management of central government debt. This point is still in the guidelines for 2018. In contrast, the specific steering of nominal krona instruments with more than twelve years to maturity that meant that the long-term benchmark for their outstanding volume is to be SEK 70 billion (point 16 of the guidelines for 2017) is removed. In order to underline that the Debt Office is still able to issue long bonds, when this is judged appropriate in relation to the objective of cost minimisation taking account of risk, the text in italics is added to point 23 of the guidelines “The Debt Office shall take account of refinancing risks in the central government debt, *including by issuing instruments with more than twelve years to maturity.*” A description of the ways in which the refinancing risk in the central government debt is taken into account is given in section 3.1 above.

### 3.5 Clarification regarding the main cost measure

In autumn 2016 the Debt Office carried out an investigation, as a commission from the Government, of whether the evaluation of the overall objective for central government debt management could be facilitated (Fi2016:01559). This commission was based on results and observations from the Government Communication *Evaluation of central government borrowing and debt management in 2011–2015 (Govt. comm. 2015/16:104)*.

*The cost measure in the basis for evaluation is made analogous with the guidelines and is defined more clearly.*

Briefly, the proposal from the Debt Office is to replace the measures used in the basis for the evaluation of the management of the central government debt: i) period cost and ii) average issue yield.

The reason for this is that the measure i) period cost is difficult to understand, especially for instruments whose future cash

flow is unknown, like inflation-linked bonds and foreign currency instruments. For these instruments cost is revised retroactively as previous assumptions are replaced by new outcomes.

The new cost measure “average issue yield” is based on the cost being calculated (as before) on the basis of the issue yield of each instrument but the variation of inflation and exchange rates is to be recognised as an expense continuously. This means that cost will not be revised backwards in time. This valuation method follows the international standard for the reporting of financial liabilities held to maturity and is already used in the Debt Office’s financial reporting of the management of the central government debt.

In the guidelines decisions the established view has been that unrealised changes in market value should not be seen as a cost. Instead the cost of the central government debt should be determined on the basis of the interest on the issue date plus the outcome of changes in inflation and currency exchange rates. The reason for this is that the management of the central government debt should be viewed from a long-term perspective and that the Debt Office generally holds its bonds to maturity.

In the basis for the evaluation of the management of the central government debt the Debt Office reports average issue yield (AIY) as a snapshot of the interest rate component of the total cost. To avoid confusion of the new cost measure and AIY the following clarification (text in italics) is made in point 21 of the guidelines.

- The main cost measure is to be the average issue yield. *The cost is to be calculated using the valuation principle of amortised cost with continuous revaluation by inflation and exchange rate changes.*

*The definition of the main risk measure is also made clearer*

A risk measure is linked to the main cost measure. The risk measure is intended to measure the variation of the main cost measure. Since cost is measured on the basis of the principle that the debt is valued at amortised cost, changes in market value as a result of changes in market interest rates during the term of the loan will not be counted as a risk. However, the effect of changes in market

interest rates will affect the variation of costs as old loans are replaced with new ones. This follows previous practice that unrealised changes in market value should not be seen as a cost. But costs and the variation of costs are affected by changes in market value in the case of buybacks since these values are realised. Changes in inflation and currency exchange rates will also be captured in both the cost and the risk measure. To clarify the risk measure the following addition (text in italics) is made to point 22 of the guidelines:

- The main risk measure is to be the *variation* of the average issue yield.

