RIKSGÄLDEN
SWEDISH NATIONAL DEBT OFFICE

Dnr 2010/1490
29 September 2010

Central Government Debt Management

Proposed guidelines 2011–2013

Contents

Summary

In this memorandum, the Swedish National Debt Office presents its proposed guidelines for the management of central government debt for 2011–2013. The proposal is preliminary for 2012 and 2013. The goal is for central government debt to be managed in such a way as to minimise the long-tem costs while taking into account risks. Furthermore, management shall take place within the framework of the requirements set by monetary policy.

The Debt Office has been commissioned by the Government to examine and make a report on three areas. The first part entails investigating how the mandate for position-taking should be designed. Furthermore, we are to analyse how the debt shares and maturities should be managed in situations with considerably higher or lower central government debt. The third part concerns improvement of the comparison between borrowing in the retail market and in the government securities market.

In this year's proposed guidelines, we report on the part of the commission concerning the mandate for position-taking. We will take up other parts of this commission in the proposed guidelines for 2012.

A starting point for the Debt Office's proposed guidelines is the development of the borrowing requirement and interest rates – factors that affect the balance between expected cost and risk. In order to obtain an idea of the borrowing requirement, we examine the forecasts made by the Government, the National Institute of Economic Research (NIER) and the National Financial Management Authority (ESV). The overall picture is that the central government debt will decrease slightly in the next few years. The proposed guidelines are based on the debt decreasing from just under SEK 1,200 billion in 2011 to SEK 1,000-1,100 billion by the end of 2014. As a proportion of GDP, this means that the debt may decrease from 35 per cent to around 30 per cent.

Short and long interest rates are both historically low. At the same time, the yield curve is steep at present. The slope of the curve argues in favour on the one hand of a shortening of the interest rate refixing period provided that the slope of the curve persists for a relatively long time. On the other hand, the absolute level of interest rates is low, which could argue in favour of locking in borrowing with a long maturity.

We note that we have little possibility in practice to ensure borrowing at the current low interest rate level by borrowing in longer maturities as the issue volumes are small in relation to the total debt. If we were to make the assessment that it is appropriate to make use of the historically low interest rates, it would be more effective to do this within active management.

We propose that the interest rate refixing period for the *nominal krona debt with maturities of up to and including twelve years* be shortened from 3.2 to 3.1 years. This shortening is explained by operational considerations. Based on our forecast borrowing requirement and given the desired allocation between borrowing in government bonds and T-bills, the planned swap volume for 2011 is small. This limits our flexibility in situations when the borrowing requirement increases unexpectedly. An increased borrowing requirement means in the short term that we issue more T-bills. Normally, we can counter a shortening of maturity of this kind by reducing the volume of interest rate swaps. This is not possible if the planned volume is already small. To maintain sufficient flexibility, we should increase the planned volume of interest rate swaps leading to a marginally shorter maturity. Provided that the yield curve continues to have a positive slope, this shortening also slightly reduces the cost of central government debt.

We propose a ceiling of SEK 65 billion for the *nominal krona debt with maturities over 12 years.* This is the same level as in the current guidelines for 2011.

As regards the *maturity of the inflation-linked debt,* it is proposed that control be changed from a specific maturity benchmark to a maturity interval. There is uncommonly great uncertainty in the forecast of the maturity of the inflation-linked debt as we are planning to introduce new inflation-linked loans in the years to come. It is not appropriate to set the maturities of these loans in the guidelines. This decision should be made close to the introduction dates. Our assessment is that it is neither possible nor desirable to control the inflation-linked debt in relation to an exact benchmark but propose an interval instead. We propose that the maturity of the inflation-linked debt should be between 8 and 10 years at the end of 2011. The maturity should preliminarily be between 9 and 11 years at the end of 2012 and 2013.

We propose that *positions in kronor in relation to other currencies* be limited to a maximum of SEK 50 billion, i.e. unchanged guidelines. This scope is sufficient for us to be able to take the positions that may be considered reasonable while retaining good flexibility. We do not either see any reason to change the mandate for *position-taking in foreign currency* and propose that the guidelines be unchanged.

We propose that *the maturity of the foreign currency debt* for the coming years be kept unchanged at 0.125 years.

No changes are proposed in *the debt shares*. Accordingly, the inflation-linked share shall be 25 per cent of the debt in the long term and the foreign currency debt 15 per cent.

1 Proposed guidelines 2011–2013

Here we show our proposed guidelines for central government debt management during 2011–2013. The proposed guidelines are preliminary for 2012 and 2013. In the cases where we propose changes in the guidelines, the current wording is given in the left column and the proposed new wording in the right column. With a view to creating an overview of the decisions controlling central government debt management, the relevant parts of the Act (1988:1387) on Central Government Borrowing and Debt Management and the Ordinance (2007:1447) containing Instructions for the National Debt Office have been included.

The goals of central government debt management

1. The central government debt shall be managed in such a way as to minimise the long-term costs while taking into account risks. Furthermore, management shall take place within the frameworks of the requirements set by monetary policy. Act on Central Government Borrowing and Debt Management (1988:1387).

The task of the Debt Office and the purpose of borrowing

2. According to the Act on Central Government Borrowing and Debt Management (1988: 1387), the task of the Debt Office is to raise and manage loans to central government. Ordinance containing Instructions for the National Debt Office (2007:1447).

3. According to the Act on Central Government Borrowing and Debt Management (1988:1387), the Debt Office may raise loans for central government to:

    1. finance current deficit in the central government budget and other expenditure pursuant to decisions made by the Riksdag,
    2. provide such credit and perform such guarantees as decided by the Riksdag,
    3. amortise, redeem and buy back central government loans,
    4. in consultation with the Riksbank, satisfy the requirement for central government loans with different maturities, and
    5. satisfy the requirements of the Riksbank for foreign currency reserves.

The guideline process

4. The Debt Office shall submit proposed guidelines for central government debt management at the latest by 1 October each year. Ordinance containing Instructions for the National Debt Office (2007:1447).

5. The Government shall allow the Riksbank to comment on the Debt Office's proposed guidelines. Act on Central Government Borrowing and Debt Management (1988:1387).

6. The Government shall make a decision on guidelines for central government debt management by the Debt Office at the latest by 15 November each year.

7. The Debt Office shall submit documentation to the Government for evaluation of central government debt management at the latest by 22 February each year. Ordinance containing Instructions for the National Debt Office (2007:1447).

8. Every other year, the Government shall evaluate central government debt management. This evaluation should be submitted to the Riksdag by 25 April. Act on Central Government Borrowing and Debt Management (1988:1387).

9. The Debt Office shall establish principles for implementation of the guidelines for central government debt management established by the Government. Ordinance containing Instructions for the National Debt Office (2007:1447).

The composition of central government debt – debt shares

10. The share of *inflation-linked krona debt* should be 25 per cent of central government debt in the long term.

11. The share of *foreign currency debt* should be 15 per cent of central government debt.

    The control interval around the benchmark should be ±2 percentage points.

    If the foreign currency share is outside the control interval, the share of foreign currency debt should be restored to the benchmark or within the interval if the deviation is due to currency movements.

12. The Debt Office shall set the benchmark for the distribution of the foreign currency debt among different currencies.

13. In addition to inflation-linked krona debt and foreign currency debt, central government debt shall consist of *nominal krona debt*.

The maturity of central government debt

Current wording	Proposed wording
14. The maturity of the nominal krona debt for maturities of up to twelve years shall be 3.2 years *during 2010. The direction for 2011 and 2012 shall be 3.2 years.*	14. The maturity of the nominal krona debt for maturities of up to twelve years shall be *3.1* years
15. The ceiling for the outstanding volume for maturities exceeding twelve years shall be SEK 60 billion in 2010. The ceiling for 2011 and 2012 shall be SEK 65 billion and SEK 70 billion.	15. The ceiling for the outstanding volume for maturities exceeding twelve years shall be SEK 65 billion.
16. The maturity of the inflation-linked krona debt shall be *9.4* years at the end of *2010. The maturities* at the end of *2011* and *2012* shall preliminarily be *8.7 years and 9.0* years.	16. The maturity of the inflation-linked krona debt shall be *between 8 and 10 years* at the end of 2011. The maturities at the end of 2012 and 2013 shall preliminarily be *between 9 and 11 years*.
17. The maturity of the foreign currency debt shall be 0.125 years during 2010. The direction for 2011 and 2012 shall be 0.125 years.	17. The maturity of the foreign currency debt shall be 0.125 years.
18. The Debt Office shall decide on a deviation interval for *the benchmarks* for the maturities.	18. The Debt Office shall decide on a deviation interval for the maturities.

Costs and risk

19. The balance between expected cost and risk shall mainly be made through the choice of the composition of maturity of the central government debt.

20. The overarching cost measure shall be the average cut-off yield.

21. The overarching *risk measure* shall be the average cut-off yield risk.

22. The shares of the types of central government debt shall be calculated for a measure that takes into account all cash flows in the central government debt, i.e. also future coupon payments and future compensation for inflation.

23. *The maturity* shall be measured by an average interest rate refixing period where all cash flows including expected compensation for inflation are included. Cash flows shall not be discounted.

24. Positions shall not be included in the calculation of debt shares and maturities.

25. When taking positions, market values shall be used as a measure of costs and risks in management.

Market and debt maintenance

26. Through market and debt maintenance, the Debt Office shall contribute to the good performance of the government securities market with a view to achieving the long-goal of keeping costs to a minimum while taking into account risk.

27. The Debt Office shall decide on the principles for market and debt maintenance.

Position-taking

28. The Debt Office may take positions to reduce the costs of central government debt, while taking into account risk.

    Position-taking refers to transactions which aim at reducing costs, but which are not justified by underlying loan or investment needs.

    Positions may be strategic (long term) or operational (current). *The Debt Office shall decide on the distribution of the risk mandate.*

    Positions shall be taken with derivative instruments. This restriction applies to all transactions with the exception of strategic positions between kronor and other currencies, see below.

    Positions may not be taken in the Swedish fixed income market.

28. The Debt Office may take positions in

    1. foreign currency,
    2. the exchange rate of the krona.

    Positions in foreign currency may only be taken with derivative instruments.

    Positions may not be taken in the Swedish fixed income market.

    Position-taking refers to transactions which aim at reducing costs for the central government debt, *taking into account risk*, but which are not justified by underlying loans or investment needs.

    Positions may be strategic (long term) or operational (current).

29. The maximum limit for position-taking shall be SEK 600 million, measured as daily Value-at-Risk at 95 per cent probability.
    The risk limitation shall apply to all transactions with the exception of strategic positions between kronor and other currencies, see below.

29. Positions in foreign currency are limited to SEK 600 million, measured as daily Value-at-Risk at 95 per cent probability.

    The Debt Office shall decide on the maximum extent of the scope used in operational management.

30. Strategic positions in kronor in relation to other currencies are limited to at most SEK 50 billion. These positions need not be taken in derivatives and are exempted from the limitation in terms of Value-at-Risk.

    Kronor positions shall be built up gradually and announced in advance.

30. Strategic *positions* in the *exchange rate of the krona*

    1. are limited to at most SEK 50 billion,
    2. shall be built up gradually and announced in advance.

31. Operational (current) positions in relation to other currencies may in connection with exchanges between kronor and other currencies be taken to a limited extent. The Debt Office shall state the maximum permitted extent.

Borrowing in the retail market

32. The Debt Office shall contribute to reducing the costs of central government debt by retail market borrowing.

Loans to meet the need of central government loans

33. The possibility of raising loans to meet the need of central government loans may only be used if required due to threats to the functioning of the financial market.

The Debt Office *shall have the right to have* outstanding loans *during 2010* to a maximum nominal value of SEK 200 billion for this purpose.	The Debt Office may have outstanding loans to a maximum nominal value of SEK 200 billion for this purpose.

34. Placements of funds raised through loans to meet the need of central government loans should be guided by the principles stated in the Government Support to Credit Institutions Act (2008:814).

Management of funds, etc.

35. The agency shall deposit its funds, to the extent that they are not needed for disbursements, in an account at the Riksbank, a bank or a credit market company, or in government securities or other instruments of debt with a low credit risk. Deposits may be made abroad and in foreign currency. Ordinance (2007:1447) containing Instructions for the Debt Office.

36. The Debt Office shall cover the deficits that occur in the Government central account. Ordinance (2007:1447) containing Instructions for the Debt Office.

37. Management of exchanges between Swedish and foreign currency (currency exchanges) shall be characterised by predictability and clarity. Ordinance (2007:1447) containing Instructions for the Debt Office.

Consultation and collaboration

38. The Debt Office should consult the Riksbank on matters concerning the components of borrowing that may be assumed to be of great importance for monetary policy. Ordinance (2007:1447) containing Instructions for the Debt Office.

39. The Debt Office shall collaborate with the National Institute of Economic Research (NIER) and the National Financial Management Authority (ESV) on the agency's forecasts of the central government borrowing requirement. Ordinance (2007:1447) containing Instructions for the Debt Office.

40. The Debt Office should obtain the points of view of the Riksbank on how the funds borrowed to meet the need for central government loans are to be placed in accordance with the Ordinance (1998:1387) on Central Government Borrowing and Debt Management.

Evaluation

41. Evaluation of *board decisions* shall be made in qualitative terms in the light of the knowledge available at the time of the decision. Where possible, the evaluation shall also contain quantitative measures.	41. Evaluation of *central government debt management* shall be made in qualitative terms in the light of the knowledge available at the time of the decision. Where possible, the evaluation shall also contain quantitative measures.

42. Evaluation of the operational management should, inter alia, cover borrowing and management of the different types of debt, market and debt maintenance measures as well as management of currency exchanges.

43. The realised cost difference between inflation-linked and nominal borrowing should be reported for inflation-linked borrowing.

44. The cost saving compared with alternative borrowing should be reported for borrowing in the retail market.

45. Strategic and operational positions within the given risk mandate should be currently taken up as income and evaluation be made in terms of the market values.

2 Prerequisites

The size of the central government debt and the future borrowing requirement affect the direction of central government debt management. This management is also designed to take into account the working of the loan market. This assumes, inter alia, knowledge of the depth of the loan market and expected interest rate levels for different maturities. Central government debt management is moreover designed to take into consideration covariance between the borrowing requirement and terms of the loan market. In this section, we analyse these underlying prerequisites for the shape of the guidelines.

2.1 The development of the borrowing requirement and central government debt

Central government debt has exceeded SEK 1,000 billion since 1993, most often by a broad margin. This debt has increased when economic growth has been weak and decreased when growth has been strong. Despite the Swedish economy still being in a downturn, there has only been a moderate increase in central government debt.

The political ambition to maintain a surplus in central government finances on average over a business cycle is expected to lead to a continued reduction in central government debt. This ambition is based, inter alia, on the future composition of the population with a long period with a larger proportion of elderly persons. This will lead to a greater number of dependants for economically active persons in the next few decades. The risks of future deficits can be reduced by having a low level of central government debt initially. This burden can be lightened by allowing there to be a deficit in the central government budget during that period, which assumes low central government debt initially. If the goal of the Riksdag and the Government of a one per cent surplus in general government net lending, over a business cycle, is achieved, central government debt will decrease by an average of SEK 15–30 billion per year. An even higher level of ambition has also been discussed.

Forecasts from the National Financial Management Authority (ESV) and the Government indicate, however, a development in the next few years where central government debt will increase in 2010 and subsequently decrease. This is due to an expectation of recovery from this year onwards. Despite forecasts being made with somewhat different calculation assumptions, in particular with regard to the extent to which changed tax and grant rules have been taken into account, the picture is unequivocal. The National Institute of Economic Research (NIER) also believes in an economic recovery from this year although, according to its forecast of central government debt, this debt will rise until 2013.

The surplus target and the borrowing requirement

The Riksdag's and the Government's surplus target for general government net lending entails a long-term reduction in central government debt. In this section, we sketch what different outcomes for the target mean for the development of central government debt. It is important to point out that these calculations are in no way to be equated with the Debt Office's ordinary forecasts which are published three times a year. These forecasts are made in a completely different way and only extend over the current and following year. Accordingly, the calculations presented here do not serve as the basis for any operational loan plans in the Debt Office's central government debt management. However, these calculations are part of the assessment of the future amount of central government debt.

On the basis of the Riksdag's and the Government's goal of a surplus equivalent to 1 per cent of GDP on average over a business cycle, it is possible to make a rough calculation of the net central government borrowing requirement. The surplus target refers to the net lending for the whole of the public sector, including central government, the old age pension scheme and the local government sector.[1] By first calculating net lending in the old age pension scheme and the municipalities, central government net lending can be calculated as a residue. The central government net borrowing requirement is then calculated as net lending in the state, with reversed signs, adjusted for those payments that affect the borrowing requirement but not net lending.

Net lending in the old age pension scheme, which consists of the AP (pension insurance) funds, fell sharply in 2009 and is calculated to be close to zero for some years to come. This decline is explained by income in the old age pension scheme decreasing due to share dividends and interest income both falling. At the same time, pension payments increase, partly due to new pensioners having a higher average pension.

[1] *The local government sector consists of municipalities and county councils.*

Net lending in the local government sector is expected to be negative for 2010 and 2011 at on average 0.25 per cent as a percentage of GDP.[2] As from 2012, local government net lending is assumed to amount to an average of 0.1 per cent as a proportion of GDP. While the municipalities have reported overall a surplus in recent years, it is difficult to believe that they can sustainably maintain high positive net lending at the same time as requirements for public services grow apace with an increase in the demographically conditioned needs. It is therefore assumed that the local authorities will meet the balance requirement but not much more. This assumption seems reasonable in the light of the local authorities having net lending of an average close to 0 per cent as a share of GDP during the period 1993–2009.

On this basis, central government net lending for 2010–2014 would show a surplus in the range of SEK 15-30 billion. Overall, this would produce a gradually falling level of central government debt from the 2009 level of SEK 1,189 billion down towards SEK 1,100 billion in 2014.

One weakness of this approach is the shortness of the period up to 2014. The surplus target is more usually applied to seven-year periods. Up until 2014, it is reasonable to assume that the development of central government debt will be primarily affected by the state of the economy rather than the surplus target.

It must be added to the above reasoning that the Government can decide to deviate from the long-term goal for relatively long periods. Not least, discussions have taken place as to whether the level of ambition should be raised.

The forecasts of the amount of central government debt are based on the assumption of continued on-lending to the Riksbank. We expect the Riksbank to refund existing loans as they mature. Should this on-lending cease, the central government debt would fall by the equivalent of SEK 100 billion.

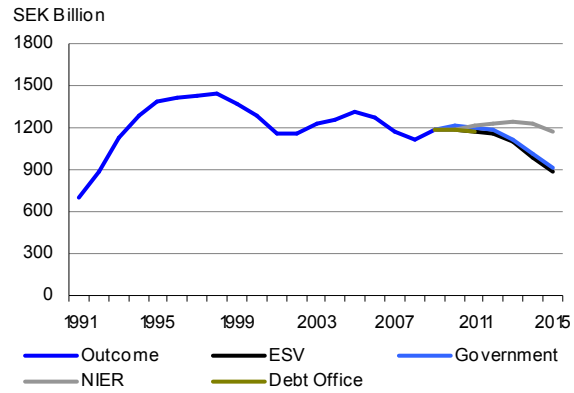
Forecasts of the borrowing requirement

An alternative way of looking forward is to use the available forecasts as a basis. By replacing the Riksdag's and the Government's ambition for general government net lending by forecasts of the central government net borrowing requirement, it is possible to obtain a supplementary picture of the development of central government debt in the next few years. This forecast information will, of course, be of greatest use in the short term (within a couple of years), while it more resembles an impact assessment in the longer term where development is permitted to be governed by, for example, demographic changes.

The Debt Office publishes regular forecasts of the central government borrowing requirement for the current and following year. According to the Central Government Borrowing Report of 16 June 2010, the budget balance will be close to zero both years. Central government debt is expected to rise in 2010 and subsequently fall in 2011. The reduction in central government debt in 2011 despite the positive net borrowing requirement is because the deposit insurance funds (SEK 21 billion), that are currently invested in government bonds are expected to be converted into deposits in the stabilisation fund's account at the Debt Office. As this is not a cash transaction, the net borrowing requirement will not be affected, although central government debt will fall as a result of debt adjustment.

The corresponding assessment is made by the National Financial Management Authority (ESV), NIER and the Government.[3] Unlike the Debt Office, they also make forecasts for a somewhat longer period. However, the methods of these forecasts differ from the methods for the short-term forecasts. Among other things, models are used according to which the economy in the course of a few years adapts to a balanced use of resources. Furthermore, the forecasts are adapted to the aim of the Riksdag and the Government as regards the general government net lending, possibly taking into consideration demographic conditions. Under these slightly different prerequisites, the ESV produces forecasts up to 2014, while NIER and the Government both produce forecasts that extend beyond 2015.

Figure 1. THE DEVELOPMENT OF CENTRAL GOVERNMENT DEBT, OUTCOME 1991–2009 AND FORECASTS 2010–2015



[2] *Source: National Institute of Economic Research, The Swedish Economy, June 2010.*

[3] *Forecasts from ESV are shown in the June 2010 Forecast. NIER refers to the information reported in The Swedish Economy, June 2010 and the Government's forecast is from the Spring Fiscal Policy Bill for 2010.*

In common for all these forecasts is that central government net debt is expected to increase this year and subsequently fall (see figure 1). At the end of 2010, the debt is expected to amount to around SEK 1,200 billion. In 2011, the debt is expected to amount to just under SEK 1,200 billion and the differences between the forecasts are negligible in the context of guidelines. For subsequent years, NIER makes the assessment that the central government debt will amount to around SEK 1,220 billion in 2014. The Government and the ESV make the assessment that the debt will fall to around SEK 1,000 billion.

To be able to make full use of the forecasts, it must be noted that they differ in a number of important respects. To start with, the forecasts are made at different times and they may accordingly be based on different macroeconomic information and different regulatory frameworks. The ESV and the Government make forecasts for the first three years assuming unchanged tax and grant rules, as well as an unchanged direction of public consumption. The exception is that the Government includes effects of the proposed measures in the Budget Bill. The ESV does not make any forecast for the subsequent years, at the same time as the flexibility of the Government's forecast increases; among other things, the Government's forecast reflects the effects of demographically conditioned needs for care and social services. This means that public consumption is adapted so that the standard per recipient can be maintained unchanged.

Unlike ESV and the Government, NIER makes an assessment of the fiscal policy direction for all coming years. Measures that affect net lending are distributed to income, expenditure and public consumption with the aid of standardised methods. In the longer term, in the "medium-term estimate" up to the end of 2020, expenditure is only adjusted for public consumption and transfers to households. In this way, net lending is adjusted so as to amount to 1 per cent of GDP at the end of the period, and thus the Government is assumed to comply with the surplus target over time.

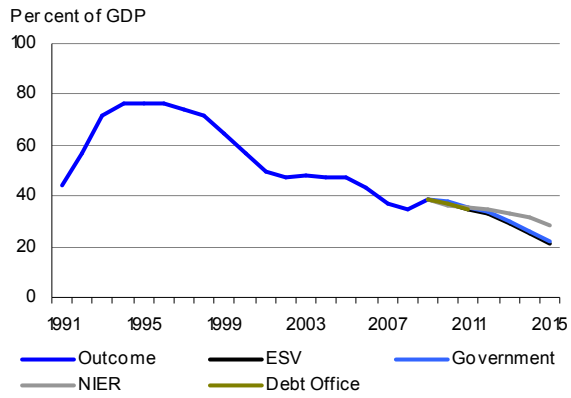
These differences in method mean that ESV anticipates decreasing central government debt from 2011 onwards, while NIER assumes that the debt will increase. NIER has taken into account a clearly more expansive fiscal policy direction in 2011. The Government also anticipates a decreasing central government debt from 2011 onwards, although at a level higher than ESV. This may be due to the Government's forecast having been produced before the positive reports on the recovery of the Swedish economy during the first quarter were presented. The difference in the amount of central government debt between ESV's and the Government's forecasts compared with NIER's forecast increase due to differing assumptions on falling or rising debt.

Conclusion

The Riksdag's and the Government's surplus targets for general government net lending entail a long-term falling central government debt. Our calculation shows that central government debt would fall to around SEK 1,100 billion if the target was met for the period 2010–2014.

An alternative way of looking forward is to use available forecasts. The forecasts we studied show that there are a number of different assessments of the development of central government debt. The forecasts indicate that central government debt in round figures amounts to SEK 1,200 billion for 2012 and to around SEK 1,000 billion for 2014. Viewed in relation to GDP, this means that the debt fluctuates around 30 per cent (see figure 2). The results are equivalent to annual general government debt net lending of 1 to 2 per cent of GDP.

Figure 2. THE DEVELOPMENT OF CENTRAL GOVERNMENT DEBT IN RELATION TO GDP, OUTCOME 1991–2009 AND FORECASTS 2010–2015



The differences in the forecasts show that considerable uncertainty is attached to forecasts of future development. One factor which contributes to this uncertainty is the interpretation of the Riksdag's and the Government's ambition with regard to general government net lending. To what extent will this goal be weighed against other political priorities? A further factor that contributes to uncertainty is the cyclical development. In the space of a few years, the borrowing requirement is assumed to follow from an economy with a balanced use of resources.

All in all, the above indicates that central government debt will decrease during the period covered by this year's proposed guidelines. Accordingly, it is reasonable to base the following proposed guidelines for central government debt management on a debt of just under SEK 1,200 billion during 2010, which may be expected to fall to SEK 1,000 – 1,100 billion towards the end of 2014. In relation to GDP, this means that the debt will fall by around 30 per cent. This

forecast applies provided that on-lending to the Riksbank continues during the period. If this on-lending were to cease, the central government debt would decrease by the equivalent of SEK 100 billion.

2.2 The characteristics of the yield curve

Borrowing by the Debt Office, which, in principle, corresponds to the sum of the net borrowing requirement and maturing loans, takes place mainly in the Swedish fixed income market. The conditions for this borrowing can in a theoretical perspective be described with the aid of a yield curve, i.e. the level of interest rate is described as a function of its time to maturity. The loan instruments that make up the yield curve are in this context T-bills and government bonds. Note in particular that the yield curve provides a snapshot of the level of the interest rate for marginal borrowing. In practice, there are limitations on the volume that can be borrowed at a given interest rate. For large loan volumes at a particular maturity, it is reasonable to believe that the interest rate will increase within this segment.

The characteristics of the yield curve which are of most interest are the level and the slope, where the costs of the central government debt mainly depend on the level. The trade-off between cost and risk depends, however, on the slope of the yield curve. Moreover, the risk is affected by the volatility of the interest rate at different maturities, i.e. how much and how quickly the interest rate changes. While the immediate impact on costs from a change in the interest rate level will depend on the maturity chosen due to the maturity determining how large a portion will have interest rates refixed during each period. If rises and falls in the interest rate level set off one another over time, the gain of having a long debt when interest rates rise will be reduced by the losses occurring when the yield curve moves downwards again. This reasoning leads to the level as such being of subordinate importance for the choice of maturity and that the trade-off, i.e. the ability to bear rapidly increasing interest rates in the short term is what primarily governs the choice of maturity.

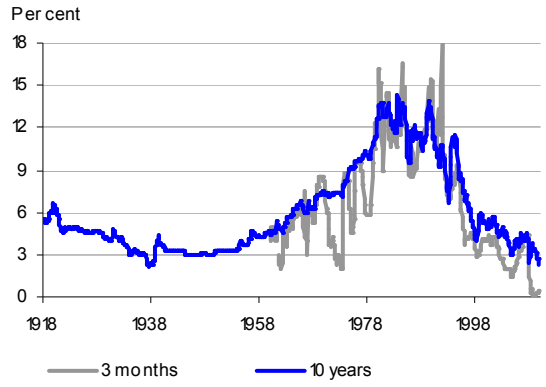
The observation that the yield curve normally has a positive slope is the most important reason for our aiming to maintain a relatively short maturity in the central government debt. The reason why the maturity has not been made even shorter is related to the risks and market limitations. A short time to maturity entails a greater interest rate refixing risk (refinancing may have to take place at considerably higher interest rates on maturity), and a greater refinancing risk (markets and the investor base may shrink or even disappear).The most important instrument for shortening the maturity of bond borrowing is to make use of the interest rate swap market. However, this is of limited size. Excessive use of swaps would decrease or even remove the profitability of these swaps.

The risk of rapidly increasing interest rates depends as has been said on the volatility of the interest rates in the initial position. If the current levels are viewed as extremely high or low, we normally make use of the possibilities of taking positions within the framework of our active management. On one occasion, however, we have taken such aspects into account in our regular borrowing: borrowing of just under SEK 40 billion in the 30-year government bond issued in March 2009 was partly justified by the reasoning that it ought to be cheaper in a very long-term perspective compared with, for example, borrowing in 10-year bonds in 20 years.

Low interest rates

It is extremely difficult to specify a normal interest rate level, and thus what can be expected in the future. By studying historical interest rates (see figure 3) it appears that the levels in 2009 and 2010 are remarkably low. This is particularly the case for the three-month interest rate which has fallen below one per cent. The ten-year government bond yield has also been very low, for short periods below three per cent, in comparison with the past decade when it fluctuated between four and six per cent in round figures. Looking further back in time, it seems as if current interest rate levels are considerably lower than those that predominated during the 1970s and 1980s, although direct comparisons are made difficult by today's fixed income markets not having many similarities with the regulated markets that characterised that period. While it is the case that today's levels are not wholly different from those from the 1920s to the end of the 1960s, going so far back in time means that comparisons are more uncertain since the mode of functioning of the economy may have changed in many respects.

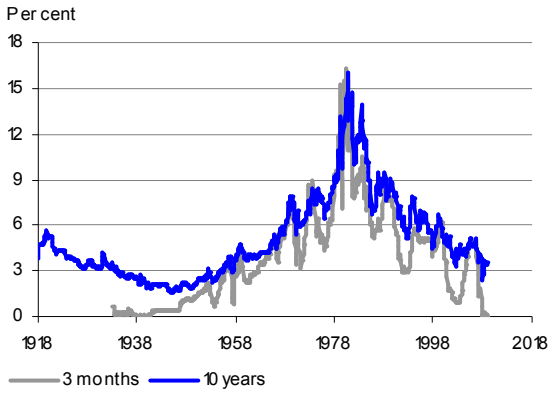
Figure 3. TEN-YEAR AND THREE-MONTH GOVERNMENT BORROWING RATES, SWEDEN



Source: Reuters EcoWin.

The picture of interest rate levels does not change markedly, however, when moving over to the US fixed income market (see figure 4), which unlike the Swedish market has not been characterised by extensive regulation. In this market too, interest rates with a long maturity were low up to the 1960s after which they rose until the beginning of the 1980s, to then fall back to around four per cent.

Figure 4. TEN-YEAR AND THREE-MONTH GOVERNMENT BORROWING RATES, USA



Source: Reuters EcoWin.

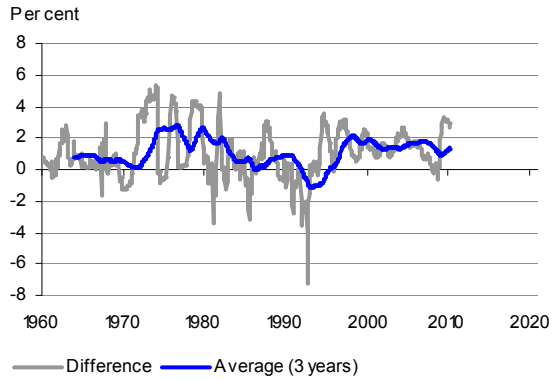
The yield curve is steep

The difference between the level of the ten-year rate and the three-month rate provides a view of the slope of the yield curve. It is accordingly advantageous to show both in the same graph (see figure 3). This shows, inter alia, that the interest rate levels of the two maturities track one another well. They both rise and fall at about the same time. The three-month rate has, however, fluctuated markedly more than the ten-year rate, in particular up to and including the mid-1990s. The change that then took place may very probably be explained by the new monetary policy regime that commenced in November 1992 with a variable exchange rate and inflation target of two per cent per year. The fall in the interest rate level that can be seen can be explained by this reorientation with a braking of both inflation and inflationary expectations. This means that we may, given a credible price stability target, set a low probability for our returning to the interest rate levels of the 1970s and 1980s.

In order to better study the differences between long and short interest rates, i.e. the slope of the yield curve, the difference is calculated between the ten-year rate and the three-month rate (see figure 5). The intention is to see whether there is a stable historical pattern.

Initially, the absence of clear connection between the level of the yield curve and its slope may be noted. It is also evident that the yield curve has usually had a positive slope. On average, the ten-year rate has exceeded the three-month rate by over one percentage point. The flat interest rate curve which could be noted in September 2008 was therefore to some extent deviant and has during 2009 been replaced by a yield curve which is steeper than normal. In this way, the pattern that has often occurred over time, with yield curves with a negative slope being relatively quickly replaced by curves with a positive slope, has again been repeated.

Figure 5. THE DIFFERENCE BETWEEN THE TEN-YEAR AND THE THREE-MONTH GOVERNMENT BORROWING RATE, SWEDEN



Source: Reuters EcoWin.

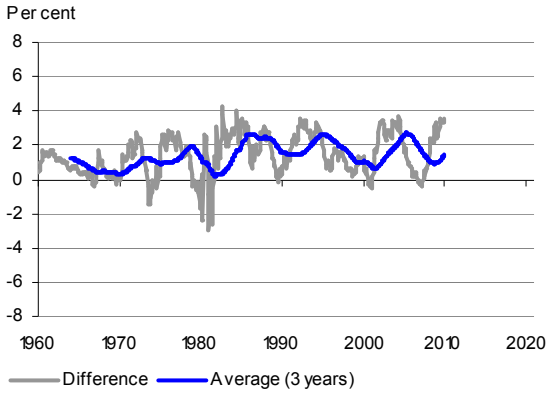
The variation in the interest rate difference has been lower since the mid-1990s compared with the preceding period. This may be an effect of the new monetary policy regime with a variable exchange rate, an independent central bank and a clear and credible inflation rate target. To the extent investors rely on the inflation target being complied with, the variation in inflation expectations should decrease, which in turn reduces the nominal yield requirements of investors on long investments. One possible effect of an independent central bank and an inflation target is thus that the average variation of the interest rate difference will also in future be lower than during the 1970s and 1980s when inflation was at times very high.

As in the above analysis of the level of the interest rate, it is noted that the data material extends over a period with different monetary and exchange rate policy regimes, which means that it may be useful to make a comparison with conditions in the US fixed income market (see figure 6).

It can again be noted that the basic pattern in the United States is the same as in Sweden. Long interest rates have over time been markedly higher than short and periods with flat and inverted curves have periodically recurred. One difference in the pattern which may be worth mentioning is that there is no reduction in the United States in the variation

in the interest rate difference. This possibly indicates that the reorientation of Swedish monetary policy has led to a reduction in volatility in the Swedish fixed income market.

Figure 6. THE DIFFERENCE BETWEEN THE TEN-YEAR AND THE THREE-MONTH GOVERNMENT BORROWING RATE, USA



Source, Reuters EcoWin.

The next characteristic of the yield curve which is interesting to shed light on in more detail is whether the difference between long and short interest rates, viewed over longer periods, is stable over time. For this reason, a moving average value that extends over four years has been included in figure 5 and figure 6.

With the exception of some years at the beginning of the 1990s, the average value of the slope has been positive for Sweden. The period with a negative slope is probably explained by the downward shift of inflation that took place in connection with the changeover to inflation targets in monetary policy. In the case of the United States, the average value of the slope has in principle been positive throughout the period studied. It is furthermore evident that the average value of the slope for Swedish interest rates has in most cases been less than two per cent and that this applies to the whole period for US interest rates.

Conclusion

The descriptive analysis of the characteristics of the yield curve indicates in the first place that interest rate levels can vary markedly for long periods. Taking into consideration the considerable uncertainty about future levels, it is difficult to base strategic decisions on a forecast of these levels.

In the second place, we can note that the slope in general is positive and does not seem to have any direct link to the level of interest rates. It should thus be possible to achieve low expected costs of central government debt at the price of a higher interest rate refixing risk by having a relatively short maturity of the debt. This is conditional on the yield curve in future having the same characteristics as during the analysed period. We do not know, of course, that this will be the case. However, we do not see any crucial reasons which indicate that the characteristics will be changed even though an increased element of matching between assets and liabilities and new regulations of, for example, liquidity reserves in banks could entail changes in the slope of the yield curve.

A second prerequisite is that it is possible to implement the chosen strategy taking into account market conditions and our requirements for a well-functioning infrastructure and good liquidity in the instruments that serve as the core of our borrowing, in particular nominal government bonds. Other restrictions are the limited investor base in T-bills compared with that for nominal bonds where we have access to an international group of investors, as well as the relatively limited depth of the swap market. Swaps are perhaps the most important instrument for reducing the maturity of the nominal krona debt. Swapped nominal bonds entail a lower refinancing risk compared with T-bills and at the same time make it possible to maintain good liquidity in the market for nominal government bonds.

3 Reasons for certain proposals

In this section, we start by discussing a general need for greater flexibility in the control of central government debt. We then discuss the maturity of the central government debt and give reasons for our proposal to change the maturity control of the inflation-linked debt and the maturity of the nominal debt. Finally, we discuss, at the request of the Government, the mandate for position-taking, both with regard to strategic krona positions and with regard to interest rate and currency positions in foreign currency. However, we are not proposing any change in this respect.

3.1 Control of the central government debt and the need for flexibility

Control of the central government debt by annual benchmarks for debt shares and the maturity of the shares has been used in its present form for just over ten years Experiences have substantially been good. However, at times, it has proven difficult to comply with all benchmarks continuously or in the short term without setting aside the overarching goal and other parts of our policy.

One cause of these difficulties is that borrowing in a particular year is relatively small in relation to the size of the total debt. This is particularly the case when the budget balance is positive. Changes in the distribution of borrowing to different instruments thus have a small effect on shares and maturities. Conversely, it may be said that large changes in the composition of borrowing are required to achieve a given change in maturity or share.

During periods when the budget balance rapidly changes or when forecast deviations arise, the adjustment of borrowing primarily takes place in the short maturities within the framework of liquidity management or issue of T-bills and in certain situations by issuing foreign currency bonds. Borrowing with nominal government bonds is less suitable for extensive borrowing of large volumes over a short period of time. We have therefore, inter alia, aimed to keep borrowing in nominal government bonds relatively constant over time and allow the borrowing volume to reflect the more long-term borrowing requirement. Large volumes can be borrowed on this market over a longer time horizon as the investor base is considerably larger than for shorter instruments. Another reason is that we need to promote liquidity in this market to maintain a good infrastructure.

Likewise, we have an undertaking to continuously provide the market with T-bills, which means that we can never completely cease this form of borrowing even though we have surplus cash at certain periods.

These limitations on our freedom of action follow from our task of maintaining the markets for our instruments. We do this with a view to keeping down costs and ensuring that we are able to cover future borrowing requirements.

The maturity of the nominal krona debt can be adjusted by interest rate swaps. This market is relatively limited and the possibilities of countering changes in maturity due to, for example, reduced short-term borrowing, are sometimes insufficient to maintain the maturity benchmark.

The control opportunities are particularly limited as regards the share of inflation-linked debt. If, for example, the central government debt decreases rapidly, we have no real possibilities for reducing the inflation-linked debt at the corresponding rate. It is unreasonably expensive to undertake buybacks and the maturities of inflation-linked bonds take place at relatively infrequent intervals. Over time, the control of shares has therefore come to mean a longer time horizon than a year.

Pertinent here is that certain aspects of the flexibility of the control system have decreased over time. During the initial years of control by guidelines, no maturity targets at all were set for the inflation-linked debt. There was only one target for the aggregate nominal debt (in kronor and foreign currency). Separate maturity targets are now stated for all three types of debt. The maturity target for the inflation-linked debt entails, expressed sharply, that the Debt Office would need to request a government decision for changed maturity benchmarks every time that a new loan is introduced. Detailed control by the Government of this kind would not serve its purpose. Decisions of this kind are not strategically important. In this year's guidelines, we therefore propose that control of the maturity of the inflation-linked debt should take place within an interval rather than in relation to a benchmark stated to within one decimal place.

The experiences that we have had to date of share and maturity control indicate a need for greater flexibility within the framework of somewhat broader limits in the guidelines. This matter has also come to the fore in the Government's

evaluation and instructions to the Debt Office. Not least the investigator appointed by the Government in connection with the most recent report to the Riksdag, has taken up this need of greater flexibility.

The Debt Office is now led by a board with full responsibility. This is also a reason to consider greater scope for the Debt Office to make decisions on central government debt management within the guidelines.

We therefore propose that the scope for taking positions relating to the exchange rate of the krona should remain for the larger volume decided upon in the spring of 2009. These proposals would entail a slightly greater element of flexibility.

In the coming year, we will continue the analysis of how the control of central government debt management can be made more suited to its purpose. In this perspective, greater flexibility may prove appropriate. We will include a proposal to this effect in our proposed guidelines for 2012.

3.2 The maturity of the central government debt

3.2.1 The maturity of the inflation-linked debt

We propose that the maturity of the inflation-linked krona debt shall be between 8 and 10 years at the end of 2011. The maturity shall preliminarily be between 9 and 11 years at the end of 2012 and 2013.

This does not aim to change the maturity in any particular direction but entails a small change in control. Instead of the benchmark being stated as a fixed point to one decimal place, it is stated as an interval.

The Debt Office has limited possibilities of controlling the maturity of the inflation-linked debt. The inflation-linked bond market is considerably less liquid and deep than the market for nominal bonds. We have few outstanding loans which gives us little flexibility in borrowing. Furthermore, issue volumes are small in relation to the size of the stock and issues accordingly have a small effect on the total maturity. We do not either see any possibility of using derivatives at present because the market for inflation derivatives is relatively undeveloped.

In recent years, we have proposed for operational reasons that a benchmark for maturity be based on the current issuance plan for inflation-linked bonds. As we plan to issue new inflation-linked bonds in the next few years, it is more difficult than before to forecast the maturity of the inflation-linked debt. This year, a seven-year inflation-linked bond is being introduced and we will issue a new longer bond next year. The uncertainty of the forecast is partly due to our not yet having stipulated the maturity of the longer loan. It is also difficult to assess how much interest there will be in exchanges to the new bonds.

In the light of this, we consider that it would be practically impossible to control the maturity of the inflation-linked debt in relation to an exact benchmark but instead propose a maturity interval. We propose that the average interest rate refixing time of the inflation-linked debt should be between 8 and 10 years by the end of 2011. At the end of 2012 and 2013, we estimate that the maturity should be between 9 and 11 years. The higher benchmark during the latter period reflects the fact that an inflation-linked bond matures in 2012, which increases the average maturity.

The outcome within the interval will be determined by which maturity in the new inflation-linked bonds we are deciding on and by the interest of investors in taking part in the exchanges which will take place to build up the outstanding volumes.

We aim eventually to establish a maturity structure of the inflation-linked debt with greater long-term stability. This would make it possible to define a desirable maturity as an average over a certain time period, for example, rolling five-year periods. We will continue to work with the strategy for the inflation-linked debt and intend to take this up again with a deeper analysis in next year's proposed guidelines.

3.2.2 The maturity of the nominal krona debt

We propose some shortening of interest rate refixing period of the nominal krona debt for maturities of up to 12 years. The adjustment from 3.2 to 3.1 years is being made for operational reasons.

In the light of the short interest rates being lower than long bond rates, we have aimed for a short maturity without risking liquidity and the investor base in our core borrowing on the bond market. This limits the extent of T-bill borrowing. The possibility of using interest-rate swaps is limited by the depth of this market.

At present, interest rates on both T-bills and longer bonds are historically very low. It cannot be excluded that the yield curve will be flatter than before or that it will even, over a longer time horizon, be cheaper to borrow at a long fixed interest rate compared with rolling over short borrowing.

Our possibilities of acting on this type of assessment are extremely limited, due both to limited demand for longer securities and our moderate borrowing requirement. It should be borne in mind that changes in how our relatively small issue volumes are distributed among different maturities cannot produce other than marginal effects on costs. A crucial factor is also that the outstanding stock of T-bills

cannot be reduced much more. Our planned volume of swaps for 2011 is already so small that it cannot be further reduced in order to, for example, extend the maturity.

If we were to make the assessment that costs could be reduced by making use of the fact that long interest rates are historically low, it would in such an eventuality be appropriate to do this within our active management. The international fixed income market offers a more cost-effective way of creating a desired exposure due to its greater depth and better liquidity. It would furthermore be easier to evaluate a strategy of this kind in active management than within the framework of the regular borrowing. The regular borrowing which is controlled by the guidelines, normally does not offer reasonable conditions for making use of more or less temporary market conditions to reduce the costs of the central government debt.

The planned volume of swaps for 2011 is in practice so limited that it cannot be reduced to counter an unexpected shortening of maturity. If, for example, the borrowing requirement were to be greater than we anticipated, the initial bill borrowing would increase accompanied by a shortening of the maturity. The best means to counteract this without having to increase bond borrowing quickly is to reduce the swap volumes. A significant presence in the swap market gives us the flexibility to increase or reduce the swap volume with the aim of adjusting the maturity.

In line with our aim of being predictable, we are reluctant to close down existing swaps or make swaps with a view to extending the maturity, i.e. we pay a fixed interest rate. Unnecessary transaction costs may also arise if we close down existing swaps.

In order to maintain sufficient flexibility, it would therefore be desirable to increase the swap volume in the next few years. This results, all other things being equal, in a slight reduction in maturity. For this reason, we are proposing some shortening of the maturity benchmark.

If the yield curve were to continue to have a positive slope, a shortening of this kind would also reduce the costs of the central government debt. As bond rates are very low, the cost argument is not crucial at present however.

In next year's proposed guidelines, we will discuss the possibilities of increasing the flexibility of control of maturity, in such a way that we can ourselves adjust the composition of borrowing to current changes in market conditions and unexpected changes in the borrowing requirement.

3.2.3 Nominal maturity longer than 12 years

There is a ceiling in the guidelines for the nominal krona debt for the outstanding volume in maturities over 12 years. We are proposing that the ceiling should be SEK 65 billion. This level is the same as in the current guidelines for 2011.

At present, we only have one nominal krona bond with a maturity of longer than 12 years, the 30-year loan 1053. The outstanding volume of this loan is at present around SEK 40 billion.

We do not intend to use the bond in our regular financing and do not have any strategy to increase the outstanding volume in maturities of over 12 years. It may come into question on a few occasions to issue in long bonds to promote liquidity in the market or to make use of opportunities with strong demand for long maturities.

However, we do not see any need to specify the ceiling for particular years but consider that the current ceiling of SEK 65 billion is sufficient.

3.2.4 The maturity of the foreign currency debt

As regards the maturity of the foreign currency debt, we do not either see any reason to specify the maturity for particular years. We propose that the maturity of the foreign currency debt should be kept unchanged at 0.125 years until further notice. The benchmark for the maturity accordingly does not need to be specified for the respective year.

3.3 Maximum volume to meet the need for government securities

The maximum volume is specified in the current guidelines at SEK 200 billion for 2010. The need of loans in the event of threats to financial stability is difficult to foresee during the time horizon covered by the guidelines.

Our proposal is that the current ceiling should apply until further notice to enable the Debt Office to quickly make decisions if a need suddenly arises. There is no reason to specify a particular amount for each year.

3.4 The mandate for position-taking

3.4.1 Strategic positions in the exchange rate of the krona

We propose that positions in kronor in relation to other currencies be limited to a maximum of SEK 50 billion, i.e. unchanged guidelines. The arrangement and wording of the guidelines has, however, been edited without a change in the contents.

During the spring of 2009, the Debt Office requested the Government to raise the benchmark for positions in the exchange rate of the krona from SEK 15 billion to SEK 50 billion. The background to this was the extremely weak krona

exchange rate during 2009. The exchange rate for the krona was affected by the international financial market crisis, the deep downturn and, among other things, uncertainty about whether the crisis in the Baltic countries would affect the Swedish bank sector. In this situation, there was also considerable uncertainty about how much the borrowing requirement would be affected.

With a view to creating preparedness for extensive borrowing which should at the same time take place at as low a cost as possible, we made the assessment that there were reasons for increased foreign exchange borrowing. Foreign exchange borrowing is a cheap form of borrowing if the loan is made at a weak krona exchange rate and repaid when the krona has strengthened.

During the spring of 2009, krona borrowing was converted into foreign currency borrowing through our purchasing kronor futures against the euro. In this way, a foreign currency exposure arose in the same way as in an ordinary foreign currency loan.

The position in the krona's exchange rate that we built up during 2009 corresponded to SEK 50 billion and had at the end of June reduced interest costs including exchange rate effects by more than SEK 4 billion.

To make it possible to create foreign exchange debt in this way by using the weak krona, we first had to make a request to the Government to take positions corresponding to a greater volume than the SEK 15 billion that previously applied. This meant that the position could only be built up after a government decision.

In connection with the discussion on the evaluation of central government debt management during 2009, the matter of the form of the decision-making process relating to position-taking has been raised. If the Debt Office had been able to make decisions on a larger position, it would have been possible to build up the position more quickly.

The Debt Office would be given greater freedom of action to take positions in the krona's exchange rate if the current ceiling of SEK 50 billion is retained and also after the existing position has been closed.

In situations of a more extreme character of the type that existed during 2009, it would then be possible to take larger positions without first waiting for a government decision. The entire available scope has normally been used on previous occasions when the Debt Office has taken positions in the exchange rate of the krona, The available scope has then not been greater than that we have either not taken a position at all or used the entire scope.

With an upper limit of SEK 50 billion, there is a better scope for choosing the extent of positions based on expected potential for gain without the risks being too great. On occasions when it may be justified to take a krona position without the exchange rate being at the extremely weak levels of 2009, it is natural for only a small part of the available scope to be used.

The volume of SEK 50 billion is reasonably large bearing in mind the size of the central government debt and the foreign exchange market. Larger positions than this would be difficult to build up and wind up. It should be borne in mind that it took around ten months to build up the position during 2009.

3.4.2 Positions in foreign currency

We propose unchanged guidelines for position-taking in foreign currency.

The Debt Office has a mandate to take strategic and tactical interest rate and currency positions in foreign currency with a view to reducing the costs of central government debt. We see no reason to change the direction or forms of this activity. We propose that the guidelines for position-taking in foreign currency be retained as a uniformly expressed risk mandate, stated in terms of daily Value-at-Risk (VaR), in accordance with the model applied since 2007.

Positions should as before be taken via derivatives. These derivative positions should be reported in a separate portfolio and market valued currently. This has numerous advantages. By using derivatives, we ensure that positions can be wound up. In this way, we can opt to realise gains, if the assessments leading to the taking of the position prove to be correct. We will also be able to close the position if we change our view or if development moves in the opposite direction, i.e. we obtain instruments to continuously control the risks and limit the losses.

For a long time, our position-taking in foreign currency has taken place only through derivatives. This applies both to the continuous active management in foreign currency and the dollar/euro-positions that we took in 2000 and 2007.

The principle that position should be taken with the aid of derivatives facilitates considerably measurement of results and evaluation of the position-taking at the same time as it keeps down transaction costs and increases flexibility. In a theoretical perspective, cost minimisation through position-taking does not deviate, however, in a crucial way from the cost minimisation which control of the actual foreign currency debt is focused on. A strategic position in euro against dollars, via derivatives, can be compared with a change of the shares for euro and dollar in the benchmark for the currency share in the foreign currency debt, via direct borrowing or derivatives.

The form and use of the risk mandate

It is proposed that the Government should continue to specify a risk mandate in terms of a daily Value-at-Risk measure (VaR) in SEK million. Within this framework, the Debt Office may decide whether and how the mandate is to be used.

The methods for calculation of VaR and the application of this measure of risk management are standardised and sufficiently established in finance management that this is an advantage in itself. The basic idea underlying VaR is also intuitively attractive. By stating a particular loss level and a particular probability for the loss not being greater than this, it makes it possible for the principal to express a view of what constitutes a desirable risk-taking.

A VaR mandate of, for example, SEK 600 million (daily VaR and a probability of 95 per cent), means that there is 5 per cent probability that the loss will be SEK 600 million or more on a daily basis. In other words, the commissioner is prepared to accept a loss of SEK 600 million or more every twentieth day. The other side of this is, of course, that a larger risk mandate provides scope for larger positions and that the result – if the underlying assessments are correct – can be more favourable. With zero scope for risk, the result will also be zero.

VaR calculations are based on a number of assumptions and data, which make it uncertain whether they provide a fair picture of future periods. There is therefore a particular probability that the result will differ from that predicted by the model, for example, that more or less) than 5 per cent of the losses during a particular period will end up above the VaR limit. The VaR measure none the less provides a framework for discussion on the choice of risk level in position-taking which is clearer than what existed in previous control models.

The size of the risk mandate

The risk mandate for position-taking in foreign currency measured in terms of Value-at-Risk should be set at approximately the same level that we have worked with to date, including the active management of foreign currency (where the mandate is at SEK 220 million). We are presenting some calculations in order to obtain an idea of how high the level is, as well as how much risk has been borne by the Debt Office in its previous board positions.

The (hypothetical) positions in foreign currency that we are looking at are an interest rate position in the European market and a strategic foreign currency position between euro and dollar corresponding to the position we took in 2000. These calculations are based on daily price changes in the five most recent years. These market listings are assumed to represent tomorrow's possible outcomes. For every position, we calculate the change in value of the position. From this series of yields, we then calculate the 95th percentile as a measure of the position's daily Value-at-Risk. In addition to this, we report the largest measured negative change in value in the yield series. This gives an indication of how much the market value would have to change in a stress scenario. The results are summarised in table 1.

We start by looking at the interest rate position. We assume a scenario where the ten-year rate on the European market is assumed to be unjustifiably low and the Debt Office takes a position for increased interest rates via a futures contract. The interest rate risk in the position is calculated at approximately double the maximum interest rate risk permitted in the ongoing active management, i.e. SEK 4.5 billion.

The results show that 95-per cent VaR amounts to SEK 450 million. This means that at 95 per cent probability the interest rate position will not lead to greater losses than SEK 450 million during a day. The greatest loss per day amounts to SEK 1,100 million. The historical simulation over 15 years shows that the loss at 95 per cent probability will be less than SEK 300 million.

A currency position equivalent to that taken by the Debt Office tog at the end of 2000, corresponding to SEK 24 billion, for a weaker dollar produces a daily VaR value of SEK 330 million. The greatest loss on one day amounts to SEK 1,100 million. The historical simulation over 15 years shows that the loss with 95 per cents probability will be less than SEK 390 million.

Table 1. Daily VaR and historical results for different positions and risk mandate for active management, SEK million

	Daily VaR (95 %)	Historical simulation	Worst out-come 1 day
Estimated risk for			
Interest rate position	450	300	1100
Euro/dollar position	330	390	1100
Total incl. Diversification	650	500	1400
Total excl. Diversification	780		
Risk mandate and risk utilisation active management:			
Risk mandate	220		
Risk utilisation*	40		

* Average daily VaR 2006-2009.

The reported calculations provide an estimate of the risk that the Debt Office has had in its previous board positions and the risk that the Debt Office would have been able to take. To this shall be added the active management's risk mandate of SEK 220 million. This figure might seem somewhat low if the risk mandate of SEK 600 million was to include all positions, plus the mandate of the active management (780+220). In reality, this should not be a problem. In the first place, the probability is low that the Debt Office would take two such large strategic positions at the same time. In the second place, it is seldom the case that the active management makes use of the whole of its mandate. In the third place, a combination of the different positions leads to diversification effects which reduce the aggregate VaR figure. Consequently, we propose that the risk mandate remains at SEK 600 million, measured as daily VaR at 95 per cent probability.

RIKSGÄLDEN
SWEDISH NATIONAL DEBT OFFICE

Visiting address: Norrlandsgatan 15, Postal address: SE-103 74 Stockholm, Sweden Telephone: +46 8 613 45 00
Fax: +46 8 21 21 63, E-mail: riksgalden@riksgalden.se, Internet: www.riksgalden.se