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1 Summary

The guidelines on central government debt policy should have a multiyear perspective in order to create conditions for long-term planning. This year's guidelines therefore establish what is essentially a three-year perspective. The guidelines for 2002 and 2003 are preliminary and may later be changed.

For this year's decision on the guidelines, there is a basis for deciding on the long-term development of the structure of the central government debt and for specifying a long-term operating direction. The Government is of the opinion that the percentage of foreign currency borrowing in the central government debt should be reduced and the percentage of kronor-denominated debt consequently should be increased.

The foreign currency debt is to be amortised by an amount equivalent to SEK 35 billion during 2001, which is an increase of SEK 10 billion when compared with the guidelines for 2000. The aim for 2002 and 2003 is for the amortisation rate to lead to an amortisation of the same amount. The National Debt Office may deviate ± SEK 15 billion from the specified amortisation rate. The National Debt Office should continue to be able to take cost and risk considerations into account in the position on how large a part of the interval will be made use of. The National Debt Office should report publicly on how it intends to use its mandate for foreign currency borrowing, as well as possible modifications to these plans.

Inflation-linked borrowing as a percentage of central government debt will increase in the long term. The rate of increase will be weighed against the growth in demand for inflation-linked bonds and the borrowing costs of other types of debt, with due consideration for risk.

That part of the central government’s financing needs not covered by inflation-linked borrowing and borrowing in foreign currency, will be met by nominal kronor-denominated borrowing.

The average duration of the nominal kronor-denominated debt and the foreign currency debt is to be 2.7 years. The aim for 2002 and 2003 is for the duration to remain unchanged. The National Debt Office should not take active positions on the operational management of the kronor-denominated debt. However, it should be possible for it to take strategic positions in the management of the kronor-denominated debt. When establishing the benchmark portfolios for nominal loans, the National Debt Office may decide on an average duration for the nominal debt that deviates by no more than 0.3 years from the benchmark decided by the Government.

The inflation-linked borrowing will have a long duration. Most of the newly issued inflation-linked bonds will have a maturity of at least 10 years.

The aim of the borrowing should be that no more than 25 per cent of the central government debt will fall due in the next 12 months. A maximum of 30 per cent of the entire debt will be allowed to mature in the above-mentioned period.

2 Introduction

In spring 1998 in the Government Bill on the management of the public debt, the Government presented a proposal for a new decision-making structure and a new formulation of objectives for central government debt policy. The Sveriges Riksdag endorsed in all essentials the Government's proposal (Government Bill 1997/98:154, bet. 1997/98: FiU29, rskr. 97/98:253). In the statute (1988:1387) on central government borrowing and debt management, the Riksdag legislated the overall goal for central government debt management. The goal is to minimise the long-term cost of the debt and at the same time take into consideration the inherent risk. In addition there is a stipulation that management must be within the framework imposed by monetary policy requirements.

Under the new decision-making structure, the Government will decide no later than November 15 each year on next year's guidelines for the management of the central government debt by the National Debt Office. It will come to a decision after the National Debt Office submits a proposal for the guidelines and the Sveriges Riksbank has been given the opportunity to comment on the proposal. The National Debt Office submitted its proposal for the guidelines on October 2, 2000 and the Riksbank's comments were received on October 22, 2000.

3 The Basis for the Government's Guidelines[1]

3.1 The Structure of the Central Government Debt

The main goal of central government debt management policy is to minimise the long-term cost of the debt while giving due consideration to the inherent risk. The guidelines for this policy need to be designed so that the structure of the debt has the characteristics desired. The expected total costs and the overall risk in managing the debt are critical factors in achieving this goal. It is especially important to take into account the interaction between the risks, as the total risk does not consist of the sum of the risks in the portfolios.

The distribution among the three types of debt—nominal kronor-denominated borrowing, inflation-linked borrowing and foreign currency borrowing—together with the maturity and the amortisation profile within each type are the main determinants of the debt's characteristics. In addition the size of the central government debt affects the level of cost and risk. A large debt means higher costs and thus a greater risk that these costs will contribute to a deterioration in the central government finances.

At the end of 1999 the central government debt amounted to SEK 1,374 billion, or about 70 per cent of GDP. Among the factors contributing to the decrease in the central government debt are exchange rate gains resulting from a strengthening of the

[1] A more detailed explanation of some of the core concepts can be found in Chapter 6, the Technical Appendix.

Swedish krona during 1999. At the end of 2000 it is estimated that the central government debt will amount to SEK 1,275[2] billion, a reduction of SEK 99 billion in 2000. The main factors contributing to the central government budget surplus in 2000 are transfers from the National Pension Insurance Fund to the state and the partial privatisation of Telia.

The Government's decision on foreign currency borrowing refers to borrowing associated with foreign currency exposure. Therefore, in order to get a true picture of the National Debt Office's currency exposure, the debt management measures taken in foreign currency borrowing have to be considered. In order to reduce costs, the National Debt Office has chosen to borrow in Swedish kronor and then use currency swaps to convert the loans into foreign currency debt. In recent years this has been by far the most common method of foreign currency borrowing. The distribution of the central government debt according to type**,** including debt management measures, for 1996-2000 is shown in Table 1 below.

Table 1. Structure of the Central Government Debt Including Debt Management Measures at Year End, 1996-1999, and Projections for 2000 [SEK billions].

	1996	1997	1998	1999	2000
Nominal debt in kronor	919	912	920	874	805
percentage of debt	*64,7*	*63,4*	*62,5*	*63,6*	*62,4*
Inflation-linked loans	74	91	94	97	101
percentage of debt	*5,2*	*6,3*	*6,4*	*7,1*	*7,8*
Foreign currency debt	426	436	459	402	383
percentage of debt	*30,0*	*30,3*	*31,2*	*29,3*	*29,7*
Total debt incl. debt mgmt	**1 419**	**1 439**	**1 473**	**1 373**	**1 289**
Total debt excl. debt mgmt	1 412	1 430	1 449	1 374	1 289

Source: The Swedish National Debt Office (SNDO).
Note: The debt in foreign currency has been valued at the exchange rate in effect at year end. The valuation as of December 31, 2000 is based on exchange rate forecasts made by SNDO.

[2] Source: Ministry of Finance, and with reference to table 2.

Nominal kronor-denominated borrowing traditionally represents the most important source of financing for the National Debt Office. Most of the borrowing is in treasury bonds (loans with maturities of more than one year) and treasury bills (loans with maturities of generally less than one year). Borrowing in the Swedish domestic retail market—chiefly lottery bonds and National Debt Savings—is also included in this debt category. This category of debt as a percentage of the central government debt has been showing a downward trend since the mid-1990s and is estimated to comprise 62,4 per cent of the central government debt at the end of 2000.

Inflation-linked borrowing complements nominal kronor-denominated borrowing and offers investors an opportunity for protection against the risk of inflation. Inflation-linked bonds as a percentage of borrowing on the Swedish market have steadily increased since they were first issued in 1994 and are estimated at 7,8 per cent of the central government debt at the end of 2000.

The percentage of foreign currency borrowing grew rapidly at the beginning of the 1990s from less than 10 per cent to almost 29 per cent of the central government debt in the fiscal year 1994/95. Subsequently the percentage has been relatively stable at about 30 per cent. The foreign currency debt was estimated at SEK 383 billion at the end of 2000, or 29,7 per cent of the central government debt.

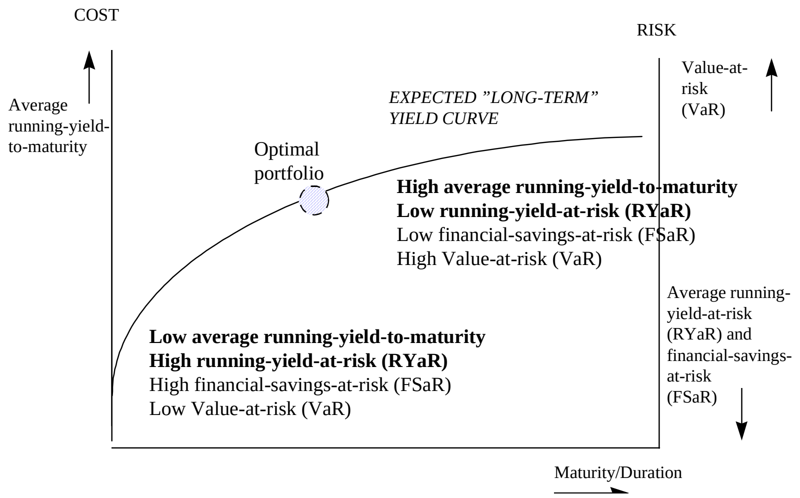
3.2 Costs and Risk in Central Government Debt Management

The Government's Assessment: In a consideration of the structure of central government debt and its maturity, the costs should be measured by the Running-Yields. The relevant nominal risk measure is the Running-Yield-at-Risk, which takes into account the risk of rising yields.

Risk in central government debt management should, in principle, be defined as the contribution of the debt portfolio to fluctuations in the central government's budget balance and in the debt level rather than as nominal risk. However, such a definition of risk is very complex and has to be developed further before it can replace the nominal risk measure. For the time being, both measures should be used in risk analysis.

The goal of debt policy necessitates weighing the cost of the central government debt against the risks involved in its management. Weighing the costs against the risks is critical in deciding the structure and the maturity of the debt. The central government debt is characteristically long-term and borrowing normally involves a large percentage of long-term loans held to maturity. Therefore it was the Government's assessment in last year's decision on the guidelines that the most appropriate measure of cost is the average running-yield-to-maturity. The technical term used for this cost measure is Running Yield (RY). Accordingly the relevant measure of risk is the average Running-Yield-at-Risk (RYaR). This concept of risk refers to the variation in the average running-yield-to-maturity. Other subordinate risks identified in last year's guidelines were the financial-savings-at-risk (FSaR), which refers to the risk that interest payments will negatively affect net lending, and value-at-risk (VaR), which refers to fluctuations in the market value of the debt. The FSaR is closely linked to RYaR, as higher RYaR at the same time increases the risk of a detoriation in the net lending. In evaluating the management of the central government debt against a benchmark portfolio, the market value of the debt is to be applied. All measures of cost and risk are expressed in nominal terms.

Figure 1. The Relationship Among Cost, Risk and Maturity in Central Government Debt Management.



In Government Bill 1997/98:154, Management of the Public Debt, the Government states that in principle it would be desirable to focus on the long-term real costs in view of the goal of minimising costs. Under the assumption that the policy on central government debt does not affect inflation, the question of a nominal or an inflation-linked approach does not govern the choice of debt portfolio. However, cost fluctuations measured in real terms can be assumed to differ from those measured in nominal terms, as fluctuations in real costs depend not only on the fluctuations in nominal costs and inflation acting individually, but also of the covariance *between* the costs and inflation. The choice between a real and a nominal approach thus affects the risk profile and hence the choice of debt portfolio. It may be argued that inflation-linked bonds have a low real risk, as the expected fluctuations in real interest rate costs are not dependent on the inflation rate. However, the risks associated with instruments in nominal terms are greater, since the costs depend on the inflation outcome, which is not known in advance.

The Government has observed that knowledge of a real approach to handling risk is limited and for the time being has taken a nominal approach to risk. Consideration of risk in central government debt management has thus focused on the fluctuations in the nominal average running-yield-to-maturity. However the Government has stated that the concept of real risk should be investigated separately. The National Debt Office has begun an in-depth analysis of the concept of risk in this year's proposed guidelines.

The National Debt Office notes by way of introduction that a concept of risk that is meaningful in economic terms has to have a broader approach than simply adjusting the nominal costs of the debt using a specific measure of inflation. Normally in asset management, an inflation-linked perspective may be warranted since the aim is a high yield measured in terms of the consumption of goods and services that can be attained. Thus the purchasing power of the yield is crucial. It makes sense that the motive for an inflation-linked approach to central government debt management should be based on the central government's capacity to pay. This supports the argument that nominal interest costs should be related to other nominal expenditures such as central government consumption and transfers, together with revenue, especially tax revenue. Therefore an appropriate measure of risk should also take into account other sources of uncertainty in addition to inflation. The real economic cost of interest payments in the central government budget depends in part on their covariance with other revenue and expenditure.

One starting-point in conducting a risk analysis is that financial risks can be minimised by matching the debt's characteristics with those of the assets. This approach has been developed within the framework of a technique called Asset and Liability Management (ALM). This technique is to be used by the four National Insurance Pension Funds as an analytical framework on which to base decisions about their portfolio structure. The principles involved were initially developed for companies in the financial sector, but they could also be used as a conceptual framework for the analysis of central government finances and the central government debt.

For the central government, the premise is that risk will ensue from inadequate correspondence between the attributes of the assets (primary future tax revenue) and of the debt (future expenditure assumptions). In principle the central government should be able to use the debt policy to reduce risk by choosing a debt portfolio in which there is a covariance between interest rate expenditure and central government debt on the one hand and budget surpluses (excluding interest) on the other hand. By putting the management of the central government debt in the broader perspective of the central government finances, it is clear that the risks do not stem primarily from the risk of rising interest costs. Instead they arise from the sharp increase in the cost of central government debt and the rapid growth in the its size during periods when there are strains on central government finances or when the debt is already large and growing.

The Government shares the view of the National Debt Office on how the analysis of the concept of risk in central government debt management should be developed. The analytical framework based on matching that the Debt Office is discussing concurs with the Government’s views expressed in the Government Bill on the management of the public debt. Like the National Debt Office, the Government also wants to stress that the technique constitutes a conceptual framework rather than a direct analytical tool ready to be put into practice. The proposed expansion of risk analysis means that in principle the structure of the central government debt has to be weighed within the framework for an analysis of all the important factors affecting the budget balance and the central government debt, especially the covariance between central government revenue and expenditure on one hand, and financial variables on the other hand.

There is considerable uncertainty about the relationships that have been discussed, especially in light of the long-term nature of central government debt. The relationships observed may also change over time. Nonetheless ALM provides a productive conceptual framework. The difficulties finding workable and quantifiable relationships do not amount to a deficiency in technique. Rather it is an expression of the complexity of the problem. It is the Government's view that ALM represents a plausible conceptual framework for the analysis of the risks in central government debt management and that the analysis should be expanded and improved. The National Debt Office should therefore continue its analytical work in both qualitative and quantitative terms in preparation for the next proposal for guidelines.

The Government is of the opinion that the risk associated with central government debt management should, in principle, be defined in terms of the contribution that the debt portfolio makes to fluctuations in the budget balance and the debt. This definition of risk seems more appropriate than a nominal concept of risk that only has in view the risk of the rising running-yield-to-maturity measured in nominal kronor. At the same time, the increased complexity that the ALM technique entails means that the difficulties in coming to operational conclusions may increase. Even if the concept of risk discussed here ought to be able to replace a nominal measure in the long term, both these measures should be used until further notice.

For its current proposal, the National Debt Office has further developed and expanded the simulations made prior to the guidelines that it had proposed earlier. An perspective, influenced by ALM, has been added. In the simulations both nominal risks and real economic risks are estimated. The more inflation-linked approach has been made operational in terms of costs as a percentage of GDP. The simulations have also been adjusted to illustrate the issue of what percentage of the borrowing should be in foreign currencies.

The simulation model consists of a strategic part and a macroeconomic part. Costs and risks associated with various strategies for the structure of the debt and its length are estimated in the strategic part. The strategies are evaluated in the macroeconomic part, which includes three currencies (the krona, the euro and the dollar) and six building blocks for each currency area. The latter are used in modelling cyclical trends; inflation; growth; short-term interest rates; interest rate differentials between short- and long-term interest rates; and exchange rates. In addition there is a building block for borrowing requirements in the part involving the krona. The borrowing is governed in part by the goal of a surplus of 2 per cent of GDP in central government net lending and the rate of economic growth in each period.

The most important results obtained are the following:

Cost savings can be obtained by using a relatively short maturity without the risk—in the form of fluctuations in interest rate payments—being unacceptably high. Achieving such a result depends largely on whether the yield curve is expected to have a positive slope. In other words, interest on short-term instruments is, on average, somewhat lower than interest on long-term instruments. This result becomes even stronger when there is an inflation-linked measure of risk, owing to the covariance between the interest costs in the model and central government revenue. This can be interpreted intuitively, as revenue increases during a boom in the business cycle at the same time that monetary policy is tightened. A shorter average time to maturity increases the covariance between interest payments and budget surpluses.

Debt denominated in foreign currency leads to greater cost fluctuations and only limited gains from diversification. Such gains may arise if there is a negative correlation between debt denominated in kronor and in foreign currency. However, the risks associated with foreign currency borrowing are greater than the gains from diversification. The risks arise because a weakening of the krona will contribute to increased interest payments as a result of exchange rate losses and to a higher central government debt. Foreign currency borrowing appears to be an even riskier alternative when it is analysed using an inflation-linked technique. This heightened risk is due to the decrease in the covariance between interest costs and growth in the event of foreign currency borrowing if the foreign interest rates are expected to have a lower correlation with the Swedish business cycle than the Swedish rates have. In addition it can be expected that the exchange rate for the krona will be weak during a downturn in the business cycle when the strains on the public finances are greatest.

In the simulations, full confidence in monetary and fiscal policy is assumed. If the risk that future disturbances could undermine this confidence had also been taken into account, the outcome would probably be that the loan period should be somewhat longer and the percentage of foreign currency debt should be lower. This is especially true from an economic perspective that takes inflation into consideration. One argument is that the krona would be expected to weaken in the event of a crisis in confidence. This would increase the exchange rate losses on interest payments and raise the value of the debt in a situation in which serious strains on the public finances could not be ruled out.

3.3 The Basis for the Decision on the Guidelines

The Government's Assessment: For this year's decision on the guidelines, there is a basis for deciding on the long-term development of the structure of the central government debt and for specifying a long-term operating direction.

The percentage of foreign currency borrowing in the central government debt should be reduced and accordingly the percentage of kronor-denominated debt should be increased.

The National Debt Office should not take active positions on the operational management of the kronor-denominated debt. However, it should be possible for it to take strategic positions in the management of the kronor-denominated debt. The National Debt Office should continue to be able to take cost and risk considerations into account in the position on how large a part of the interval will be made use of.

The guidelines on central government debt policy should have a perspective of several years in order to create conditions for long-term planning. However, the decision on the guidelines will be made under uncertainty and owing to changes in conditions, may need to be adjusted. The decisions on this year's guidelines should have a three-year perspective. The decision on the guidelines for 2001 may be reconsidered if there are important changes in the bases for the decision. The guidelines for 2002 and 2003 are preliminary and may require changes when coming guidelines are decided.

The Debt's Long-Term Structure

In the guidelines for 2000, the Government expressed the view that there were reasons for applying a traditional portfolio selection perspective to the guidelines for debt management. The guidelines would thus state how the debt would be apportioned among the various types of debt and what mandate the National Debt Office would have to deviate from the specified shares at each point in time. Swings in borrowing requirements could be countered by changes in the proportions of various types of debt. In that way the debt's characteristics with respect to costs and risk would not changed.

In previous decisions on the guidelines, the Government has stated that there has been an insufficient basis to enable it to take a position on the desired long-term proportions for the various types of debt. Therefore earlier guidelines aimed essentially at holding these proportions unchanged.

In this year's proposal on the guidelines, the National Debt Office has expanded its analysis of the structure that the debt ought to have, particularly with respect to the percentage of foreign currency borrowing.

The National Debt Office recommends a reduction in foreign currency borrowing in the long term. It states that foreign borrowing is a flexible instrument that can swiftly be made use of if the borrowing requirement were to rise sharply. However, this assumes that the debt in foreign currency is not too big to begin with. It could be said that by reducing the debt denominated in foreign currency, the central government is renewing insurance that will be valuable should conditions affecting the public finances worsen.

In addition there is no reason to expect that in the long term there are any systematic differences in the cost of kronor-denominated and foreign currency borrowing. In the past decade, foreign currency borrowing has, on average, been cheaper than kronor-denominated borrowing, as substantial risk premiums caused by economic and political uncertainty have raised the price of domestic borrowing. However, the budget consolidation in recent years and the low inflation rate have meant that the previous interest rate differential between Sweden and, for example, the EMU-countries has, in principle, disappeared. Thus it is difficult to use costs to justify a large foreign currency debt.

Debt denominated in foreign currency implies a greater risk-taking than that denominated in kronor, as changes in the exchange rate for the krona directly affect the value of the foreign currency debt and thus the debt's size. Exchange rate changes also directly affect the interest rate paid on the debt and hence the budget balance.

From a public finance perspective, matching arguments favour kronor denominated borrowing, since there is little correlation between changes in the value of the foreign currency debt and the central government's assets. A weakening of the krona, with the attendant exchange rate losses, is not offset by an increase in central government revenue in kronor. A likely hypothesis is that the krona tends to be weak when public finances are also weak, owing to cyclical reasons. Thus from an ALM perspective, the structure of the debt denominated in foreign currency risks making the swings in the public finances more pronounced, since increased interest payments on the debt then coincide with a weakening budget balance. Accordingly these reasons also argue against a high percentage of foreign currency debt.

The results obtained using the National Debt Office's simulation model indicate that the percentage of foreign currency debt should be substantially lower—15 per cent, at the most—compared with the present share of about 30 per cent. A report by consultants from Salomon Smith Barney also indicates that the percentage of foreign currency should be reduced. According to the simulation results, there are limited gains from diversification in the foreign currency borrowing (lower risk owing to the negative correlation between currencies). Instead the exchange rate risk is of major importance (fluctuations in the nominal interest costs and the size of the central government debt). In a real terms perspective, foreign currency borrowing appears to be an even riskier alternative as the course of the exchange rate for the krona may be expected to raise the management costs in situations when the public finances are strained at the same time that the covariance of the interest costs with the budget surplus is weakening. The National Debt Office also notes that Sweden has a high proportion of debt denominated in foreign currency compared with other OECD countries (the same level as Greece and Hungary).

In the event that Sweden joins the monetary union, outstanding borrowing denominated in Swedish kronor and other parts of the central government balance sheet and income statement will be converted into euro. Since only just over 30 per cent of the foreign currency debt consists of debts in currencies other than the euro, the foreign currency debt would shrink considerably. Upon a possible entry, the foreign currency debt would, using a rough estimate and todays figures, come to 10 per cent of the central government debt. However, there is much uncertainty surrounding the issue of economic and monetary union membership. It is the National Debt Office’s opinion that a possible membership in the future should not form part of the basis for choosing a position on the direction of central government debt policy.

It is the Government’s assessment that the cost argument in favour of foreign currency debt has lost in importance. One of the most important reasons for foreign currency borrowing has been that on average it has been cheaper than borrowing in kronor. For example, Swedish interest rate differentials with Germany on loans with a length of 10 years have gradually fallen from about 4.5 percentage points in 1995 to about 0.5 percentage points at the end of 1999. In 2000 the Swedish interest rate has fallen to parity with the German rate. With the budget consolidation and the credibility earned for its price stability policy, the central government in Sweden appears to be able to borrow, for example, in kronor and in euro, on similar terms.

It should also be noted that a conciderable part of the present foreign currency debt resulted from the krona’s defence in 1992. It was not a consequence of a conscious effort to accumulate a substantial currency exposure. It may be valuable in particularly difficult budgetary situations to be able to take advantage of the opportunities offered by the international capital market. However, this should be done under the assumption that in normal times, the foreign currency debt is allowed to shrink. The Government notes that the foreign currency debt has, in principle, been unchanged since the fixed exchange rate regime was abandoned, even though the large budget deficit has now been completely eliminated.

At the same time there may be some reasons for retaining some foreign currency debt. One reason is the opportunity of diversifying interest rate risk. Borrowing in several currencies reduces dependence on the interest level in individual countries (including

Sweden). Borrowing using relatively short maturities may also take place with the associated cost advantages, without the refinancing risk becoming too great. Foreign currency borrowing in the international capital market helps broaden the investor base and may also increase interest in bonds denominated in kronor. Some covariance between the exchange rate for the krona and, for example, tax revenue is possible, as the exchange rate for the krona affects net exports, among other things, and thus the tax base.

The Government shares the opinion of the National Debt Office that the issue of possible economic and monetary union participation should not be taken into account in the decision on the guidelines.

It is the Government’s conclusion that the reasons for foreign currency borrowing have diminished in importance. At the same time the proposal for the guidelines this year makes the risks clear. The risks arise as a result of both higher interest costs and an increase in the debt in situations when the krona weakens, along with an unfavourable strain on the budget in times when public finances may be expected to be weak owing to cyclical factors. Even though there are some arguments for retaining a certain percentage of foreign currency in the debt, the reasons for a decrease in the percentage of foreign currency borrowing are stronger.

This year’s proposal for guidelines has been extended and developed in important respects. It is the Government’s assessment that it represents a satisfactory basis at least for a qualitative assessment of the present structure of the central government debt. However, the Government notes that it is not yet meaningful to formulate the guidelines in terms of assigning percentages to the various categories of debt. Certainly additional steps have been taken in the direction of thinking in terms of proportions assigned the different kinds of debt, but the basis for taking a more precise position on the optimal size of the various types of debt is still lacking. However, this year’s guidelines indicate an operational direction that in the long term has a smaller percentage of foreign currency debt and an increasing percentage of nominal and inflation-linked kronor-denominated debt.

Position Taking by the National Debt Office

The goal of the central government debt policy is to minimise the long-term costs of the debt with due consideration for risk. It is the characteristics of the debt as a whole that determine the cost and the risk. The decision on the guidelines governs how the debt is apportioned among the principal debt categories and the average duration. The deliberations preceding these decisions are thus critically important. Smaller deviations from the guidelines in the intervals surrounding the benchmarks are secondary. However, this does not imply that these positions would be insignificant, but it is important to identify the management decisions that are fundamental to the achievement of the goal.

The government´s guidelines include intervals refering to the maturity of the debt and to the amortisation rate for the foreign currency debt in which the National Debt Office has a mandate to deviate. The maturity interval for the kronor-denominated debt specified by the Government has been used both in the National Debt Office's benchmark portfolio decisions and in its operational management. Management by the National Debt Office has been evaluated with the help of profit and loss measurement using market values resulting from variances between the benchmark portfolio and the actual borrowing.

The Government stated in rskr. 1999/2000:104 Evaluation of Central Government Debt Borrowing and Management, 1994/95-1999 that if the National Debt Office chooses essentially to replicate the benchmark, then the present structure having a delegated risk mandate and an evaluation of it will not be particularly meaningful. The Government intends to come back with a more detailed discussion on how active the National Debt Office should be in taking positions on the management of the nominal kronor-denominated debt. The Government also noted that the flexibility in the amortisation rate gave the National Debt Office the opportunity to some extent to choose between nominal kronor-denominated borrowing and foreign currency borrowing with the aim of reducing costs. In this instance the Government also intends to come back later with a more detailed discussion on what degree of flexibility there should be in foreign currency borrowing and how it should be made use of.

It is important in this discussion to differentiate between position taking relative to the benchmark portfolios in the operative management and active debt management in a broader sense. Position taking in operative management refers to positions that will, in principle, be closed at a suitable point in time. The position taken may be assigned a market value and the result measured in kronor as a gain or a loss. It should be noted that debt management may very well be active, but without the National Debt Office taking positions relative to a benchmark. The decision on management respecting the choice of the specific bonds to be issued and the utilisation of swaps are examples. Arranging the actual borrowing includes considerations that will affect costs and risks and thus is part of the active management. The question raised in the Government's evaluation concerns whether it is meaningful to take positions towards specified benchmark portfolios and to evaluate these deviations in terms of market values – not whether borrowing and management will be actively pursued with the aim of minimising costs.

The National Debt Office proposes that it should not take positions in managing the nominal kronor-denominated debt. It is also proposed that there could be active position taking in the management of the foreign currency debt, but with an exception for positions based on developments with respect to the krona's exchange rate.

The basis for the Government's decision on the degree of active management and position taking relative to benchmark portfolios is that the goal of debt management policy—to minimise costs with due consideration for the risk—is to be guiding. In this sense, it is relevant to compare the task of the National Debt Office with asset management by the National Insurance Pension Fund (AP-fonderna). This basis then has to be qualified, depending on whether other aspects of the task of the National Debt Office would warrant putting special restrictions on the management. One such reason could be that the National Debt Office as the sole issuer of government bonds has a dominant position in the market. This would argue for the introduction of restrictions on debt management that aim at minimising costs. The government´s conciderations in these matters are outlined below.

Position Taking by the National Debt Office in Managing the Kronor-Denominated Debt

An important element in the Government's evaluation of debt management by the National Debt Office has been the result obtained in the operative management relative to the benchmark portfolios decided by the Debt Office for the nominal kronor-denominated debt and the foreign currency debt. The proposal by the Debt Office means that the evaluation of the operative management of the kronor-denominated debt will be discontinued. As there will be no position taking, there will not be any result to evaluate.

The National Debt Office gives the following reasons for its proposal. It has formally had the same management and evaluation system for kronor-denominated debt that it has had for the foreign currency debt, but in practice it has not taken positions on the former. It sees predictability and transparency as guiding principles in its borrowing in the kronor-denominated bond market. These principles would be disregarded if an active position taking were put into practice.

The National Debt Office is a dominant party in the Swedish bond market. It is the only issuer of government bonds. Its plans for issuing bonds and its actions in the bond market can influence interest rate developments. Position taking in the kronor-denominated bond market may possibly yield short-term gains, but on the contrary, they may result in higher borrowing costs for the central government in the long term. If investors perceive that they are dealing with a party with privileged information, the result may be higher risk premiums in the Swedish kronor-denominated bond market and/or investors may leave the market. In practice it would cause problems drawing the boundary between position taking based, for example, on cyclically based interest rate forecasts and positions based on privileged information. The mere suspicion that the National Debt Office was making use of privileged information might lead to mistrust.

The crucial element respecting costs and risk taking is the characteristics of the central government debt taken as a whole, as laid down in the Government's decision on the guidelines for the debt's structure and maturity. Position taking in terms of deviation relative to a benchmark is, in this context, of less importance.

The Government on the whole agrees with the National Debt Office's principal argumentation. However, it does not appear to be entirely obvious that in every situation the National Debt Office's borrowing should be conducted completely mechanically, irrespective of market conditions and interest rate levels.

Now that the Riksbank has been given an independent position, there is less risk that the National Debt Office will be suspected of acting on the basis of privileged information about monetary policy. The Swedish capital market is largely integrated with the international capital market. Interest rate differentials between Swedish and foreign long-term bonds have fallen and stabilised. This is largely the result of the consolidation of public finances and the confidence achieved in the price stability policy. Today forecasting bond interest rates is mostly based on estimates of international interest rate developments.

The problem in differentiating between actions based on privileged versus publicly available information is not unique to the National Debt Office. It should also be added that the National Debt Office's competence based on proximity to the market could be impaired if price developments in the bond market were not taken into account in the management. Its incentive to follow developments in the capital market could also be impaired.

The most important reason for a management that is less mechanical is that the goal of central government debt management policy is to minimise the cost to the central government. One obvious way of reducing costs is to avoid concentrating issues in times when maturities are expensive and accordingly adjust issuing activities so that interest rates on new bond issues will be as low as possible. The National Debt Office regularly makes such adjustments in its borrowing plans and they are reflected in the formulation of the benchmark portfolios. The duration target determines how much room there is for such adjustments. The question is whether further savings can be realised by being more flexible in managing duration. In that connection there are two related aspects that are important. First, an estimate has to be made of whether the expected savings (taking into consideration the effect on the risks involved in management) are sufficiently large. Second the possibilities of controlling duration in the kronor-denominated debt have to be taken into account.

It should be noted that the size of the debt denominated in kronor is such that the duration can only be adjusted gradually. Since the gross borrowing requirement is small compared with the outstanding stock of debt, the average duration changes at a slow pace, even given considerable rearrangement of the issues. There is some scope for influencing duration with the help of derivative transactions, but as the National Debt Office observes in the proposed guidelines, doing so also requires large - and thus expensive - transactions in order to have a noticeable affect on the characteristics of the debt in general. By way of illustration, it could be mentioned that the shortening of the duration of the kronor-denominated debt by 0.2 years in 2000 is distributed over the entire year. Consequently short-term position taking in the form of rapid changes in the debt’s duration is hardly useful and the possibilities for positioning the kronor-denominated debt in the medium-term are also limited. Thus the National Debt Office only has the chance to achieve material savings if there are expectations of sustainable and substantial changes in interest rates.

The Government finds that the arguments on balance indicate that the National Debt Office should refrain from position taking in the operative management of the kronor-denominated debt. The most important reasons are that the National Debt Office has a dominant position and the long-term nature of the debt and transparency would be put at risk.

However, the Government is of the opinion that there should be some scope for strategic positions based on estimates of long-term interest rate developments. Such positions can be taken by making use of the possibility of deviating from the duration target decided by the Government. Such decisions are announced in advance and discretionary changes cannot be made frequently. In that way, issuing activities will remain transparent and long term. Changes in issuing activities will then be linked to changes in the benchmark for duration in the benchmark portfolio. Such changes are not any more problematical than when the Government, acting on a proposal by the National Debt Office, changes the guidelines on duration.

The size of the central government debt and sluggishness in the process for changing the actual duration means that it takes time to implement strategic position taking. This is one of the reasons why there should not be frequent changes in the benchmark portfolio. In addition changes have to be made quickly enough that the potential gains can be realised before market conditions change. This makes significant demands on long-term planning in managing the debt. Therefore, there should be additional analysis of the usefulness of the possibility for strategic position taking by the National Debt Office, including the impact on the risks in managing the central government debt. However, it is the view of the Government that flexibility in managing the kronor-denominated debt should not be completely removed on the basis of the analysis to date, even if position taking in operative management is discontinued. It should be emphasised that the question of strategic positions in the form of a deviation from the guidelines on the average duration are only one dimension of the management decision made by the National Debt Office. A given duration can be achieved in a number of different ways. There are several reasons why such management decisions respecting the organisation of the actual borrowing are at least as important when it comes to costs as a marginal and gradual change in the average duration.

Position Taking by the National Debt Office Respecting Flexibility in the Amortisation Rate for the Foreign Currency Debt

This year's guidelines provide the National Debt Office with the possibility of taking into account the costs and risks in decisions on the extent to which it will make use of the flexibility permitted in amortising the foreign currency debt. In line with current practice, it has earlier not taken positions based on the krona's exchange rate.

The National Debt Office states in its proposal on the guidelines that the interval for foreign currency borrowing should not be used to take positions in the currency market based on estimates of exchange rate developments. It also states that the practice followed by the National Debt Office in recent years should be confirmed in the decision on the guidelines. The National Debt Office states that there is a risk that market players will suspect that it is acting on the basis of information from the Government Offices or the Riksbank. The flexibility in foreign currency borrowing should instead be used primarily to handle uncertainty in the borrowing requirement. In addition unrest in the Swedish bond market and unexpected changes in the borrowing requirement before year end may be reasons for using the flexibility in its mandate on foreign currency borrowing.

In the guidelines for 2000, the Government concluded that the main reason for flexibility was the uncertainty of the forecast for the budget balance. That uncertainty made it necessary to be able to adjust the amortisations in order to meet the goal of keeping the percentage of foreign currency unchanged. However, the government was of the opinion that cost and risk considerations also could be taken into account in the stand taken by the National Debt Office on how large a part of the interval would be used.

The arguments in favour of this are as follows. The National Debt Office is a small actor in the foreign exchange market and has few possibilities of influencing the exchange rate. The interval that it can use for flexibility in the amortisation rate is so small compared to other flows in the currency market that shifts in amortisations over time do not have any actual effect on the market. The flexibility can thus hardly be said to affect the conditions for monetary policy. The consolidation of central government finances has reduced the exchange rate's dependence on economic and political decisions adopted by the Government and the Riksdag. Similarly the Riksbank's independent position means that National Debt Office do not have access to privileged information on monetary and exchange rate policy. However, this does not exclude situations from arising—for example, in connection with larger central government transactions—in which the National Debt Office would be able to obtain privileged information that could be used for position taking in the foreign currency market.

Under existing practice, the Riksbank makes the National Debt Office's foreign currency trades. The Riksbank's purchases currency in order to compensate for the reduction in the foreign exchange reserves that takes place when the central government amortises the foreign currency debt are announced in advance. On each occasion the amount purchased is the same. In this way the Riksbank avoids the perception that trade on the account of the National Debt Office are interventions in foreign exchange policy. For this reason the changes in its amortisation plans, for example based on a changed borrowing forecast, are also announced in advance. The technique for currency exchange transactions is not compatible with short-term position taking on the amortisation rate aimed at reducing the central government's total costs, as possible gains by the National Debt Office would be offset by the Riksbank's losses (and vice versa).

Changes in the amortisation rate of a more strategic nature that are based on long-term exchange rate forecasts should, however, not be more problematic than changes based on a revised borrowing forecast. They can be handled in the same way, that is, announced in advance, and permitted to affect the Riksbank's daily exchange transactions. Changes in the amortisation rate that are announced in advance, strategic and less frequent confine the problem of access to privileged information affecting the exchange rate that the National Debt Office may have on certain occasions, provided that no changes in the amortisation rate are made at the occasion at question.

The government's assessments in this year's guidelines are as follows. Exchange rate forecasts—both short- and long-term—are notoriously uncertain. It is nevertheless difficult to leave out of consideration the fact that exchange rate and market conditions can entail large losses if amortisations are effected when the krona is very weak. Some flexibility in the application of the guidelines on amortising the foreign currency debt is valuable in order not to raise the cost of debt management unnecessarily at times when the value of the krona deviates markedly from the level perceived to be warranted in the long term. Despite the arguments that can be made against position taking founded on estimates of exchange rate developments for the krona, the Government is not prepared to bring to a complete end the possibility of adjusting amortisation rates in accordance with exchange rate developments. In light of present currency trading techniques employed by the Riksbank, changes in the amortisation rate should be announced in advance and based on more strategic considerations, such as forecasts of borrowing requirements or exchange rate developments. This implies that it is not meaningful for the National Debt Office to take active positions based on views on the krona-exchange rate in the operational management of the debt.

The Government's decision for 2001 is that the National Debt Office should have the possibility of taking cost and risk considerations into account in the decision on the amortisation rate in the interval permitted. In this respect the decision is the same as in the previous guidelines. However, the mandate for 2001 is more distinct as the Government observes that the flexibility will not be used for short-term positions in the operational management of debt.

Position Taking by the National Debt Office Respecting the Management of the Foreign Currency Debt

The National Debt Office actively manages the foreign currency debt. It takes active positions based on estimates of international interest and exchange rate developments. It also endeavours to achieve the lowest possible costs and with regard to risk in its choice of borrowing instruments. The National Debt Office is not proposing any change in direction here. It is the Government's opinion that active position taking in the management of the foreign currency debt comprises an important part of the effort to minimise the costs of the central government debt.

Time Perspective and Long-Term Planning

The basis for the decision on the guidelines is the goal prescribed by law of minimising the long-term costs of the debt while taking into account the risk in its management. It follows from this goal that the focus should be on the long-term perspective, which should be reflected in the decision on the guidelines.

The National Debt Office states that the guidelines should indicate a more strategic direction showing how the debt should be structured. It also states that the decision should extend a few years into the future. The size and nature of the debt mean that major changes in its structure have to be implemented gradually over a number of years. A longer-term direction would provide important guidance for the annual decisions on the guidelines, in the ongoing management by the National Debt Office and for participants in the market.

The Government shares the opinion of the National Debt Offices that a longer perspective is desirable. It would enhance long-term planning in debt policy and in the management of the debt. The Government Bill on the management of the public debt states that it may be appropriate in some cases to specify guidelines in terms of the development desired for the various types of debt. This Bill also noted that there was cause for avoiding very narrow limits in the formulation of the Government's guidelines. There is nothing to prevent applying a longer perspective to debt policy. On the contrary, most arguments favour a relatively long time perspective. The strategic direction is examined in connection with the annual decisions on the guidelines. In that way the necessary flexibility may be maintained. There is nothing preventing a long-term strategy from being reviewed in the light of new circumstances or changes in insights on debt policy management. The annual guidelines can also be changed if the conditions under which the decision was made change markedly. Thus even if there will be room for flexibility with an extended time perspective for the guidelines, the premise should be that there will be no unwarranted changes to these guidelines.

One reason why there has only been a one-year perspective thus far has been the lack of a sufficient foundation for assessing long-term developments respecting the proportion of each kind of debt. The Government now states that the foreign currency debt should be reduced over the long term. This indicates that a long-term perspective should be established. The National Debt Office's mandate to take strategic positions also supports the argument for a longer time perspective. A strategic position that has to be closed before the year end results in too short-sighted thinking and would in practice impede the long-term view that should characterise strategic considerations.

It is the Government's conclusion that the decisions on the guidelines should cover more than a one-year time horizon, which has essentially been the case until now. However, the time horizon should not be stretched so far that the overview is lost. The uncertainty about possible membership in economic and monetary union in the future also argues for not extending the time perspective too far. One obvious starting point is a time horizon that covers the same period as the expenditure ceiling for the central government budget; in other words, it would cover the period when forecasts and assumptions about developments affecting the debt and borrowing requirement are available. In that event there would be a three-year perspective in the guidelines. This year's decision on the guidelines would concern the years 2001 to 2003. However, the guidelines for 2002 and 2003 would be preliminary and would be seen as an indication of direction rather than as a definitive decision.

4 Guidelines on the Management of the Central Government Debt in 2001

4.1 The Proposal Made by the National Debt Office and the Riksbank's Comments

The Guidelines Proposed by the National Debt Office

The National Debt Office is proposing a long-term reduction of SEK 35 billion a year in the foreign currency debt in the coming years. Under the assumptions that have been given, this reduction means that the foreign currency debt at the end of 2003 would represent about 25 per cent of the central government debt. The interval around the amortisation benchmark should, in conformity with the guidelines for the current year, come to SEK 15 billion. This flexibility should preferably be used to counter uncertainties in the development of the borrowing requirement and to even out the amortisations over the time frame for the ambition of reducing the percentage of foreign currency debt in the long term.

The National Debt Office is proposing that there be an increase in real borrowing as a percentage of the central government debt in the long term and that the rate of increase should depend on the growth in demand in the market for inflation-linked bonds. The proposal differs from the current year's guidelines, whose formulation does not include a reduction in the stock of inflation-linked bonds.

It is proposed that the average maturity for the total nominal kronor-denominated and foreign currency debt be retained unchanged at 2.7 years. The main argument for doing so is that the expected gain from a shorter average maturity for the nominal debt is relatively small at the same time that the refinancing risk may be expected to increase considerably. In addition it is proposed that henceforth there will be an interval of ±0.3 a year around the benchmark. It is proposed that the borrowing in the inflation-linked debt aim at long maturities without stipulating a fixed lower bound on maturity. The current year's guidelines state that the maturity for inflation-linked bonds when issued is to be at least eight years or longer.

The proposed guidelines on the nominal kronor-denominated debt and the maturity profile remain unchanged from the decision on the guidelines for 2000.

The Riksbank's Comments

It is the Riksbank's opinion that the proposal of the National Debt Office falls within the framework imposed by monetary policy requirements. It is also the opinion of the Riksbank that the proposed increase in the amortisation rate from SEK 25 billion to SEK 35 billion will not have any effect on the krona's exchange rate. The Riksbank therefore supports this proposal by the National Debt Office. The Riksbank assumes that the expected borrowing requirement will steer the use of the interval around the amortisation benchmark. The interval should not be used for taking positions on the amortisation of the foreign currency debt based on estimates of what course the Swedish krona might take.

4.2 The Government's Decision

The Foreign Currency Debt

The Government's decision: The foreign currency debt is to be amortised by an amount equivalent to SEK 35 billion during 2001. The aim for 2002 and 2003 is for the amortisation rate to lead to an amortisation of the same amount.

The National Debt Office may deviate SEK 15 billion from the specified amortisation rate. It is to report publicly on how it intends to use its mandate for foreign currency borrowing, as well as possible modifications to these plans.

The central government debt will fall sharply in 2001 as a result of the budget surplus and the transfer from the National Insurance Pension Fund. This decrease means that at the amortisation rate used thus far, the foreign currency debt as a percentage of the total debt would increase sharply in 2001. In light of the reduced total risk signified by the lower central government debt, the National Debt Office is of the opinion that a rapid correction in the increased percentage of foreign currency debt would be unwarranted. However, given the proposed decrease in the percentage of foreign currency debt, the amortisation rate needs to be adjusted so that a drawdown of the percentage is not postponed indefinitely. Therefore, according to the National Debt Office, amortisation of the foreign currency debt should take place at a somewhat faster pace than it has thus far. The National Debt Office is proposing that the amortisation of the foreign currency debt in the next few years come to SEK 35 billion a year. Thus this percentage could gradually be reduced to about 25 per cent in 2003.

Table 2. The Government's Annual Guidelines on Net Foreign Currency Borrowing, Actual Borrowing Outcome, Changes in the Foreign Currency Debt Shown in Kronor (incl. Valuation at Current Exchange Rates), the Borrowing Requirement, Changes in the Debt and Total Amount of the Debt [SEK billions].

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Guidelines for Foreign Currency Borrowing	>30	>20	0	-25	-25	-25	-35	-35	-35
Actual foreign currency borrowing, Net	44	30	-2,5	-26	-25				
Foreign Curreny Debt, change in Value[1]	19	25	10	-24	-60				
Central Gov. Net borrowing[2]	139	21	6	-10	-82	-76	-41	16	10
Central Gov. Debt, change[2]	100	25	21	17	-75	-99	-131	8	3
Central Gov. Debt	1 386	1 412	1 432	1 449	1 374	1 275	1 145	1 153	1 156
Centr. Gov. Debt, Percentage of GDP	81%	80%	79%	77%	70%	62%	52%	51%	49%

Source: Ministry of Finance. Forecasts for 2000-2003 have been extracted from the Budget Bill of 2001 and subsequently adjusted for the government decision on transfer from the National Insurance Pension Fund for 2001.

[1] The change in value of the foreign currency debt is comprised of foreign currency borrowing (net) and valuation of the debt, including the derivatives portfolio, at current exchange rates.

[2] The net borrowing requirement is not directly linked to changes in the size of the central government debt. Conciderations has to be taken to the foreign currency debt revaluation, as well as transactions that affects the borrowing requirement but not the size of the debt (for ex. temporary placements at year ends by SNDO).

The Government is of the opinion that it is reasonable to have a faster amortisation rate in periods with robust public finances and a declining public debt. In 2001 there will be a substantial draw-down of the central government debt. In the next two years the central government debt is expected to be almost unchanged. The consolidated public sector is estimated to have a surplus in net lending corresponding to 2 per cent of GDP during the period to which the guidelines refer. Previous years' guidelines on the amortisation rate were made under the understanding that the foreign currency debt would remain mostly unchanged. The stand taken by the Government on this year's decision on the guidelines with respect to a reduction in the percentage of foreign currency debt, in combination with the rapidly shrinking central government debt, warrants a somewhat faster amortisation rate than in previous years.

Exchange rate developments in the coming years will affect the costs of amortisation. The Government's decision on the guidelines should be based on long-term, strategic considerations about costs and risks in central government debt management. Normally guidelines are decided upon only once a year. Thus such decisions cannot be based on current exchange rates or exchange rate forecasts. The exchange rate for the krona and its prospects can change rapidly. In that event, possible decisions on adjusting the rate of amortisation for forecasts of exchange rate developments will have to be made by the National Debt Office.

An increased amortisation rate is not expected to affect the krona's exchange rate appreciably. The change is small compared with the total currency flows, including the portfolio investments that affect the krona's exchange rate. It is also reasonable to assume that amortising the foreign currency debt has less impact on the exchange rate of as a result of the consolidation of public finances and the lower central government debt.

All in all, the Government thinks that the proposal for an amortisation rate of SEK 35 billion is well balanced.

The National Debt Office proposes, as in the current year's guidelines, an interval around the amortisation benchmark of SEK 15 billion. The proposal is mainly warranted by the considerable uncertainty that prevails about the borrowing requirement in coming years and the possibility of using the interval for spreading swings in the borrowing requirement between the kronor-denominated and foreign currency debt. There is also a need to be able to level out the amortisations over time owing to new information on the borrowing requirement that concerns periods other than the current fiscal year. However, this assumes that the guidelines have a more strategic direction for the development of the categories of debt. The flexibility could also be used if borrowing conditions in the kronor-denominated market deteriorate significantly and if for market efficiency reasons, it warrants channeling a greater or lesser share of the borrowing to the foreign currency market.

In its submission, the Riksbank emphasises that the foreign currency mandate is assumed to be used only when the borrowing requirement changes and that possible deviations from the amortisation benchmark are to be made public.

As in its decision on the guidelines for last year, the Government is of the opinion, explained in Section 3.3, that the flexibility in 2001 is also to be used to support the goal of minimising the cost of managing the debt while taking risk into consideration. Thus the flexibility in the amortisation mandate can be based on considerations concerning changes in the borrowing requirement, borrowing terms in the kronor-denominated market, market efficiency considerations, differences in all these respects from one year to another and strategic views on the krona’s exchange rate. Accordingly, the amortisation rate will be able to be adjusted in light of the cost in the broad sense in order to carry out a reduction in the foreign currency debt as a percentage of the central government debt.

In the guidelines for 2000, it was stated that the flexiblity in the target for the amortisation rate was primarily related to the uncertainty in the budget balance forecast. The decision on the amortisation rate and its flexibility in 2000 was dependent on there being no change, in principle, in the percentage of foreign currency debt. In this year’s guidelines, it is stated that the percentage of foreign currency should be reduced. In these circumstances, there is no reason for deviations from the targeted rate of amortisation to be specifically linked to changes in the borrowing forecast. The aim for the next three years is to amortise the foreign currency debt SEK 35 billion every year. This is based, among other things, on the view that the finances for the entire public sector will be in surplus for the period as a whole, rather than on the borrowing requirement forecasts for each individual year.

The Government is of the opinion that it is not obvious that the interval will be used symmetrically in the event of unexpected changes in the borrowing requirement. If the borrowing requirement is smaller (the surplus becomes greater) than expected, there may be cause for somewhat accelerated amortisations in order to counteract a rise in the percentage of foreign currency debt. If on the contrary, the borrowing requirement increases without markedly affecting the central government's borrowing terms in kronor or the krona's exchange rate, it may still be reasonable to amortise at the rate given by the target in view of the objective of reducing the foreign currency share in the long term.

The Government is of the view that a flexibility of ± SEK15 billion around the benchmark is an appropriate interval.

The National Debt Office will make the decision on how the interval will be used. As a basis for the evaluation of debt management, the National Debt Office will state the reasons for the change in its decision to deviate from the benchmark.

Whereas the exchange of currencies is done with the Riksbank and in accordance with the Government's decisions in Section 3.3 with respect to position taking, the planned rate of amortisation will be announced in advance.

Inflation-Linked Kronor-Denominated Debt

The Government's decision: Inflation-linked borrowing as a percentage of central government debt will increase in the long term. The rate of increase will be weighed against the growth in demand for inflation-linked bonds and the borrowing costs of other types of debt, with due consideration for risk.

The earlier guidelines stated that the outstanding stock of inflation-linked borrowing would not be reduced. However, a reduction has been permitted in order to promote more efficient markets. The percentage of the central government debt that is inflation-linked has grown somewhat in 2000 since there have been some new issues made at the same time that the total central government debt has declined.

Under the Government's decision, SEK 10 billion in inflation-linked bonds will be delivered from the National Insurance Pension Fund to the National Debt Office at the beginning of 2001. An ambition to replace this stock of inflation-linked bonds runs the risk of pushing up real interest rates to unwarranted high levels in a market that currently is not so efficient.

The National Debt Office is proposing that the guidelines be drawn up as a percentage of central government debt. In addition it is proposing that the percentage that is long term should increase. The rate of increase should be decided in view of the growth in demand for inflation-linked bonds. If the current rate of issue can be maintained, there will be some increase in the share of inflation-linked borrowing that can be achieved in 2001.

The National Debt Office emphasises that inflation-linked bonds perform an important function in the central government debt portfolio. This form of borrowing helps diversify borrowing to one more source of financing besides nominal kronor-denominated and foreign currency borrowing. From a central government financial perspective, there are reasons for assuming that there is less risk in inflation-linked borrowing than in nominal borrowing. Inflation, and thus the compensation for inflation that is paid out in the case of inflation-linked borrowing, can be assumed to vary with the business cycle and thus with the budget balance. In addition, inflation-linked borrowing in a normally functioning market with a small liquidity premium may be expected to give the central government lower borrowing rates in comparison with nominal kronor-denominated borrowing, as the inflation risk premium goes to the central government. The inflation risk premium is the compensation that lenders require for the uncertainty about future inflation developments. With inflation-linked borrowing, the inflation risk to the investor disappears and thus no inflation compensation needs to be paid.

In earlier decisions on the guidelines, the Government has pointed out that a reasonable aim is that the guidelines for managing the central government debt assume a portfolio approach in which the proportions of the types of debt, rather than their absolute size, are stated. With a portfolio approach, changes in the borrowing requirement could be countered with changes in the proportions of the various types of debt without the total debt's risk and cost characteristics being changed. Such an approach can no longer be applied fully in the decision on the guidelines for 2001. The foreign currency amortisation is stated in kronor and the market for inflation-linked bonds is not yet sufficiently liquid to make this useful. However, it is a step in the right direction to show the guidelines on the inflation-linked debt as a percentage of the total debt.

The market for inflation-linked bonds is still not completely developed There is not sufficient liquidity, a situation that results in high liquidity premiums. The Government therefore is of the opinion that it is urgent that the National Debt Office continue its efforts to develop the market for inflation-linked bonds.

The transfer of inflation-linked bonds from the National Insurance Pension Fund reduces the outstanding stock. A compensating increase in the volume issued 2001 would probably come into conflict with the cost minimisation goal. However, the Government is of the opinion that the percentage of inflation-linked bonds should increase in the long term. The increase should take place at the rate permitted by the growth in demand in order not to neglect the cost minimisation goal. The objective of central government debt policy means that the cost of an increase in the proportion of inflation-linked borrowing should be weighed against the cost of the nominal borrowing with due consideration given to risk.

It is important for the National Debt Office to continue to expand its analysis of the contribution of inflation-linked borrowing to cost and risk in the central government debt.

Nominal Kronor-Denominated Debt

The Government's decision: The central government's financing needs that are not covered by inflation-linked borrowing and borrowing in foreign currency, will be met by nominal kronor-denominated borrowing.

Nominal kronor-denominated borrowing is the central government's most important source of financing from both a quantitative and a policy standpoint. It makes up over 60 per cent of the central government debt. With the Government's decision to amortise the foreign currency debt by SEK 35 billion and the limits on the possibilities to increase the percentage of inflation-linked bonds, nominal kronor-denominated borrowing will continue to be the central government's most important source of financing. The Government's guidelines consequently mean that the financing requirement not met by inflation-linked and foreign currency borrowing will be met by nominal kronor-denominated borrowing.

It should be noted that the National Debt Office creates foreign currency debt by issuing kronor-denominated loans that are then swapped for foreign currency loans. This means that the extent of amortisation of the foreign currency debt does not have any significance for the central government's issuing requirements for kronor/denominated debt, as possible changes in the rate of amortisation only affect the scale of the kronor/foreign currency swaps. Such debt management technique has helped maintain the volume of issues in the kronor market and in this way has strengthened the market's liquidity.

As noted, the nominal kronor-denominated debt represents a residual between the central government's borrowing requirement and borrowing in foreign currency and inflation-linked bonds. However the Government is of the opinion that the assigned interval around the benchmark for amortising foreign currency increases the possibilities that the National Debt Office will have to spread the borrowing between the kronor-denominated and foreign currency markets. Therefore this flexibility furthers the National Debt Office's possibilities of acting predictably and transparently in the kronor-denominated market and promoting market efficiency.

As the dominant player in the bond market, the National Debt Office has a responsibility for maintaining a well-functioning market for kronor-denominated borrowing. The principles of predictability and transparency in its actions are therefore important components in fostering the kronor-denominated market in Sweden. With the aim of making this responsibility clear and strengthening it, the Government states in the decision on this year's guidelines that position taking in the operative management of the nominal kronor-denominated borrowing will no longer be one of the National Debt Office's tasks. (See also Section 3.3).

As emphasised in Section 3.3, the decision taken by the Government on position taking does not mean that the kronor-denominated borrowing will be conducted in an entirely mechanical fashion. The National Debt Office will certainly not try to reduce borrowing costs by deviating from the benchmark portfolio. The central government's borrowing costs are, however, also affected by its choice of a benchmark portfolio and issuing policy in general, the number of loans, the maturities chosen and debt management. The Government wants to underscore the National Debt Office's own observation that the Debt Office has a special responsibility to promote and develop the Swedish market for interest-bearing instruments.

Maturity

The Government's decision: The average duration of the nominal kronor-denominated debt and the foreign currency debt is to be 2.7 years. The aim for 2002 and 2003 is for the duration to remain unchanged. When establishing the benchmark portfolios for nominal loans, the National Debt Office may decide on an average duration for the nominal debt that deviates by no more than 0.3 years from the benchmark decided by the Government.

The inflation-linked borrowing will have a long duration.

The maturity of the nominal debt measured as duration by the end of year 2000 will be 2.7 years, with an allowed deviation of 0.3 years upwards and downwards. These guidelines entail a shortening by 0.2 years, compared with the guidelines for 1999. In last year's decision on the guidelines, the duration was shortened in order to reduce the expected cost of the debt. On average, interest rates for short-term loans are lower than those for long-term loans. In other words, the yield curve normally has a positive slope. The cost advantages of short-term borrowing have to be weighed against the increased risk resulting from the fact that short-term rates normally are more variable. A short duration means that a larger part of the debt has to be rolled over each year, increasing the sensitivity to current interest rates. The refinancing risk that may occur in the event of a crisis in confidence also speaks for not shortening the maturity excessively.

In its benchmark portfolios for 2000, the National Debt Office has set the duration benchmarks at 3 years for the nominal kronor-denominated debt and 2 years for the foreign currency debt. This results in an average duration of 2.7 years. The reason for the shorter duration of the foreign currency borrowing is that it takes place in several markets. Thus, the Debt Office chose not to use the possibility of deviating from the Government's guidelines on maturity.

A smaller share of foreign currency loans reduces the possibilities of diversifying; therefore, the interest rate exposure increases in the kronor-denominated debt. In qualitative terms, this argues against a shortening of the maturity. In contrast, an increased percentage of inflation-linked loans reduces the refinancing risk in the nominal debt, an argument in qualitative terms in favour of shortening the maturity of the nominal portfolio. But as long as the market for inflation-linked bonds is insufficiently developed, it hampers the possibility of further shortening the total maturity of the nominal debt.

The National Debt Office proposes that the benchmark for the duration of total nominal kronor-denominated and foreign currency debt be maintained at 2.7 years. It argues that on average the yield curve probably will also have a positive slope in the future. In the present environment of low inflation and a credible monetary policy, the differential between short-term and long-term interest rates in the relevant segment of the yield curve may, however, be expected to be relatively small. Therefore, a further shortening of the maturity would yield relatively small cost savings.

The Government shares the opinion of the National Debt Office. No reasons have emerged for changing the guidelines on maturity. The average duration for the nominal debt should be 2.7 years for 2001 to 2003. The guidelines for 2002 and 2003 are preliminary and should be seen as an expression of the long-term direction. The changed risk characteristics that result from a gradually shrinking percentage of foreign currency debt and a growing percentage of inflation-linked loans is probably marginal, at least in the next year. Therefore, there is time for further analysis of whether changes to the composition of the debt should have consequences for the average maturity.

Table 3. Remaining Average Maturity on the Nominal Part of the Central Government Debt at Year End, forecast for the year 2000.
[years]

	1995	1996	1997	1998	1999	2000
Duration	3.2	3.2	3.1	3.1	2.9	2.7

Source: The Swedish National Debt Office (SNDO)

According to the National Debt Office, there should, in future, also be an interval of ±0.3 years around the target for the duration. The interval is needed both because the Debt Office cannot control the duration of the kronor-denominated debt in the short term without substantial costs to counteract derivative transactions and because the interval creates room for separate position taking in the foreign currency debt.

The National Debt Office proposes that the interval not be used for position taking relative to the benchmark portfolio’s target in the operative management. As Section 3.3 indicates, the Government shares this assessment. However, decisions on strategic and preannounced deviations from the Government’s guidelines on duration should, as before, be able to be taken by the National Debt Office. Such deviations can be seen as strategic position taking and should be taken in the form of decisions on changes in the benchmark portfolios on the average duration. The Government is of the opinion that the allowed interval should be ±0.3 years.

In addition an operational interval around the target for the duration in the benchmark portfolio for the kronor-denominated debt is needed in order to manage short-term fluctuations. Such fluctuations may arise as a result of swings in the borrowing requirement. As long as the duration interval is not used for positions, there is little need for micromanagement of the duration of the kronor-denominated debt, as short-term fluctuations in the market value of the debt have no significance for government debt policy. In addition the costs of controlling duration with a high degree of precision using derivative transactions may be considerable in the event of large short-term swings. The National Debt Office should decide on an interval around the duration in the benchmark portfolio to manage short-term swings in the duration. In its material on evaluation, it will account for any short-term fluctuations in the interval, report deviations from this interval and state the reasons for the deviations.

The National Debt Office will continue to conduct an active management with the possibility of position taking relative to the benchmark portfolio for the foreign currency debt. The National Debt Office should decide the duration interval around the operational management. This interval is intended to be used for active positions. The interval should therefore be set so that the average duration for the benchmark portfolio for the kronor-denominated debt and the bounds on the interval for the duration in the benchmark portfolio for the foreign currency debt lie within the interval of about 2.7 years decided by the Government. Position taking in the operative management of the foreign currency debt accordingly limits to a certain extent the National Debt Office’s possibilities of deviating from 2.7 years, given decisions on maturities in the benchmark portfolios.

An obvious starting-point would be to manage the inflation-linked debt in the same fashion as the nominal kronor-denominated and foreign currency debt, that is, by means of a duration target. The National Debt Office notes, however, that that these guidelines are not practical at present. Given the liquidity situation in the market for inflation-linked bonds, it is difficult to control the duration in the inflation-linked debt. The new issues are small in relation to the stock and there is no derivatives market. Thus managing new borrowing will work better than managing the average maturity on the entire stock.

It is the opinion of the National Debt Office that inflation-linked borrowing should be aimed at long maturities, as before.

The outstanding maturity on the inflation-linked debt comes to almost 12 years (with regard to the transfer from the National Insurance Pension Fund), which is considerably longer than that for the kronor-denominated and foreign currency debt. The National Debt Office proposes that in future borrowing in inflation-linked bonds also aim at long maturities, as long-term inflation-linked bonds yield the largest advantages, both for the central government and the investor. Uncertainty about inflation increases with the investment horizon. The guidelines for 2000 state that the maturity on newly issued inflation-linked bonds should be at least eight years. The Debt Office hold the view that there is no reason for the Government's overall guidelines to state a specific number of years. It proposes that the bulk of newly issued inflation-linked bonds have a maturity of at least 10 years.

The Government shares the opinion of the National Debt Office. Inflation-linked borrowing should have a long duration. The bulk of newly issued inflation-linked bonds should have a maturity of at least 10 years.

Maturity Profile

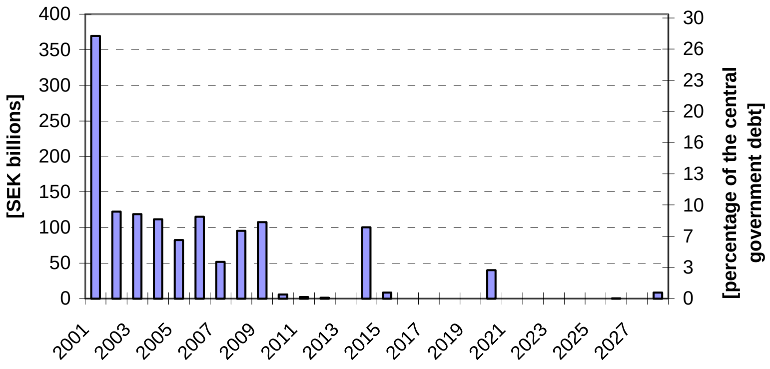
The Government's decision: The National Debt Office will manage the borrowing in such a way that no more than 25 per cent of the central government debt will fall due in the next 12 months. A maximum of 30 per cent of the entire debt will be allowed to mature in the above-mentioned period.

Maturity in the central government debt is measured in terms of duration. However the measure does not entirely capture the refinancing risk, as a certain duration can, in principle, be achieved in many ways. For example, a duration of 2.7 years can be achieved by choosing very short maturities when investing some of the debt and very long maturities when investing another part. The maturity dates will then be concentrated in certain periods and the borrowing costs will be heavily dependent on the interest rate terms prevailing just then. The guidelines on the maturity profile therefore are a supplement to the target for the average maturity date in the central government debt and aim at limiting the refinancing risk.

The distribution of kronor-denominated borrowing among a number of benchmark bonds along the yield curve gives the central government debt a relatively equal maturity profile. The refinancing of loans falling due is thus spread over time. This reduces the risk that a large part of the debt might have to be refinanced in periods of relatively high interest rate levels. In addition varying maturities meet investors' investment objectives.

Diagram 1, which follows, shows that part of the central government debt projected to fall due each year. The basis is the projected composition of the debt as of December 31, 2000. In 2001 estimates are that SEK 370 billion (appr. 28 per cent) will fall due.

Diagram 1. Projected Maturity Profile of the Central Government Debt at Year End 2000
[SEK billions and as a percentage of the Central Government Debt].



The National Debt Office is not proposing any change to the guidelines on the maturity profile. The Government shares this opinion. The National Debt Office will manage the borrowing in such a way that no more than 25 per cent of the central government debt will fall due in the next 12 months. A maximum of 30 per cent of the entire debt will be allowed to mature in the abovementioned period.

5 The Evaluation of Central Government Debt Management in 2001

The Government's decision: The National Debt Office will for 2001 establish internal, operational guidelines based on the Government's guidelines. The operational guidelines will contain benchmark portfolios for each category of nominal debt. They will refer to the distribution of borrowing among debt categories, the average duration for the nominal debt, the distribution of the duration between nominal kronor-denominated and nominal foreign currency debt and the composition of the currencies in the foreign currency debt. The operational guidelines will be evaluated quantitatively and qualitatively. The quantitative evaluation will concern absolute costs and as much as possible be comparable to the Government's guidelines with due consideration given to risk.

The evaluation of the operative management of the kronor-denominated debt will comprise to what extent the Debt Office has achieved the objectives established for debt management and market maintenance. The evaluation will be made primarily in qualitative terms but, if possible, will include quantitative estimates of the effects on absolute costs.

There will be a quantitative evaluation of the operative management of the foreign currency debt. The costs of the debt based on market value will be compared with costs of the benchmark portfolio for the foreign currency debt, with due consideration given to risk.

Background

The law on central government borrowing and debt management prescribes that the Government will evaluate the management of the central government debt in a written communication to the Riksdag by April 25 every year. The evaluation aims at providing the opportunity for a complete assessment of the conduct of central government debt management as well as guidance for future decisions on central government debt management policy. In addition regularly recurring evaluations provide incentives for reasoned and efficient debt management. The evaluation of the debt management policy will take place on several levels. The written communication to the Riksdag will include an evaluation of the National Debt Office's borrowing and management of the central government debt as well as the Government's decision on the guidelines.

The objective of the central government debt policy is long term in nature and it is natural to conduct the evaluation using a time perspective in which temporary fluctuations in the result will be smoothed out. Therefore, in recent years the Government has used moving five-year periods in its evaluation of the management. The written communication submitted to the Riksdag in April, 2000 referred to the years 1994/95-1999 and was the first evaluation based on the guidelines decided under the new decision-making arrangements. The evaluation of the decision on the guidelines for 2001 will thus concern the years 1997-2001.

The decision on the guidelines for 2000 stated that management by the National Debt Office is to be evaluated in two stages. First the Debt Office, if it finds it appropriate, can distribute the average duration for the nominal debt stated in the decision on the guidelines over two separate benchmark portfolios. Such a decision should first be evaluated based on its impact on the absolute costs, with due consideration for the risk. A second stage should be an evaluation of deviations by the kronor-denominated and foreign currency debt from the established benchmarks. If so, this evaluation would be done in terms of relative costs that are based on market maintenance. As a complement to the evaluation of the kronor-denominated debt, the market maintenance measures that have been taken will also be evaluated qualitatively. Finally deviations inside the interval around the benchmark for the amortisation of the foreign currency debt can be evaluated in terms of average interest rates at the time of issue and expressed in kronor. The flexibility around the benchmark aims primarily at parrying changes in the central government's borrowing requirements, but it can also be used for to improve compliance with objectives.

Evaluating Central Government Debt Management in 2001

The evaluation of the Government's guidelines for 2001 should, in principle, be made as set out in the guidelines for 2000 and be based on the goal of minimising the costs of the debt over the long term with consideration given to risk.

The Government decides the overall guidelines on central government debt policy. On the basis of the Government's decision, the National Debt Office establishes operational guidelines for the management. These internal guidelines refer to benchmark portfolios for the nominal debt, objectives for debt management and market maintenance, the handling of the exchange rate mandate and the policy on issuing inflation-linked bonds. In the following discussion**,** the operational guidelines of the National Debt Offices are called *strategic* decisions. These objectives aim at achieving the objective of central government debt policy and will be evaluated in relation to this objective. Thus the evaluation concerns the *absolute* costs as distinguished from *relative* costs related to a benchmark. Measures aimed at lowering the absolute interest costs are not evaluated against any benchmark and concern costs measured in terms of the running-yield-to-maturity. Positions are evaluated in relative terms against a benchmark and are evaluated using market values. It should be noted that quantitative evaluations are not always meaningful. Qualitative assessments always have to make up an important part of each evaluation.

The evaluation of the operational management has in view how well the strategic management objectives have been achieved or, where appropriate, if the relative costs have been reduced. In the management of the foreign currency debt, an evaluation is made relative to a benchmark portfolio.

Strategic Decisions

The evaluation of strategic decisions concerns the National Debt Office's internal guidelines. These include several crucial decisions:

– *Decisions on the distribution of the debt between various types of debt within the framework of the intervals stated by the Government*: The National Debt Office's flexibility in this respect stems from the interval around the targeted amortisation rate for the foreign currency debt and the mandate to increase the percentage of inflation-linked borrowing.

– *Decisions on the benchmark portfolios for the nominal kronor-denominated debt and the foreign currency debt*: This position includes decisions on average duration for the portfolio, decisions on duration for each of the portfolios and decisions on the currency composition of the benchmark for the foreign currency debt.

– *Decisions on objectives for debt management and market maintenance*.

The evaluation of these decisions, especially those about the benchmark portfolios, should, as far as possible, be made by contrafactual comparisons between clearly differentiated and stylised debt portfolios with respect to expected costs and risks. It should have in view the absolute costs in terms of average running-yield-to-maturity. One alternative may be a so-called status quo portfolio that assumes that the debt's characteristics will be maintained from the outset. It should be emphasized that the evaluation concerns debt management in a longer perspective of time.

Decisions on the distribution of the debt among types of debt can probably not in any meaningful way be evaluated quantitatively with contrafactual estimates except if a change in the proportions of the types of debt is primarily based on considerations about the exchange rate developments affecting the krona. It should also be noted that the rate of increase in the inflation-linked debt is to be weighed against the costs and risks of the other types of debt.

It ought to be underlined that the evaluation should be made in the light of the knowledge that existed at the time of the decision and that the choice of alternatives for purposes of comparison is made among portfolios that beforehand appear to be reasonable. Contrafactual estimates should be complemented by qualitative evaluation.

The evaluation of strategic decisions on objectives for debt management and market maintenance should primarily assess the choice of objectives, the setting of priorities and the results expected to give the desired results. Here, the criterions are foremost of a qualitative nature.

Operative Management

The evaluation of the operative management entails both an assessment of the extent to which the Debt Office has achieved its agreed objectives and taken agreed measures and a quantitative evaluation in relative terms of the operative management of the foreign currency debt.

In recent years borrowing by the National Debt Office and debt management have been evaluated by comparing the actual costs of the nominal debt denominated in kronor and the foreign currency debt with the hypothetical costs for each respective benchmark portfolio. This year's decision on the guidelines stipulates that the National Debt Office is not expected to take positions in the operative management relative to the benchmark for the nominal debt denominated in kronor. Thus an evaluation in relative terms is not meaningful.

The National Debt Office proposes that the evaluation of the decisions on the guidelines for the management of the nominal and inflation-linked kronor-denominated debt should be done mainly in qualitative terms. It should have in view the debt management and market maintenance that the Debt Office conducts with the aim of achieving the lowest possible absolute interest cost (average running-yield-to-maturity). The debt management and market maintenance concept is difficult to define unambiguously. Examples of such measures are the organisation of the Debt Office’s loan transactions (choice of maturities, volume of issues, repurchases, etc.) and market maintenance measures (the quality of market information, commitment to matters about the structure of the market, etc). The concept therefore should be defined both with respect to what it includes and the expected impact of various measures.

The National Debt Office stresses the importance of having a framework for the qualitative evaluation in order to be able to limit the subjectivity. Before a new fiscal year, clear operative subobjectives for debt management and market maintenance should be established. Even though on the whole the evaluation may be expected to be qualitative, there should be an effort to increase the quantitative elements in the evaluation. It is therefore important to develop quantitative evaluation methods with the aim of getting indicators of how the Debt Office’s measures affect the government´s financial costs. It plans to engage outside consultants to develop control and evaluation of the management. The National Debt Office also intend to show how the operative duration interval around the kronor-denominated debt and the foreign currency debt has been used, to report deviations from the intervals and to state the reasons for the deviations.

The evaluation of the management of the foreign currency debt will, as before, be made by comparing the actual costs of the foreign currency debt in market maintenance terms with the benchmark’s hypothetical costs. The results indicate the extent to which deviations from the benchmark portfolio have led to high or lower costs in relative terms.

The Government agrees with the proposal by the National Debt Office for evaluating the operative management. The evaluation will be mostly in qualitative terms, but as much as possible contain quantitative estimates of the impact on the absolute costs. The forms for the management of the central government debt have changed and become clearer in certain respects in recent years. This is especially true of the possibilities that the National Debt Office has to take strategic positions on the management of the kronor-denominated debt and the amortisation of the foreign currency debt, together with the debt management and market maintenance conducted by the Debt Office. It is important to keep on developing methods and instruments for evaluating both the strategic decisions and the operative management.

6 Technical Appendix: Definitions of Main Concepts

Foreign Currency Borrowing

The mandate for foreign currency borrowing laid down in the guidelines on the management of the central government debt is defined in terms of flows. An amortisation of the foreign currency debt consists of the net of the amounts falling due and the amounts borrowed as regards both loans and derivative instruments, valued at the exchange rates in effect on the transaction day. This means that all foreign currency flows are included in the foreign currency mandate; for example, in swaps between kronor and foreign currencies, the foreign currency part of the swap is included in the foreign currency mandate, while the kronor part is included in the kronor-denominated debt. Unrealised revaluations of the debt owing to exchange rates are not counted in the amortisation of the foreign currency debt as stated in the guidelines. This means that an amortisation in terms of the foreign currency mandate does not ex post equal the change that can be measured in the value of the outstanding debt during the same period, as the outstanding debt also contains unrealised exchange rate revaluations.

Debt swaps (kronor/valuta swaps)

For reasons of cost, the National Debt Office has chosen to take out loans in Swedish kronor and by skuldbytesavtal (kronor/foreign currency swaps) convert the loans to debt in foreign currencies. This practice has in most cases proved to be cheaper than direct borrowing in foreign currencies.

This form of foreign currency borrowing can be said to consist of two steps. In the first step borrowing in kronor in the form of ordinary bond issues takes place; that is, the National Debt Office acquires debt in kronor. The second step involves making a kronor/foreign currency swap, conducted with banks as counterparts. The swap gives the National Debt Office an asset in kronor – equivalent to the debt in kronor incurred by the issuance of the bond – and a debt in foreign currency. The debt in kronor has thus been converted into a debt in foreign currency. The cost savings occur as the National Debt Office receive a higher interest rate from the swap-contract than the interest rate paid by the SNDO when issuing the bond. This difference in interest rates is known as the swappspread.

Market Value Costs, Average Running-Yield-To-Maturity and Periodicised Costs per Period

The market value cost over a given period is defined as the difference between the debt's market value at the beginning and at the end of the period plus any interest coupons paid out in the period. It thus follows that the cost increases if the market value of the debt increases and decreases if the market value of the debt falls. The average running-yield-to-maturity is defined as a weighted average of the running-yield-to maturity rates in the debt portfolio. The weights are composed of the nominal value of the securities. The running-yield-to-maturity is the interest cost at which a security was issued. Thus according to this measure, the costs are stated in the form of an interest rate level expressed as a percentage.

Periodicised costs state the cost in kronor, when the interest payments for each instrument are evenly spread over the maturity for each instrument. Periodicised costs are the interest costs that are included in central government net lending. Included in this concept are the current interest payments on the central government debt and positive and negative price differences from par on the exchange rate in effect at issuance, evenly spread over the loans' time to maturity. However capital gains and losses at early redemption of loans and realised exchange rate gains or losses are not included in the periodicised costs that affect net lending. If the periodicised costs for a certain period are divided by the average nominal debt for the same period, a value close to the average running-yield-to-maturity will be obtained.

Risk Measures

For every measure of cost, there is a corresponding measure of risk. The risk of an unfavourable outcome in terms of changes in market value can be quantified using Value-at-Risk, VaR, which, somewhat simplified, is the maximum loss that could be suffered at a specified probability. For example for a particular borrowing strategy, it could be said that there was a 95 per cent certainty that the largest market value loss during one year would be SEK 5 billion. Similarly Running-Yield-at-Risk can be defined as the highest possible average running-yield-to-maturity obtainable at a given probability and for a given borrowing strategy. Finally Financial-Savings-at-Risk is the largest cost that can arise, defined as the effect on net lending.

Average Interest Fixing Period and Duration

Duration is used to measure the length of the debt. The measure calculate the debt's average remaining time to maturity by multiplying the time to each cash flow (coupons and redemptions) by the size of the cash flow. As the present values of the future cash flows depend on the interest rate level, the duration is consequently dependent on the interest rate level. There are a couple of different definitions of duration. The National Debt Office's target duration is expressed as Macauley duration, which means that the obligation's yield-to-maturity is used to calculate the present value of the future cash flows. Macauley duration is generally expressed in years.

Maturity Profile

The maturity date profile is defined in terms of how large a percentage of the outstanding stock at the time of measurement has maturities within the prescribed maturity interval. In practice the maturity date profile is measured at the end of each month. The cash balance, which shows levels that on a daily basis in individual months may move from deficits of about SEK 35 to 40 billion to surpluses of the same magnitude, is estimated ex ante to be at an average level with a deficit of SEK 15 billion. However the cash balance changes in a predictable manner over the months. Accordingly it is known at what approximate level that amounts fall due for a twelve-month period on those days when the deficit in the cash balance is at its largest. For short-term borrowing (principally call loans and treasury bills with a maturity of less than 12 months), which are refinanced during the year, only the volumes that are outstanding at each time of measurement are included. The maturity date profile thus gives an on-the-spot account of the total outstanding volume that will fall due within 12 months of a particular day. The net maturities of derivative instruments have been estimated at zero in the calculations. The net values appear only as a result of exchange rate fluctuations, and as the exchange rates at the due dates are not known in advance, zero is a reasonable forecast.