

RIKSGÄLDS  
KONTORET

THE SWEDISH NATIONAL DEBT OFFICE

# The Swedish Central Government Borrowing Requirement and Funding – forecasts and plans

May 21, 2001

# THE CENTRAL GOVERNMENT BORROWING REQUIREMENT

**The Swedish National Debt Office's revised forecast for 2001 indicates a surplus in central government payments of about SEK 86 billion. This is higher than the range of SEK 70–80 billion in the quarterly report in January, but inside the range of 80–90 billion that has been in force since February. The forecast for 2002 indicates a surplus of about SEK 48 billion.**

## **The annual forecast for 2001**

During the four months since the previous forecast was published, positive net inflows to the state treasury, mainly in the form of larger than expected tax payments, have generated a larger than expected surplus in central government payments. Other things equal, this should give rise to a smaller borrowing requirement this year. However, there are other factors that point in the opposite direction.

The cyclical development, for example, is important for the borrowing requirement. The present forecast is based on the macroeconomic picture, presented in the March forecast of the National Institute for Economic Research, which shows a lower growth rate than earlier forecasted. Lower growth implies a larger borrowing requirement as lower tax payments reduce government revenue while at the same time payments of unemployment benefits etc. increase outlays. Owing to the weaker cyclical situation, the positive results at the beginning of the year have therefore not been fully reflected in the revised forecast for the borrowing requirement in 2001. It should be noted that a much stronger decline in growth and employment than now forecast by the National Institute is required for the borrowing requirement to be affected to a significant extent. (See the section on Cyclical Sensitivity of Central Government Finances below.)

Net central government payments, i.e. the budget balance, are expected to yield a surplus of about SEK 86 billion. A surplus in the budget is equivalent to a negative borrowing requirement, i.e. the state is amortizing its debt.

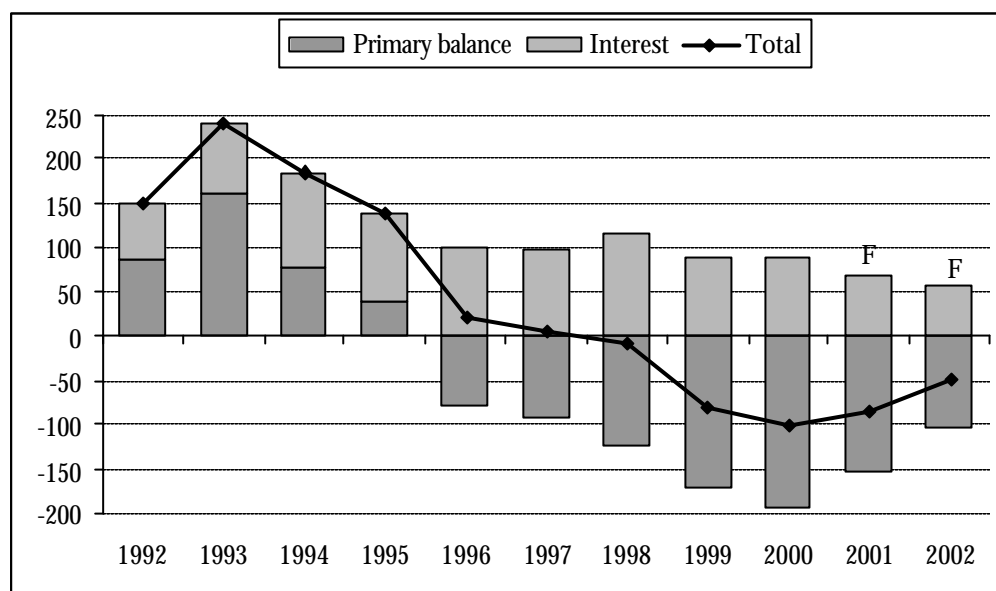
**The primary surplus**, the overall concept covering all state payments excluding interest payments, is expected to amount to SEK 154 billion, an increase of about SEK 14 billion compared to the previous forecast. As the debt has shrunk and the interest rate level has fallen, **interest payments** on the debt have declined; see Chart 1<sup>1</sup>. This trend will continue, though to a somewhat lesser extent than previously anticipated. During the early months of this year, interest rates have increased somewhat. This means that interest payments in 2001 will increase by about SEK 1 billion

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<sup>1</sup> The interest calculation is based on interest rates and exchange rates on May 10, 2001.

compared with the previous forecast, or to just over SEK 68 billion.<sup>2</sup> Altogether, this implies that the Debt Office is forecasting a larger surplus in central government payments than the SEK 70–80 billion indicated in January. The forecast now indicates a surplus of SEK 86 billion in 2001.

**Figure 1: Central government borrowing requirement 1992–2002, SEK billion.**



The increase in the primary surplus has to do mainly with the fact that net tax payments are expected to be larger. In principle, the improvement is fully reflected in the result for the first four months, which has yielded 13 billion more in tax revenue than forecast. Some adjustments have been made to the forecast for tax payments during the remainder of the year. For example, the forecast for supplementary payments of taxes in December has been revised downwards somewhat owing to the continued, unstable development in the financial markets. Experience shows that supplementary tax payments are difficult to predict so the forecast is uncertain.

In addition, a number of central government authorities are expected to make smaller disbursements than previously assumed. This is only partly offset by the fact that disbursements of foreign aid have been revised upwards as a result of new information in the Spring Budget Bill. In addition, the Debt Office anticipates, like in the January forecast, revenue from the sale of state assets totalling SEK 15 billion during 2001. Until now, the state has received just over 1 billion in connection with the redemption of shares in AssiDomän.

Net lending by the Debt Office is estimated to amount to SEK 10 billion this year, an increase of about SEK 2 billion since the January forecast. The increase has to do with somewhat higher lending to certain government authorities.

<sup>2</sup> In the January forecast, interest payments were given as SEK 65 billion, a figure that had been rounded.

## HOW THE FORECAST IS PRESENTED

Until now, the Debt Office has presented its annual forecasts of the borrowing requirement in the form of even, ten-billion intervals. This means that the forecast has been expressed, for example, as SEK 80–90 billion, irrespective of whether the point estimate has been 81 or 89 billion. The main purpose has been to emphasize the uncertainty that characterizes the forecast. In addition, the Office has wished to keep small changes in the estimate that have no practical implications for the borrowing plans etc., from receiving unwarranted attention.

At the same time, this mode of presentation has drawbacks. The underlying forecast may be subject to change of up to 9 billion without the official interval being affected. On the other hand, a change from, for example, 79.5 to 80.5 causes the interval to be changed from 70–80 to 80–90. Thus, this method can hide relatively large changes as well as give an exaggerated impression of small changes.

As was apparent above, the Debt Office has decided to begin showing the borrowing requirement as an amount in billions in the annual forecasts as well. With this, the forecasts will be easier to interpret.

It is still true that forecasts for the borrowing requirement are subject to considerable uncertainty. Even in the relatively short term, forecasting discrepancies of the order of SEK 10 billion may appear, for example in connection with supplementary payments of taxes or decisions regarding the sale of state assets. These and other elements of uncertainty remain. The fact that the forecasts from now on will be shown as a precise amount in billions is not to be interpreted as an increase in the precision of the assessment.

Preferably, it should be possible to quantify the uncertainty by specifying probability intervals around the forecast. However, the basis for such specifications is lacking. In general, it is obvious that the uncertainty is greater the longer into the future the forecast extends. Thus, the subjective uncertainty interval is smaller for the forecast referring to this year than for the one for 2002.

### **The annual forecast for 2002**

The first forecast for 2002 shows that the central government payments continue to show a surplus. The surplus is estimated at SEK 48 billion. This is equivalent to a reduction by SEK 38 billion compared with 2001.

**The primary surplus** is estimated to amount to SEK 105 billion. This is close to SEK 50 billion less than in 2001. This development is explained by three main factors. First, net revenue from temporary payments are expected to decline from SEK 45 billion to 30 billion. The maturing of mortgage bonds that were transferred from the AP fund will decline from SEK 42 billion to 7 billion. A new temporary item derives from the

assumption that an additional extra transfer from the Riksbank will take place. A decision in this matter will not be taken until the spring 2002, but in its report regarding the transfer for this year, the Finance Committee of the parliament has assumed that a continued analysis of the capital requirement of the Riksbank will show that there is scope for a transfer of at least the same amount as this year. The transfer this year will take place by the Riksbank turning over bonds to the Debt Office. This does not affect the borrowing requirement but reduces the central government debt directly. Since, following this, the Riksbank has no more krona bonds, the Debt Office has assumed that additional transfers will take place through cash payments and accordingly will affect the borrowing requirement.

Second, the Debt Office assumes that a decision regarding tax reductions of SEK 20 billion will be taken later this year. This is based on the government's so called technical assumption regarding transfers to households, included in the Spring Budget Bill and shown as an amount of SEK 26 billion. A compensation of the households for an additional one fourth of the general pension fee is probable and would cost about SEK 10 billion. Added to these tax reductions, there will be expenditure increases as a result of volume and price changes in the transfer systems as well as certain reforms. The Debt Office expects that possible, extra transfers to the households will take place through tax reductions since there is no room to speak of under the expenditure ceiling.

Third, it is assumed that supplementary payments of taxes by households and enterprises will decline by about SEK 8 billion compared with 2001. This assumption is based, inter alia, on the fact that the disbursement of so-called SPP funds entailed unusually large supplementary payments during the spring of 2001. In addition, the general decline in share prices has reduced the stock of unrealised capital gains in the household sector. This makes it reasonable to expect somewhat smaller supplementary payments related to capital gains on shares. Since the rate at which capital gains will be realized is difficult to judge, the estimate of supplementary tax payments is highly uncertain.

As regards revenue from the sale of state property, the Office assumes that payments will amount to SEK 15 billion in 2002 as well. This assumption is in line with the government's estimate in the Spring Budget Bill.

The Swedish economy is assumed to continue to grow in 2002, although at a relatively slow pace. Consequently, the tax bases will grow, which in itself will yield larger revenues. However, these revenues are not sufficiently large to offset the factors mentioned above in combination with the expenditure increases that follow from for example increased disbursements to the municipalities and the AP funds. Thus, the net effect will be a reduction of the primary surplus by close to SEK 50 billion compared with 2001.

**Interest payments on the central government debt** are estimated to fall from about SEK 68 billion in 2001 to about SEK 57 billion in 2002. The lower interest payments are mainly related to the continued reduction of the

debt. In addition, bonds with a high coupon interest rate will mature in 2001 and be replaced by loans with a lower interest rate. Finally, the Office is likely to make exchange rate gains on foreign currency loans maturing in 2002, while in 2001 this item is expected to result in losses.

### **Sensitivity analysis**

As indicated, the forecast is uncertain, partly because the assumptions regarding the economic development may prove to be erroneous. Below is a partial analysis of the effects on the borrowing requirement, in a one-year perspective, of changes in some important macro variables, each analysed separately and using rough estimates. Such sensitivity analyses can give some guidance as to how the borrowing requirement might be affected, should the economy develop differently than is now expected. For an assessment of an alternative scenario, in which several variables develop differently, the effects must be added. (See also box below on Cyclical Sensitivity of Central Government Finances.)

<i>Increase by one percent/percentage point</i>	<i>Effect on borrowing requirement, SEK billion</i>
Wage sum	-(1-2)
Household consumption expenditure, current prices	-(1-2)
Open unemployment	3.5-4.5
Interest rate level in Sweden	3
International interest rate level	1
Exchange rate	0.5

## **CYCLICAL SENSITIVITY OF STATE FINANCES**

The favourable economic development in recent years has contributed to a strengthening of government finances. Not least has the recovery of employment relative to the crisis years in the mid-1990s been advantageous in increasing the tax base as well as reducing the cost to the state of, for example, unemployment benefits. In recent months, indications of a decline in the rate of growth have appeared, although there is great uncertainty regarding the depth and duration of a possible cyclical downturn. Accordingly, the issue of the cyclical sensitivity of the Swedish state finances has again become topical.

### **Empirical studies**

Given that Sweden has a relatively large public sector, high income-related taxes and relatively high compensation levels in social insurance systems linked to the cycle, for example unemployment insurance, it stands to reason that the Swedish state finances have displayed a high sensitivity to cyclical fluctuations. In comparative studies of the effects on public sector finances of changes in GDP, Sweden usually ranks relatively high.

According to the OECD, public sector financial savings in Sweden would decline by an amount corresponding to 0.7 percent of GDP if the growth rate falls by one percentage point, the highest figure among EU countries.<sup>3</sup> Similar results – a sensitivity in the interval 0.6–0.8 – appear in a study of the cyclical sensitivity of the budget by Henrik Braconier and Steinar Holden.<sup>4</sup> The figures for Sweden are somewhat higher than for the other Nordic countries. The reaction is stronger if the disturbance comes from domestic demand than if export demand weakens. This has to do with the fact that domestic sectors are more employment intensive, which implies that the downturn has a stronger effect on the most important tax base, the wage sum. In addition, expenditures increase if employment declines.

The studies aim to separate fluctuations in the public sector finances that have to do with the automaticity in tax and expenditure systems from those that are mainly related to decisions taken in reaction to economic developments. Examples of the latter are the spending on bank support at the beginning of the 1990s, which raised the borrowing requirement during the crisis, and the comprehensive consolidation program carried out to restore government finances after the crisis years. It is in the nature of things that the need and willingness to take such decisions are difficult to predict. To the extent discretionary decisions follow certain, established patterns, the difference in relation to automatic mechanisms is in practice negligible.

### **Qualitative aspects**

The analyses made by Braconier and Holden are based on data up to and including 1997. Accordingly, they have not had the opportunity to consider effects of the changes in the state budget processes, including nominal expenditure ceilings and budget targets. Other things equal, these reforms should reduce the automaticity in the state finances, primarily on the expenditure side. In the past, expenditures could increase strongly without prompting any countermeasures. If under the present system a certain kind of expenditure were to increase, funds must in the first place be shifted from other appropriations in the same expenditure category. As a second option, reallocations among expenditure categories may take place. Only as a third option is it possible let total spending exceed the original expenditure ceiling. Both reallocations and increases in the overall expenditure ceiling require decisions by the parliament.

Thus, the earlier automaticity in spending has disappeared and discretionary decisions are required for the expenditure ceilings to be exceeded. Thereby, the new budget process has in practice changed the premises for a discretionary expenditure policy. On the revenue side, the freedom of action is greater, at least in the short term, since the overall surplus target relates to a full cycle and in addition does not pose the same demands for a formal follow-up as the expenditure ceiling. The pension reform can also be expected to have influenced the properties of the state finances, partly

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<sup>3</sup> OECD Economic Outlook, No. 62, December 1997.

<sup>4</sup> Henrik Braconier and Steinar Holden, "The public budget balance – fiscal indicators and cyclical sensitivity in the Nordic countries", Nordic Council of Ministers, October 1999.

because a larger part of wage bill-related revenues have been transferred to the pension system.

For these reasons it is likely that the Swedish central government finances are now less cyclically sensitive than before, but to what extent is difficult to judge. One element of uncertainty is that the new budget process has not been tested in a downturn. Nevertheless, the new set of rules lends greater stability to the state finances than before.

### **What should it be like?**

At the same time it should be noted that a certain cyclical sensitivity in central government finances is desirable. Automaticity in the state's expenditures and revenues across the cycle can help stabilize the economy. The prerequisite is that the fluctuations in the finances occur around a path that is sustainable in the longer term, so that deficits in periods with low growth are balanced by surpluses during the cyclical highs.

The question as to how strong the cyclical sensitivity ought to be has no simple answer. A high sensitivity can yield good stability in the course of a normal cycle, but can, on the other hand, produce imbalances if a sustained, negative shock hits the economy. As shown by the experiences from the early 1990s, the state's financial problems may then have time to grow large before the government and the parliament can react with measures that adjust revenues and expenditures to the fact that the resources available for publicly financed activities have been reduced. The size of the state debt also plays a role. The smaller the initial debt, the larger is the room for buffering disturbances by running deficits for some time.

A third factor is the exchange rate regime in force. With a floating exchange rate, monetary policy can contribute to stabilizing the development of demand in the economy. Then the need for automatic stabilizers in fiscal policy is correspondingly less. With a fixed exchange rate, or for a small country in a monetary union, monetary policy has little scope to adjust to developments in the domestic economy. Thus, the importance of effective fiscal stabilizers would be greater if Sweden were to enter the EMU.

### **Conclusions**

To sum up, it may be concluded that it is not easy to determine how sensitive the Swedish central government finances are to the cycle. Nor is it easy to say how sensitive they ought to be. There are strong indications that they are much less sensitive than during the first part of the 1990s and that such an adjustment has been necessary, in particular since it is related to the tightening of the budget process.

Current economic forecasts indicate a certain decline in economic growth in Sweden. Thus, the coming years might provide new information regarding, for example, the effects of the budget reform. However, a deeper and more lasting downturn than is now being talked about by the majority of forecasters is required for the government finances to be significantly

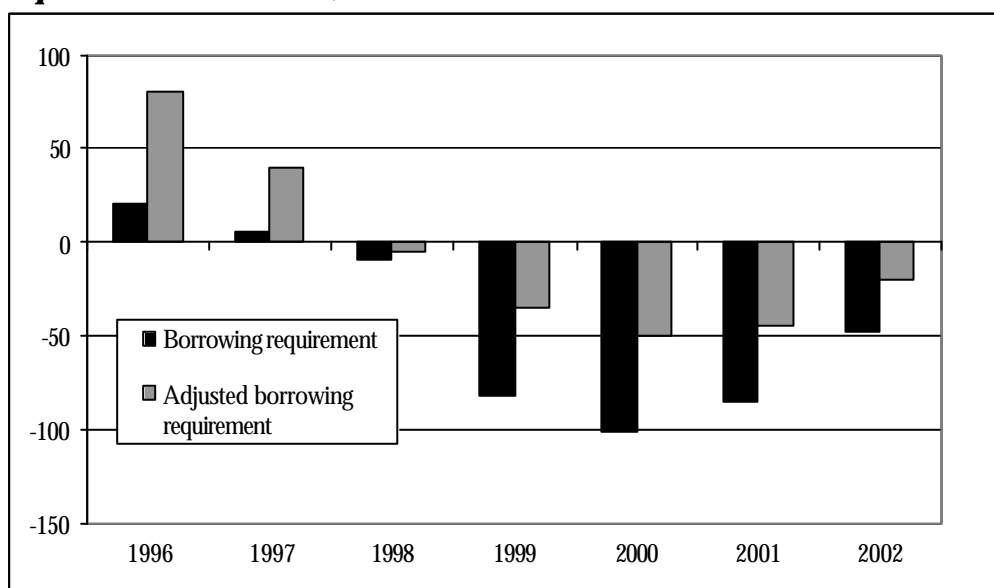


affected. The main scenario suggests an economic growth well in excess of 2 percent this year and perhaps more in 2002. With this, it is possible to count on an underlying strengthening of the tax bases, albeit to a lesser extent than if growth had been over 3 percent. This is the perspective in which the Debt Office's forecasts for the borrowing requirement in 2001 and 2002 are to be seen.

## The borrowing requirement adjusted for temporary effects

The recorded borrowing requirement has declined strongly in recent years, but for this year a small increase is forecast and the forecast for next year indicates a further increase of almost SEK 40 billion. The large fluctuations in the recorded borrowing requirement can easily convey an exaggerated picture of the importance of economic developments for the budget balance. To have a more correct picture of the state finances temporary payments should be excluded. These are payments that do not change the wealth of the state in a lasting manner. (For a more detailed description of the Debt Office's definition of temporary payments, see the forecast report of January 31, 2001, which can also be downloaded from the Office's web site [www.rgk.se](http://www.rgk.se).)

**Figure 2: Borrowing requirement and adjusted borrowing requirement 1996–2002, SEK billion.**



The conventional borrowing requirement is expected to increase by about SEK 38 billion, from -86 billion in 2001 to -48 billion in 2002. At the same time the adjusted borrowing requirement is estimated to increase by about SEK 25 billion, from -45 billion to -20 billion. Part of the increase in the borrowing requirement, i.e. the reduction of the surplus, reflects the fact that temporary net payments are reduced to about SEK 30 billion, about two thirds of the average for the previous three years.

## Comparison with other forecasts of the borrowing requirement

The government and the National Institute for Economic Research have published forecasts for the borrowing requirement, most recently in March (see Table 1). At first sight, the differences between the forecast of the Debt Office and those of the others for 2002 are conspicuously large. The Office anticipates a surplus that is SEK 38 billion larger than that of the Government and SEK 15 billion larger than that of the NIER.<sup>5</sup>

**Table 1: Comparison between forecasts of the borrowing requirement, SEK billion.**

	SNDO		The Government		NIER	
	2001	2002	2001	2002	2001	2002
<b>Primary borrowing requirement</b>	-154	-105	-135	-69	-142	-93
<b>Interest payments</b>	68	57	66	60	64	61
<b>Net borrowing requirement</b>	-86	-48	-69	-9	-78	-32

However, a large part of the differences between the forecasts for 2002 can be attributed to differences in the initial position, i.e. in the estimated borrowing requirement for 2001. Another part of the difference is explained by different assumptions about interest payments on the state's debt, where the Government and the NIER are using interest rate forecasts while the Debt Office uses current rates. Adjusted for these factors, the Debt Office and the NIER are projecting about the same development of the borrowing requirement from 2001 to 2002. The Government expects a SEK 17 billion larger increase.

## Monthly forecasts

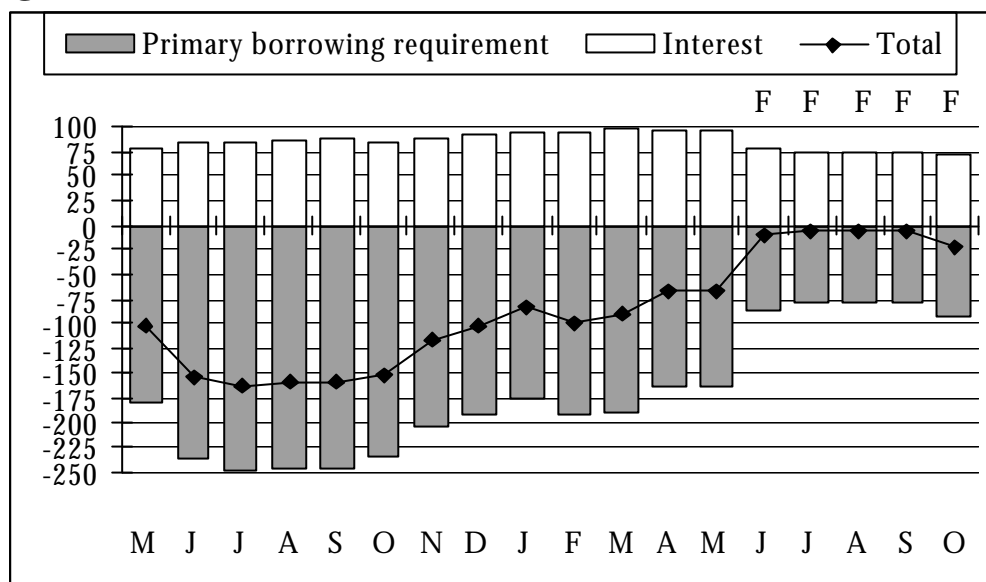
The Debt Office publishes thoroughly prepared forecasts for the borrowing requirement four times a year instead of every month as before. At the same time it publishes monthly forecasts for the intervening months. If these forecasts need to be revised between the regular forecasting exercises, this will be reported in connection with the presentation of the outcome of the borrowing requirement for the preceding month. Only exceptionally will revisions of the annual forecasts be made between the quarterly reports.

This forecast includes monthly forecasts for June through October, when the next quarterly report will be published. The fact that the borrowing requirement is expected to be considerably larger in June and July this year has to do with the payment for Telia, of which SEK 64 billion occurred in June 2000 and 9 billion occurred in July 2000. In June 2000 the State also received dividends from Statum amounting to 11 billion. For October, the

<sup>5</sup> The NIER has not taken additional tax cuts into account, neither has it included additional transfers from the Riksbank. These factors offset each other, so that the Office's and NIER's forecasts can be directly compared.

forecast indicates a smaller borrowing requirement than the outcome in October 2000. This has to do mainly with the payment of SEK 9 billion of premium pension funds to private fund managers in October 2000.

**Figure 3: Central government borrowing requirement, twelve-month figures, SEK billion.**



The twelve-month figure for October is small compared with the forecast for the year as whole. This has to do with the fact the remainder of the payment of premium pension funds during the fall of 2000 drop out of the twelve-month figure for November and December, months that showed large deficits last year.

**Table 2: Central government borrowing requirement, SEK billion.**

	June		July		August		September		Oktober	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
<b>Primary borrowing requirement</b>	-84,3	-8,9	-17,5	-10,1	-0,4	-0,2	-19,0	-19,2	5,8	-8,4
<b>Interest payments</b>	22,8	4,4	3,1	0,6	4,0	3,2	3,9	3,8	0,9	-0,5
<b>Net borrowing requirement</b>	-61,5	-4,5	-14,5	-9,5	3,6	3,0	-15,1	-15,4	6,7	-8,9

## THE CENTRAL GOVERNMENT DEBT

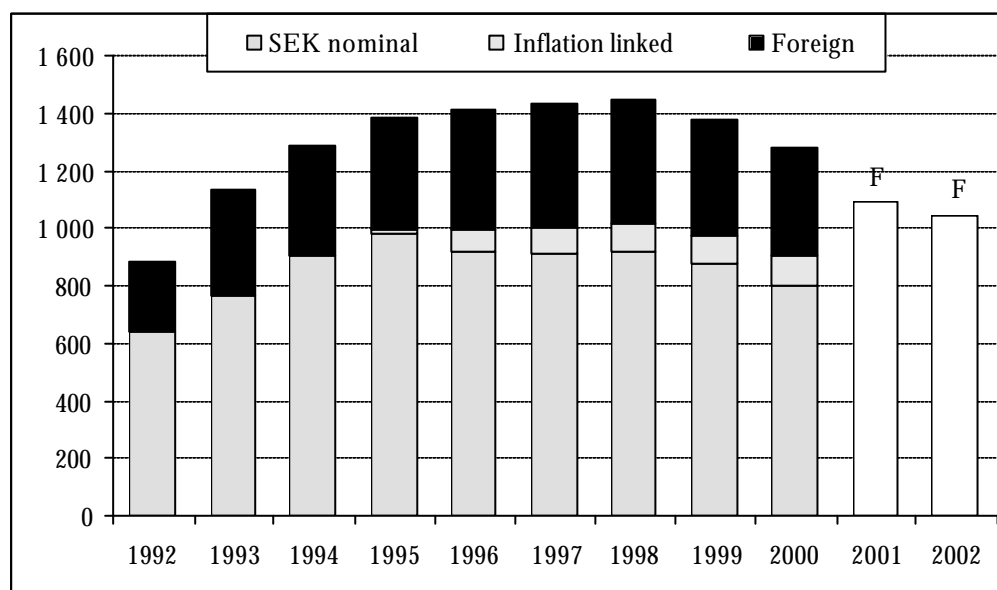
The Debt Office expects the central government debt to amount to about SEK 1095 billion at the end of 2001. This implies a reduction by about 185 billion during the year. The debt is expected to decline by more than is accounted for by the budget surplus, which is mainly due to the fact that Treasury bonds were transferred from the AP funds to the state at the turn of the year. This reduced the debt by SEK 69 billion without affecting the cash surplus. At the turn of the year, moreover, the Debt Office had short-term investments, i.e. a certain excess borrowing, of about SEK 10 billion

as a consequence of unexpectedly large tax payments just before the end of the year. During 2001, the state will also receive an extra transfer from the Riksbank of SEK 20 billion in the form of central government bonds. This transfer has the same effect on the debt as the transfer from the AP fund.

A further factor giving rise to discrepancies between cash surplus and change in debt is the exchange rate of the krona. If the krona strengthens, the foreign currency debt expressed in kronor declines (and vice versa if the krona weakens), as does the overall debt. The borrowing requirement is affected only if and when changes in exchange rates lead to realised exchange rate losses, i.e. to the extent the exchange rate is still at the same level when a foreign currency loan is repaid. The debt forecast is – as the forecast for the borrowing requirement – prepared on the basis of the exchange rates prevailing at the time the forecast was prepared.

During 2002, the debt is expected to decline to about SEK 1045 billion. No extraordinary effects over and above the borrowing requirement – like the transfers from the AP fund and the Riksbank – are anticipated next year. Accordingly the difference between surplus and change in debt is small.

**Figure 4: Central Government Debt 1992–2002, SEK billion.**



## FUNDING

### Issue volumes of nominal bonds to be lowered from SEK 3 billion to 2 billion

On April 11, the Debt Office reduced the issue volume of nominal bonds from SEK 4 billion to 3 billion per auction. In this context, the market was alerted to the possibility of additional reductions even in the event that the borrowing requirement was to remain unchanged. The auction volume of nominal bonds is determined by medium-term forecasts for the borrowing

requirement. The projected borrowing requirement for 2002 is therefore important for the size of the auctions to be conducted during the fall. Given that the forecast for the borrowing requirement as well as the maturity profile indicate that the gross borrowing requirement will be low in 2002 as well, the Debt Office expects to reduce the auction volume to SEK 2 billion per auction as of the auction on August 15. As usual, these plans are subject to change in case large unforeseen changes in the forecast borrowing requirement were to occur.

The forecasts for the borrowing requirement imply that the estimated volume of issue is lower in 2002 than in 2001. The Debt Office estimates that bonds in a total amount of SEK 45 billion will be issued in 2002 compared with SEK 65 billion this year. On a monthly basis, this would mean that the issue volume of SEK 2 billion per auction, or about SEK 4 billion per month, can be retained in 2002 as well. The issue forecast for next year is based on the assumption that the Government's guidelines decision for next year regarding the management of the central government debt does not include any major changes with respect to the duration target, rate of amortization of the foreign debt and the distribution between different kinds of debt. The Government's decision on guidelines for 2002 will be taken in November. The Debt Office also assumes that swaps in the kronor market will be conducted in roughly the same amount as this year, i.e. about SEK 30 billion in total. This means that next year, just under 70 percent of the total issue volume of nominal bonds will be transformed into short-term interest rate exposure. It should be noted that the issue volume of bonds would be affected in case the swap plans were to be changed. The Debt Office carries out swaps in the kronor market in order to obtain short-term interest rate exposure via long-term borrowing in kronor. Some of this is transformed into foreign exchange exposure and the rest is kept as floating domestic borrowing. Relative to other issuers, the Debt Office can borrow more cheaply in longer than shorter maturities. Thus, the use of swaps yields a cost effective borrowing.

## **Auctions of bonds and Treasury bills during the summer**

With net surpluses in the central government budget and with small amounts of maturing loans, the gross borrowing requirement will be low during the summer. Seasonal variations in the borrowing requirement in the course of the year are altogether normal. As a buffer, the Debt Office adjusts the volume of Treasury bills issued. If the issue activity would be maintained according to the normal schedule, i.e. with issues of nominal bonds every other week alternating with issues of treasury bills every other week, issue volumes would be very small. Accordingly, the Office has decided not to conduct any auctions during the period July 11 until August 1. The Treasury bill with maturity in January 2002, which was to have been introduced in July, will instead be introduced in June. The last auction before the break consists of a bond auction on July 4. Auctions will then resume with a Treasury bill auction on August 8. As of August 8, auctions

will be carried out according to the normal schedule, with auctions of nominal bonds or Treasury bills on Wednesdays and auctions of index-linked bonds approximately once a month. The auction schedule for the remainder of the year is posted on the Office's web site [www.rgk.se](http://www.rgk.se) under Investor information.

### **The National Debt Office supports electronic trading through enhanced repo facilities for nominal bonds**

The Debt Office participates in the repo market both as part of the Office's liquidity management and for the purpose of supporting the liquidity of the market (repo facility for enhancing market efficiency). The introduction of electronic trading might imply a concentration of trade to the reference loans, i.e. those bonds for which quota requirements apply. These might develop into what could be called "super benchmarks" with high turnover and low transaction costs, something that all market participants will gain from. In order to avoid shortages in the "super benchmarks" there is reason for the Debt Office to support the functioning of the electronic trading by increasing the size of the repo facility. Accordingly, the Debt Office doubles this repo facility from SEK 500 million to SEK 1 billion per dealer. For the remainder of the loans, the present size of the repo facility for enhancing market efficiency is retained, i.e. SEK 500 million per dealer. During an introductory phase, only the 10-year loan will be traded electronically. To begin with, the adjusted repo facility will therefore apply only to this loan. The Debt Office wants through its pricing of the repos to contribute to a well functioning market and thus avoid crowding out other participants in the repo market. The pricing of the repo facility for enhancing market efficiency will therefore continue to be 60 basis points below the Riksbank's repo rate. Thus, the facility is to be viewed as a "repo of last resort" and command a higher price.

### **On-tap exchanges of inflation-linked bonds for authorised dealers**

The Debt Office has increased the daily exchange volumes for inflation-linked bonds from SEK 50 million to 100 million per day. As before, the maximum exchange volume per dealer and week is 250 million. The Debt Office quotes prices for trading blocks of 50 million.

## **A ELECTRONIC MARKET PLACE FOR SWEDISH GOVERNMENT BONDS**

In recent years computerised trade has become an ever more important element in financial markets around the world. In markets for government bonds, borrowing is to a large extent conducted in computerised trading systems. Recently, an increasing share of turnover in the secondary market has also begun to take place electronically. So far, there are different

systems for so-called interbank trade and for trade directly with investors. Most often the latter takes place via different kinds of Internet solutions, developed by the banks. The kind of computerised systems discussed here, and now being introduced in the Swedish market, are systems for computerised interbank trade in bonds. These are primarily systems that replace trade previously being conducted by telephone between investment banks. In trade of the latter kind only the banks had full view of the activity. Gradually, transparency will increase, making it possible for investors and borrowers to observe actual market prices in real time.

### **Computerised interbank trade in Europe**

In Europe there were initially several system providers with the ambition to establish a common platform for computerised trade in fixed income instruments in the euro area. There are still several competing systems, but the company that has moved into a dominating position in the European bond markets is Italy's MTS. Currently the system is in place in Italy, France, the Netherlands, Belgium and Portugal and, since a few months back, in Japan as well. The MTS systems in the different countries are often organised in close cooperation between the most active banks and the government issuer, in some cases even in the form of commonly held companies. Apart from the national MTS platforms there is the EuroMTS, where the most liquid government bonds from different euro area countries are traded. Participants linked to any of the national MTS platforms have automatic access to the EuroMTS. Trade in the MTS systems is to a large extent organised with market makers, but outside the market maker group there is in some countries also a circle of traders (banks) who can trade directly without themselves quoting two-way prices, so called market takers. However, the rights of the latter are slightly different than those of the market makers.

### **Computerised trade in Sweden**

In Sweden discussions regarding computerised trade in central government bonds have been going on for some time. The work on the launching of a computerised trading place has taken place in cooperation between the Swedish National Debt Office, the Swedish Securities Dealers Association, representatives of Swedish banks and securities dealers and OM. From the beginning there were two main options, MTS and the OM system Saxess. The Debt Office chose not to take a position on the selection of system, but the majority of its dealers preferred Saxess. The use of Saxess for interbank trade in bonds means that trade in shares as well as primary and secondary market trade in Swedish central government bonds now takes place on a common platform. Since February 2001 Saxess is also used in the Debt Office's auctions of nominal and inflation-linked bonds and Treasury bills. In addition, the Danish bond market uses the Saxess system.

The computerised trading place was introduced on May 15. According to an agreement between the Debt Office and the dealers, trade is to be

concentrated in the three maturity segments two, five and ten years (so called reference loans). The selection of reference loans is done by the OM Advisory Board<sup>6</sup> according to a mechanical rule. The rule states that the loans for which the remaining time to maturity comes closest to two, five and ten years, respectively, shall be reference loans, provided that they have an outstanding volume of at least SEK 20 billion. In an introductory phase, only the ten-year loan will be traded electronically. The two- and five-year loans will be introduced gradually, following decisions by the OM Advisory Board. This can probably take place at the beginning of the autumn. Within the dealer group, there are suggestions that the remaining central government bond loans should also be included. In such a case, trade in these loans will take place with a slightly larger interest rate differential than the two basis points that applies to current quotations in the most liquid loans. There are also discussions regarding the inclusion of government bond forward contracts in the computerised trade.

Liquidity will be mainly concentrated in the reference loans and the hope is that the lion's share of the deals will be concluded in the computerised trading place. It is also possible to expand the system in the future so that, for example, Treasury bills and mortgage bonds can also be traded electronically. The prospects for good liquidity are better the larger the number of instruments and maturities that are available electronically.

In connection with the introduction of the system, the Debt Office has concluded new dealer agreements. The dealers undertake to be market makers in the computerised system by quoting binding buying and selling interest rates with a spread of two basis points for traded loans. Moreover, the main part of the commissions paid by the Debt Office to the dealers will be based on their activity in the primary and secondary markets, respectively, in the electronic market place. In addition, a fixed commission is paid. The total commission amount for the eight dealers with which the Debt Office has signed agreements is SEK 16 million for the secondary market and SEK 5 million for the primary market.

### **Purposes and opportunities of a electronic trading place**

The emergence of electronic trading places is a consequence of both the technical development and structural changes in the market. The low borrowing needs and stability in the market of recent years have led to lower profit margins and fewer participants. Electronic trade is a cost-effective way of doing business since it requires less staff than the traditional telephone trade. The deals will be concluded faster, while the price formation works better when all participants can simultaneously observe actual deals in the entire interbank market.

Initially, information from the electronic system will be available only to the participating market makers. However, the participants have agreed with

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<sup>6</sup> The OM Advisory Board comprises one representative from each member of the electronic system, one from OM and one from the Debt Office.



the Debt Office to increase transparency gradually. The objective should be that certain price information is available in real time within a year from the start of the system. With a larger number of participants and better transparency, liquidity should improve, which will eventually yield lower borrowing costs. It should, in other words, be possible for the borrowing costs of the state to decline somewhat as a result of the introduction of computerised trading in Swedish central government bonds.

An important effect of electronic trading is that obstacles to entry will be smaller. The new way of trading means that two additional participants join the interbank immediately. It is also the view of the Debt Office that the chances of attracting additional participants in the Swedish market increases. This applies in particular to investment banks in London, which have, among other things, regarded the telephone trade as too costly.

In an environment where both Swedish and foreign investors diversify their portfolios, it is important to be able to attract foreign investors, interested in investing long-term in the Swedish market. The objective is that the electronic system will gradually get more participants with new contact nets and who can help broaden the investor base. With a broader investor base, the debt is distributed across more categories of investors, and the Debt Office is less vulnerable in case a group of investors would choose to move their investments. A broader base also means that the Debt Office reaches investors who might not otherwise have invested in Swedish government bonds. Thus, a broader base can contribute not only to smaller vulnerability but also to lower borrowing costs via increased demand for Swedish bonds.

### **Effects of electronic trade on debt policy**

Internationally, liquidity in the bond markets has for several years been concentrated in the two-, five- and ten-year maturities. These loans have been forming what might be called “super benchmarks” in the market. This trend has not been quite so pronounced in Sweden. The Debt Office has liquid loans in these segments, but issues have taken place in other maturities as well. The issue policy has been aiming for a reasonably smooth maturity profile, with loans maturing every other year up to ten years, plus one or a few loans with slightly longer maturities. The Debt Office intends to support the new trading place in its issue policy. This means that the Office will pay more attention to the liquidity in the reference loans. As far as the issue activity is concerned, this may mean that a bigger share of the issues will take place in the two-, five- and ten-year maturities. Benchmark loans are normally introduced as ten-year loans and this is where the need to add liquidity is the largest. Normally, outstanding volumes in the two- and five-year maturities are already quite large.

However, the focus on reference loans does not necessarily mean that all auctions will take place in these maturities. It is the ambition of the Debt Office that all outstanding benchmark loans should be relatively liquid. Depending on the size of the borrowing requirement and government debt,

this may mean that, for refinancing reasons, issue volumes need to be spread over a larger number of loans than those that are traded electronically. It may also mean that the number of loans needs to be reduced in order for liquidity to be concentrated in the “super benchmarks”. Exchanges are one way of redistributing liquidity between different maturities in an environment of small borrowing needs. For example, the Debt Office might conduct exchanges from one loan to another when new loans become super benchmarks. In this way, outstanding volumes might be transferred from old reference loans into new ones.

The Debt Office will discuss possible changes in the borrowing policy consequent upon the electronic trade. Such a discussion will include a dialogue with the dealers.

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