RIKSGÄLDEN
SWEDISH NATIONAL DEBT OFFICE

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Basis for evaluation

Central government debt management 2013

Basis for evaluation 2013

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Calculations and information for this report

A thorough review of the Debt Office's business system has been made during the past two years. The system was, in principle, restarted from scratch on 28 October 2013.

A number of parameters have been adjusted with a view to facilitate reporting and analysis. The risk of reporting errors has therefore decreased.

During the review deviations in historical data were corrected when discovered. This means that certain calculations and information in this report may differ from what was published in previous reports.

One example of such a correction is the valuation of debts in foreign currency where there was no clear definition of which exchange rate to use. The exchange rates now used consistently are the mid-market rates between the buy and sell rates, which affects the valuation expressed in SEK.

Another example is the assigning of dates for debt in liquidity management. Here there are now stricter rules about determining the business date of transactions. Unlike before, the business day reporting principle is now used consistently.

1 Objectives and evaluation

This introductory chapter describes the Debt Office's mandate and the framework for its management of the central government debt. It also discusses the conditions for evaluation. The overall objective for the management of the central government debt is to minimise the long-term cost while taking account of risk The Debt Office has identified a number of intermediate objectives that support this overall objective but are easier to influence and measure.

1.1 Mandate

The Debt Office mainly borrows on behalf of the state by raising loans in the Swedish and international capital markets. The Debt Office finances deficits in the central government budget or amortises the central government debt when there is a surplus.

In addition to handling surpluses and deficits in the central government budget, the Debt Office must also finance repayments of loans going to maturity. In practice this means refinancing old deficits in the central government budget.

Buyers of Debt Office bonds are lending money to the Swedish State. Sales are made through the Debt Office's primary dealers. The final investors may, for example, be pension funds, insurance companies, banks, investment funds and central banks. They can be both Swedish and international players. A small part of the debt is financed by private individuals, chiefly through lottery bonds.

1.2 Framework for management of central government debt

The Government steers the management of the central government debt through its annual decision on "Guidelines for Central Government Debt Management". This decision is based in part on proposed guidelines drafted by the Debt Office, which are also presented each year. The Government's guidelines apply to the coming year and provide preliminary guidance for the subsequent three years.

These guidelines mainly steer the risks in the central government debt at a general level. They include objectives for the interest rate re-fixing period of the debt and the distribution between nominal krona debt, inflation-linked krona debt and foreign-currency debt.

The 2013 Guidelines in brief

The foreign-currency debt is to be steered towards 15 per cent and the inflation-linked krona debt towards 25 per cent. The remaining share of 60 per cent is to consist of nominal krona debt[1].

The maturity of central government debt is governed in terms of interest rate re-fixing periods[2]. The interest rate re-fixing period is to be 0.125 years for foreign-currency debt and 7–10 years for inflation-linked krona debt. The steering of the nominal krona debt is divided into instruments with outstanding maturities of less than and more than 12 years. For instruments with outstanding maturities of up to twelve years the interest rate re-fixing period is to be 2.7–3.2 years. For instruments with outstanding maturities of more than 12 years, the long-term benchmark for the outstanding volume is SEK 70 billion.

The Debt Office is to take account of refinancing risks in the management of central government debt. The mandate for positions in the Swedish krona exchange rate is SEK 7.5 billion.

[1] *The shares of the debt are calculated using a debt measure expressed as aggregate cash flows, i.e. future coupon payments are included.*

[2] *The maturity measure does not discount cash flows.*

The guidelines also state, "The Debt Office shall establish internal guidelines based on the

Government's guidelines. The decisions shall concern deviation intervals for the maturity benchmarks decided by the Government for each type of debt, the distribution of the risk mandate, the foreign currency distribution in the foreign currency benchmark and principles for market and debt maintenance." The Board of the Debt Office adopts these internal guidelines in the document "The Debt Office's Finance and Risk Policy".

The overall objective of the management of the central government debt is to minimise the long-term cost while taking account of risk. The strategic trade-off between costs and risk is made in the guidelines decision and is stated with further precision in the Debt Office's Finance and Risk Policy. Put simply, the trade-off made is very much about choosing the risk level for the management of the debt.

Then the costs of the debt are determined by the prices prevailing in the market each time funds are borrowed given the level of risk chosen.

The Debt Office's main contribution to reducing these costs is to establish an attractive market for Swedish government securities that is characterised by good liquidity and a broad investor base. This creates conditions for strong demand for Swedish government securities, leading to lower interest costs. At the same time the financing risk decreases since there are many lenders that are prepared to lend to the Swedish State.

On the margin the Debt Office can also influence costs by, for example, making use of favourable pricing because the Swedish State has high creditworthiness or when conditions on the market are favourable. In addition, the Debt Office monitors changes in risk arising from price movements in the market in order to avoid excessive risks.

Evaluation and intermediate objectives

It is difficult to evaluate to what extent the overall objective is being fulfilled. There is no quantitative objective for costs and there is no natural benchmark for comparisons either. It is not easy to make comparisons with other state borrowers either since their situations are so different. There are, for example, organisational differences and differences in size and loan needs as well as in whether states have their own central bank and currency.

The relevant starting point for evaluation should be whether the decisions taken were the best possible decisions in the light of the information available at the time of each decision.

To make the task of evaluating central government debt management manageable, the management strategy can be described in terms of its overall objective and intermediate objectives. The intermediate objectives support the overall objective but are easier to influence and measure than the overall objective.

Intermediate objectives

The main intermediate objectives are:

- a liquid market in government securities with well-functioning infrastructure
- transparency and predictability
- clear and open communication with investors and primary dealers
- good counterparty and investor contacts
- a broad investor base
- cost savings through derivative positions in foreign currency.

The Debt Office follows a number of strategies intended to achieve the objectives set out above. Each year the Debt Office measures confidence in its debt management. This survey gives a picture of how well the intermediate objectives are being fulfilled. In general the Debt Offices is given a good grade and stands up well in comparison with other state borrowers.

The survey also shows how counterparties and investors rate the importance of the Debt Office's strategies and activities. The intermediate objectives are a good match with the factors assessed as most important by primary dealers and investors.

The Debt Office's management strategies are described in more detail in the next chapter. The results of the latest questionnaire are also presented there.

The result of positions in foreign currency is presented separately in chapter 10.

2 The Debt Office's management strategies

The Debt Office's management strategies are discussed below. The strategies are intended to achieve the intermediate objectives discussed in the previous chapter.

The Debt Office's management strategies can be divided up into two categories. The first covers strategies intended to improve the liquidity and infrastructure in the government securities market. The second concerns strategies intended to achieve the objectives of transparency, predictability and clear communication.

Since 2004 TNS Sifo Prospera (called Prospera below) conducts a confidence survey among the Debt Office's primary dealers and Swedish and international investors to measure how they view the Debt Office's borrowing activities. The purpose of the measurement is to provide a picture of how counterparties and investors value the Debt Office's strategies. The results of the survey also show how well they think that the Debt Office has succeeded in fulfilling its strategies to minimise its cost in the long term.

2.1 High confidence in the Debt Office

The latest survey was conducted between 12 November and 20 December 2013. In total, all 8 primary dealers and 53 investors were interviewed. The response rate was 91 per cent.

Confidence in the Debt Office's borrowing activities remains high, and for the third year in a row the rating given by primary dealers increased. The Debt Office's borrowing activities are also rated highly in this year's survey for their transparency compared with other debt offices

Prospera weighs together the scores of the various factors included in the measurement and the investors' rating of the importance of the factors. The rating given by Swedish and international investors is marginally lower than in the previous year but the grade is still high. A grade of 4 is characterised by Prospera as 'excellent' and a grade of 3.5 as 'quite good'. Prospera summarises the result of the survey in the following way.

"The primary dealers' confidence in the Debt Office (has) increased and can be characterised as very high, 4.2. The rating given by Swedish and international investors is lower than last year, but in both groups confidence can still be described as good, 3.8."

The figure shows the development of the weighted assessment over time.

Figure 1 Weighted assessment

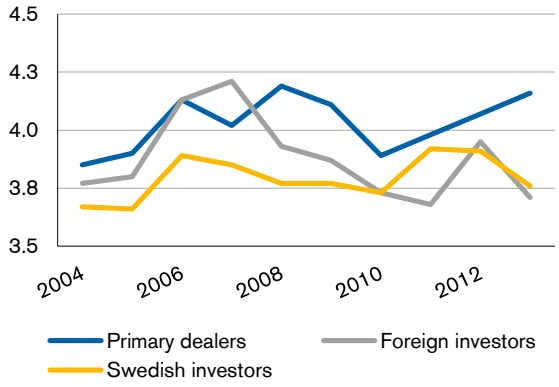


Table 1 The Debt Office's main strengths

Strengths	Grade
Market maintenance through repos in government securities	4.3
Communication on borrowing requirement and financing	4.2
Clear and consistent behaviour	4.1
Good information about volumes and other conditions for government securities	4.0
Good market maintenance through exchanges of inflation-linked bonds	4.0

The table above shows the main strengths of the Debt Office as regards its borrowing as such ranked by grade. The grades used are the weighted grades from primary dealers and Swedish and international investors.

Table 2 shows the market's requirements ranked by grade. Here requirements mean the factors that primary dealers and investors think that it is important that the Debt Office is good at. Importance is graded on the scale 1–5.

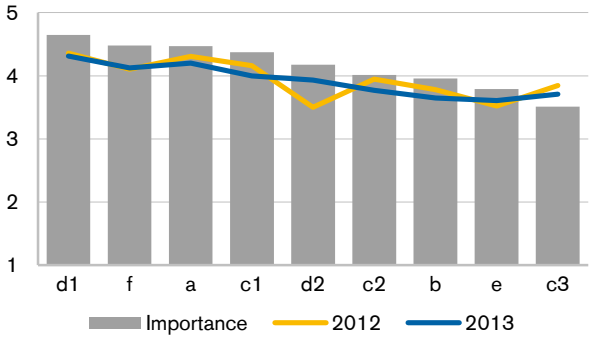
Table 2 The market's most important requirements

Requirements	Grade
Good market maintenance through repos in government securities	4.6
Clear and consistent behaviour	4.5
Communication on central government borrowing requirement and financing	4.5
Good information about volumes and other conditions for government securities	4.3
Good market maintenance through exchanges of inflation-linked bonds	4.2

The same factors figure in both of the above tables. In other words, the Debt Office is best at what investors and primary dealers also think is most important.

In contrast, one area that the Debt Office needs to strengthen is contact with investors, which was given a grade of 3.65. Contacts with investors are an important factor but not one of the most important of all. Good contact with investors is given the importance rating of 3.95.

Figure 2 Importance and grade



Communication
- **a** Borrowing requirement/ financing
- **b** Good contact

Market maintenance
- **d1** Repos in government securities
- **d2** Exchanges of inflation-linked bonds

Borrowing
- **c1** Government bonds
- **c2** Inflation-linked bonds
- **c3** T-bills

General
- **e** Market wishes
- **f** Clear and consistent behaviour

As is seen in figure 2 the grades in 2013 are marginally poorer than 2012 for five factors while the grade for the factor *Exchanges of inflation-linked bonds* is clearly better.

Since measurements began in 2004 the weighted grades have varied between 3.8 and 4.1.
It is not particularly easy to analyse what the variations are due to. As regards international investors the sample varies more than for Swedish investors. On the whole the grades are close to 4.0 over time, i.e. a very good grade, with something of a fall in 2010.

Debt Office "Sovereign of the year"

The Debt office was given the "Sovereign of the year" award by Risk Magazine. The jury was impressed by the Debt Office's performance in 2013. Its reasons for the award were based on:

- Very extensive and successful financing of on-lending to the Riksbank in a very short period of time. This was the most important reason.
- A pioneering use of CCP (central counterparty clearing) for interest rate swaps in SEK.
- A high ambition regarding transparency by giving interactive access to a database for the central government debt on its website.

During this millennium the Debt Office had already received a prize form the International Finance Review (IFR) for the best eurodollar loan in 2002. There is also a third prize, awarded by Euroweek, where the Debt Office was nominated for a prize in 2007.

2.2 Strategies for liquidity and infrastructure

Normally the demand for government bonds is based on their low credit risk and good liquidity. The low credit risk is guaranteed because the bonds are government securities issued in its own currency by a country with its own central bank. Their attractiveness is also due to a great extent to the liquidity that can be offered. This refers mainly to the possibility for investors to sell or buy large volumes without any appreciable effect on price.

The Debt Office works actively to promote the liquidity and infrastructure in the government bond market by:

- conducting active market and debt maintenance with exchanges and repo commitments;
- concentrating borrowing to a limited number of benchmark loans for improved liquidity;
- maintaining many effective sales channels with the aid of a system of primary dealers;

- distributing the central government debt across different types of instruments and maturities so as to limit the refinancing risk;
- seeking a broad investor base.

Market and debt maintenance

The Debt Office conducts active market and debt maintenance with exchanges and repo commitments to reduce the risks for counterparties and support liquidity. Market participants are given the possibility to repo government bonds from the Debt Office. The Debt Office also offers exchanges of government bonds with low liquidity for more liquid maturities. New bonds are primarily introduced using exchanges so that the new loans will quickly gain good liquidity. More information about the activities carried out during the year is given in the sections about the various instruments in chapters 6 and 7.

The participants in the confidence survey rate repos in government bonds as the single most important factor in their assessments. And here the Debt Office also receives an excellent grade of 4.5. Getting such a high grade for the factor rated as most important must be viewed as very satisfactory.

The Debt Office is given a higher rating by primary dealers than in the previous year with respect to market maintenance through exchanges of inflation-linked bonds. The weighted rating is 4.0 for these exchanges, i.e. excellent.

Few benchmark loans

Borrowing in government bonds and inflation-linked bonds is concentrated to a few benchmark loans. This is done so that the outstanding volume of each bond will be large enough to ensure good liquidity.

Government bonds are the Debt Office's most important instrument. When the borrowing requirement is small, issues of government bonds are given priority ahead of other borrowing so as to retain good liquidity in the government bond market.

The Debt Offices tries to maintain a relatively even maturity profile. A range of bonds with both short and long maturities makes the Swedish market attractive to different types of investors. At the same this limits the refinancing risk, i.e. only a limited part of the central government debt needs to be refinanced in any single year.

Effective sales channels

The Debt Offices tries to maintain many effective sales channels. A system of primary dealers is a guarantee for well-functioning infrastructure in the Swedish government bond market. This also contributes to good liquidity and good possibilities of borrowing large volumes in a possible crisis situation in the future.

Evaluation of liquidity

According to Prospera's measurement the liquidity of government bonds continues to be good. Swedish investors regard liquidity and price transparency as excellent, giving a grade of 4.1. International investors give the grade of 3.9 and primary dealers the grade of 3.8 per cent. However, as pointed out previously the Debt Office can only influence liquidity indirectly.

Liquidity in the secondary market for T-bills has improved according to Swedish investors but is still deficient with a grade of just under 2.5. The outstanding stock has decreased by more than half in five years and investors are increasingly using other instruments to adjust their exposure. Since the Debt Office also has a limited undertaking for repos in T-bills this grade is not surprising. In the main, this is a situation that has to be accepted. The Debt Office follows the development of liquidity for T-bills and has an ongoing dialogue with market participants so as to possibly be able to support liquidity on the margin.

The liquidity of inflation-linked bonds is also regarded as poorer than liquidity in the market for government bonds. The grade given is about the same as for T-bills. However, Swedish investors give the grade of 2.6, which is slightly better than for T-bills.

Inflation-linked bonds are not an instrument with the same liquidity as government bonds. Basically this is because investors do not have the same interest in active trading in inflation-linked bonds and there is no developed derivative trading in this market either.

The Debt Office's assessment is that liquidity is better than in the market for T-bills and is relatively good from an international perspective. The Debt Office makes special efforts to support liquidity through its undertaking to make on tap exchanges between different maturities of inflation-linked bonds.

2.3 Predictability, openness and clear communication

To create an attractive market for government bonds, these bonds are managed with openness, transparency and predictability. This means that all communication with the market should be as consistent, predictable and open as possible.

This applies especially to the markets for krona bonds and T-bills. Such an approach reduces risk for counterparties and investors since they are well aware of what they can expect in the form of coming borrowing and of what policy the Debt Office has for handling external changes. Lower risk contributes to increased interest in Swedish government securities.

The Debt Office is therefore working to achieve the objectives of openness, clarity and predictability by

- maintaining good investor relations;
- planning borrowing for the next few years on the basis of forecasts of the net borrowing requirement;
- handling borrowing in a consistent way in line with clear principles;
- publishing regular forecasts of the net borrowing requirement and borrowing;
- trying to maintain clear communication both in written documents and in contacts with investors and counterparties;
- providing detailed information about borrowing and the central government debt on its website.

Investor relations

The Debt Office tries to maintain good counterparty and investor relations and a broad investor base. Abroad investor base results in lower interest costs through strong demand for government securities and lower risk since there are many lenders who are prepared to lend to the Swedish State.

Good investor relations are part of the long-term sales strategy. The sales strength of the primary dealers is the key factor. The primary dealers have the most frequent and active role in sales and in communicating with investors. It is they who maintain the ongoing direct contact with investors and provide them with information about and analysis of the issuing activities of the Debt Office However, this is not sufficient. The Debt Office and investors cannot rely solely on the information provided via the primary dealers.

It is important that investors have the possibility of a direct dialogue with the Debt Office. The Debt Office works continuously on its dialogue with Swedish and international counterparties.

Its communication with counterparties and investors takes place both direct from the Debt Office via its website and in meetings with investors and counterparties.

In 2013 trips were made to foreign investors in Europe and North America and in Sweden. The Debt Office also regularly provides speakers at investor seminars in Sweden and abroad.

Swedish investors think that the Debt Office should be more responsive to the wishes of the market and would like to see more information about T-bills. Foreign investors make a similar assessment regarding information about inflation-linked bonds.

As previously mentioned, the Debt Office has a policy of predictability in its borrowing. At the same time, a certain degree of flexibility is needed to respond to changes in market conditions. This has turned out to be required, not least during the financial unrest after 2007. So a balance needs to be struck between predictability and flexibility, which is a delicate task.

Some temporary flexibility is both possible and important but excessive compliance with fluctuations in market interests could result in deviations from the Debt Office's strategy in the long term. Naturally, it can also be the case that different investors have different interests of their own that cannot always be satisfied at the same time.

Evaluation

Contact with investors is an area where there is a potential for improvement. This year's survey showed that investors are interested in more contacts with representatives of the Debt Office. The interest in participating in investor meetings increased compared with the previous year.

Among Swedish investors 94 per cent say that they have great interest in investor meetings. The corresponding figure for foreign investors is 69 per cent. About half of all investors say that they have very great interest. Among foreign investors about a quarter replies that at present they do not have any direct contact with the Debt Office but that they would like to have such contact. Personal meetings are the form preferred by investors. The frequency of contacts is given as once a year or more often.

The Debt Office meets Swedish and international investors at both personal meetings and larger gatherings such as conferences or investor meetings when new forecasts are presented.

To create conditions for well-functioning and cost-effective borrowing it is important to satisfy the interest in information and contacts that investors think they need.

By prioritising resources and engaging in a continuous dialogue with primary dealers and investors it ought to be possible to improve investor contacts and maintain reasonable flexibility with responsiveness to changes in market conditions.

Clear communication

The report "Central government borrowing – forecast and analysis" is an important channel in the strategy of communicating openly and transparently to all market participants at the same time. This report is published three times a year and describes in detail how the Debt Office intends to finance the central government debt in the coming two years.

The plan for financing is based, in part, on a forecast of the net central government borrowing requirement and data for the existing central government debt. On this basis the Debt Office adapts borrowing in the coming two years so that the conditions in the guidelines and the internal risk policy are fulfilled while taking account of the objective of low costs. The borrowing plan and the forecast for the net borrowing requirement normally remain in place until the next report is published.

Interactive service on website

In 2012 and 2013 the Debt Office also started an expansion of the availability of information about debt structure and borrowing on the website. It is now possible to gather data and information interactively on the Debt Office's website. Users can themselves choose the information they want as print-outs or via Excel.

According to the confidence survey some 42 per cent of primary dealers have used this service. As regards investors just under 15 per cent of both Swedish and foreign investors have used it. As has also been pointed out by several investors, the chief target group is especially analysts at primary dealers, who need detailed information.

The impression among users is that the service is quite good or very good. Some respondents see some scope for improvements in user-friendliness and filter alternatives. The Debt Office is, in fact, planning to increase the availability of more easily searchable and requested presentations of data.

It is satisfying to see that the interactive service has been given such a good reception even though it is not yet fully developed and important data are still not included. It has also emerged that there is interest in more real-time information. Such information (with daily updates) is now also available regarding the supply of securities issued.

Evaluation

The Debt Office's borrowing activities are also rated highly in this year's survey for their transparency compared with other debt offices. As in previous years information about the central government borrowing requirement and financing are assessed as being of most importance alongside the repo undertaking. The grade for communication about borrowing requirements and financing with respect to government bonds is about 4.5, i.e. a very good grade. Since communication about borrowing and debt management is a central part of the strategy for creating conditions for borrowing that is as cheap as possible, this is a good indication of fulfilment of this objective.

The Debt Office's website is still the most important channel for information on central government borrowing requirement and financing, auction terms and auction outcomes. Approaching 100 per cent of the primary dealers use the Debt Office website. Among Swedish investors about 65 per cent do so and the figure among international investors is 55 per cent. Virtually 100 per cent of website visitors find that the information needed is available there.

3 Cost and risk

This chapter describes and presents some of the measures that the Debt Office uses to calculate the cost of the management of the central government debt. It also discusses a number of risks and how they are handled by the Debt Office.

The Government's guidelines for the management of central government debt make a strategic trade-off between cost and risk. These guidelines set out the overall strategy in terms of a distribution between different types of instruments and maturities. The Debt Office continuously evaluates the overall strategy in its annual guideline proposal. At present a review is under way of the size of the foreign currency exposure in the central government debt. Work on analysing costs and risks in the foreign currency debt has not yet been completed. The outcome of this analysis will be presented in the coming guideline proposal. The evaluation of cost and risk presented in this report should be viewed in the context of the present guidelines.

Since the Debt Office is the dominant state borrower in Swedish kronor, it is particularly difficult to make a quantitative evaluation of whether the borrowing strategy implemented was better than other alternative strategies. The Debt Office is a dominant actor and prices in the market are influenced by its choice of borrowing strategy. Therefore the costs can only be measured at an overall level. It is not possible to carry out a traditional evaluation against a benchmark or index. The same applies to financial risks in terms of cost variation. The Debt Office also takes account of other risks in the management of central government debt, and they are evaluated and measured in qualitative and quantitative terms below.

3.1 Costs

In this section the cost of the central government debt is presented using three different measures:

- interest payments
- average issue yield
- accrued cost

Interest payments show how much has to be paid in a single year. This measure only reflects cash flow and is not affected by temporary effects such as exchanges of bonds.

The average issue yield is calculated by weighting the issue yield for outstanding instruments by their nominal amount. This measure shows the average interest rate at which loans currently outstanding have been raised. The interest rates are reported separately for different kinds of debt since the interest rates are of different types and therefore not directly comparable. The issue yield for the inflation-linked debt is a real interest rate that does not include compensation for inflation. For the foreign currency debt the interest is in foreign currency.

The accrued cost shows the cost in a uniform way for all kinds of debt. This measure takes account of the entire cost irrespective of when the payments are made. The cost is spread evenly over the term of the loan and includes inflation and exchange rate effects. This measure gives a better picture of the long-term cost of the loan than the other two.

It is worth noting that, irrespective of the measure, the calculations cannot be used to determine whether one type of debt is cheaper than another since the maturities are different. For such a comparison to be fair, the analysis must be carried out for the same maturity. Here the cost is measured given the actual shape of the debt.

Interest payments on central government debt

The interest payments on the central government debt were SEK 16.4 billion in 2013.[1] In current prices interest expenditure has not been as low since 1980. Compared with 2012 interest payments fell by SEK 10.9 billion.

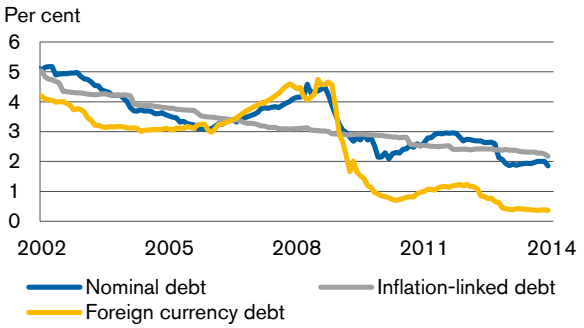
The main explanation for the reduction in interest payments is the large exchange gains on the debt in foreign currency. In addition, lower market interest rates have helped to reduce the state's interest expenditure.

[1] *In addition to interest payments on the central government debt this amount also included interest payments from and to government agencies.*

However, the low market interest rates also contributed to negative cash flow effects when bonds with high coupons were exchanged for new bonds with lower coupons. At the same time, such changes reduce future interest expenditure and do not entail any cost in the proper sense and only involve bringing forward payments. Between 2012 and 2013 these cash flow effects decreased by SEK 6.5 billion and were SEK 6.0 billion.

Average issue yield

Figure 3 Average issue yield



The average issue yield was 1.9 per cent on 31 December 2013 for the nominal krona debt. This was a marginal decrease compared with the end of 2012.

The average issue yield for the foreign currency debt was 0.4 per cent on 31 December 2013. Compared with the same day a year before this meant that the average interest rate has decreased slightly.

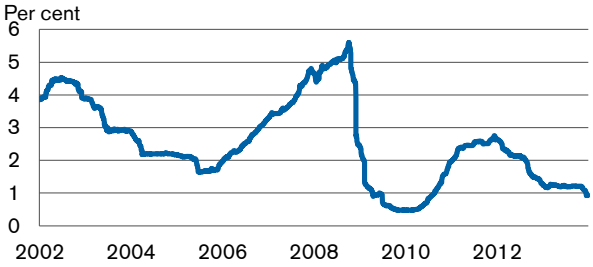
For the inflation-linked debt the average real issue yield was 2.2 per cent on 31 December 2013. This was 0.2 percentage points lower than on the same day one year before.

The real interest rate does not contain any inflation compensation and therefore cannot be compared directly with the nominal interest rates in the figure. The fact that, despite this, the interest rate was higher than for the nominal krona debt is explained by the longer interestrate re-fixing period, about 8 years compared with just under 3 years.[1]

The long interest rate re-fixing period means that the inflation-linked debt is turned over slowly. It is influenced more than the nominal debt by loans raised in a situation with higher interest rates. The decline in market interest rates has therefore had a faster impact on the interest rate on the nominal krona debt. It is also the case that over time long rates can be expected to be higher than short rates.

In addition to bonds the nominal krona debt also includes T-bills and short instruments in liquidity management. Moreover, the Debt Office uses interest rate swaps to shorten the interest rate re-fixing period.[2] A large part of the nominal krona debt is therefore exposed to short interest rates. The following figure shows the development of the three-month inter-bank rate Stibor. Stibor is the floating rate that the Debt Office pays in swaps.

Figure 4 Three-month Stibor



Low interest rates have helped to keep the interest rate for the nominal krona debt down. In 2013 the Stibor was 1.19 per cent on average. In the last ten years the average has been 2.29 per cent.

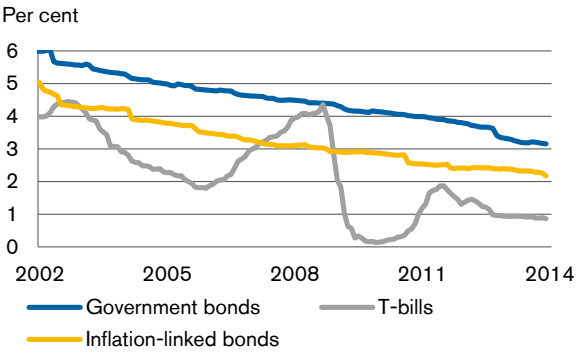
The interest rate for the foreign currency debt was lower than for other types of debt, but here the interest rate re-fixing period is also much shorter, only 0.1 years. It should be noted that exchange rate changes, which can have a considerable effect on cost, are not included in the calculation. So the interest rate on the foreign currency debt is not directly comparable with krona interest rates.

Figure 5 shows the development of the average issue yield for various government securities. Here it is seen that the interest rates on short T-bills are lower than those on bonds. The interest rate on T-bills follows the development of the Stibor in figure 4. The real interest rate for inflation-linked bonds is lower than the interest rate on government bonds since inflation compensation is not included.

[1] *The interest rate refixing period is the average period to payment of the loan. The guidelines state the maturity of the debt types in terms of their interest rate refixing periods. The measure is calculated as duration when the market interest rate is set at 0 per cent.*

[2] *Interest rate swaps are an instrument for swapping fixed interest rates for floating interest rates and are used to shorten the interest rate refixing period of the debt. More information about swaps in the management of the debt is given in chapter 9.*

Figure 5 Average issue yield per instrument



Accrued cost

In its guideline proposal for 2013 the Debt Office presented a method of calculating cost in a consistent way for all types of debt and instruments. Since then work has been under way on implementing the new method. Thus far the Debt Office is able to calculate the cost of nominal bonds, T-bills, inflation-linked bonds and interest rate swaps in SEK.

In 2014 the Debt Office expects to supplement this tool to make it also possible to also calculate the cost of foreign currency instruments. It will also be possible to use the tool to compare the cost of different types of instruments in a more accurate way than before. One example is the difference between borrowing in inflation-linked bonds and hypothetical borrowing in government bonds with the same maturity. Unlike the simple estimate previously presented, the new method takes account of and accrues price effects that arise in exchanges and buy-backs. With the previous calculation the result can be misleading. The estimate is therefore not presented in this report as the calculation using the new method is not ready yet.

Certain difficulties are associated with measuring the accrued cost. A number of the instruments used by the Debt Office in the management of the central government debt, such as inflation-linked bonds and instruments included in the foreign currency debt, give rise to future cash flows that are unknown today.

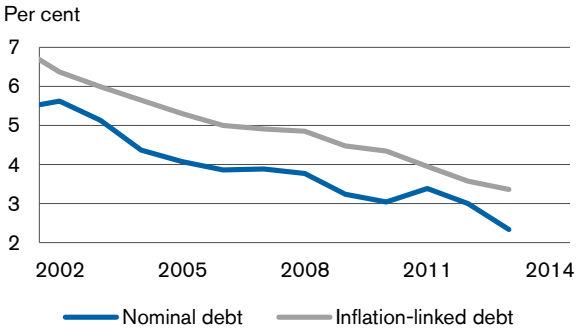
The method therefore means that assumptions must be made about future cash flows that are unknown. To calculate the cost, assumptions are needed about future inflation, interest rates and exchange rates. Over time these assumptions are replaced with actual outcomes, which means that the calculated cost needs to be revised.

The Debt Office does not make forecasts of the development of interest rates or exchange rates in Swedish kronor since this risks harming the confidence of investors. The Debt Office is a major player in the Swedish interest rate and currency market and its actions can affect pricing. The assumptions made by the Debt Office are based instead on the expectations implied by current market prices. This is a way of obtaining consistent assumptions without building in cost differences between different types of instruments in advance.

Inflation, measured as the change in the CPI, is assumed to follow the implicit inflation assumptions that can be identified from the pricing of inflation-linked bonds in relation to government bonds, known as 'break-even inflation'. The three-month Stibor is also assumed to develop in line with the implicit forward interest rates. Finally it is assumed that currently outstanding instruments run to maturity.

The following figure shows the annual cost of the nominal and inflation-linked krona debt since 2002 given these assumptions.

Figure 6 Cost of nominal and inflation-linked krona debt



The cost of the nominal krona debt was 2.3 per cent in 2013.[1] This is a historically low figure that comes about because instruments issued at the low interest rates of recent years make up an increasing share of the total debt.

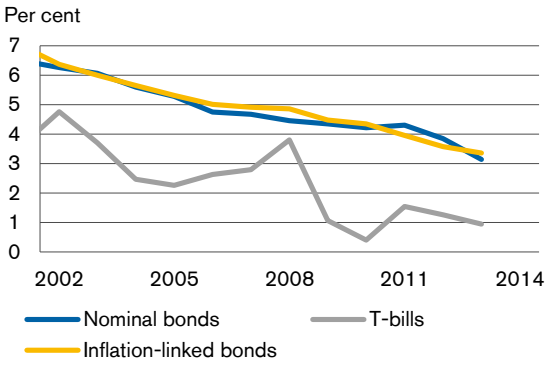
The cost of the inflation-linked debt was 3.4 per cent in 2013. This cost is higher since the interest rate re-fixing period is longer than in the nominal krona debt. The cost of the inflation-lined debt is also historically low.

The following figure shows the cost per type of government security. The cost measured in this way

[1] *Nominal government bonds, T bills and interest rate sways in SEK.*

follows the development of the average issue yield well. The biggest difference is that the cost of inflation-linked bonds includes inflation compensation unlike the average issue yield.

Figure 7 Annual cost per instrument



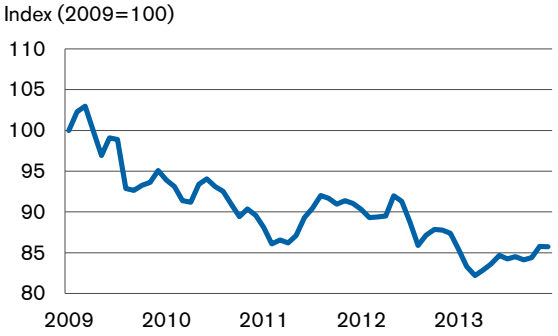
Exchange rates and inflation

The krona exchange rate is of great importance for the cost of the foreign currency debt. Inflation measured as the CPI affects the cost of the inflation-linked debt. The development of these factors in 2013 is shown below.

Exchange rates

In 2013 the krona was strengthened by an average of 1.8 per cent against the currencies included in the currency benchmark. This contributed to lower payments in SEK.

Figure 8 Development of the krona in relation to the currency benchmark

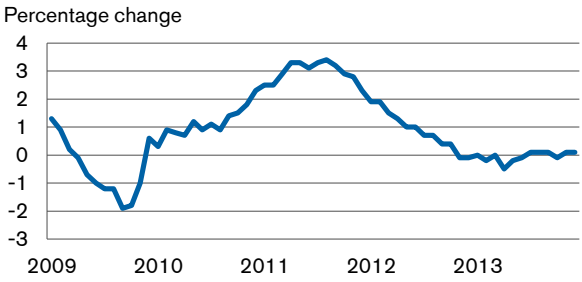


More than half of the currency exposure in the debt is created by swapping borrowing in SEK for foreign currency, see chapter 9. Since the maturity of the swaps is relatively long, it is primarily the future SEK exchange rate that decides what the final cost will be. For the part that comes from foreign currency borrowing the maturity is shorter and movements in the krona exchange rate have a faster impact on costs.

CPI

Inflation measured as the annual change in the CPI was 0.1 per cent in December 2013. Inflation has been low throughout the year, which means that the Debt Office has to pay lower inflation compensation to holders of inflation-linked bonds. So this reduces the cost of the debt.

Figure 9 Change in CPI



3.2 Risks

Steering according to guidelines

According to the guidelines for the management of the central government debt in 2013 the interest rate re-fixing period for the nominal krona debt, consisting of instruments with a maturity up to and including 12 years, was to be between 2.7 and 3.2 years.

For nominal instruments with a maturity of more than 12 years the Government raised the long-term benchmark from SEK 60 to 70 billion in order to reduce the refinancing risks (see next section).

The maturity of the inflation-linked krona debt was to be between seven and ten years, while the maturity of foreign currency debt was to be 0.125 years.

The interest rate re-fixing period of the nominal krona debt varies as a result of fluctuations in state payments. The interval in the guidelines does not refer to the outcome on a single day or month. Instead the interval steers the average level that the Debt Office aims at in its issue planning. On days with a large deficit more is borrowed at short maturities in liquidity management and vice versa. Seen over the year as a whole the average interest rate re-fixing period was 2.94 years, i.e. about the middle of the interval.

The average interest rate re-fixing period for the inflation-linked krona debt was 8.0 years, while the average interest rate re-fixing period for the foreign currency debt was 0.1 years.

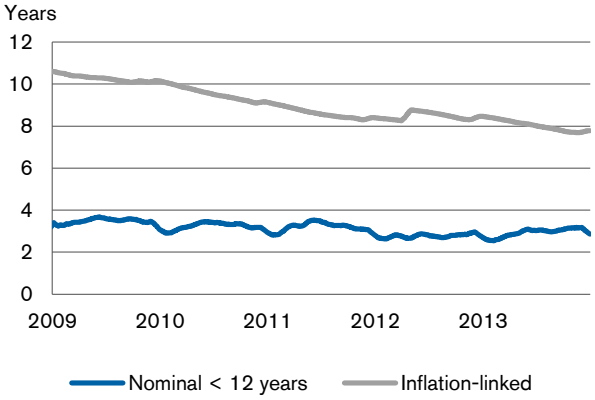
The conditions for steering the interest rate re-fixing period are different for the different types of debt. By using derivatives the Debt Office has considerable possibilities of steering the interest rate re-fixing period of the foreign currency debt. The interest rate re-fixing period of the foreign currency debt is therefore always very close to the benchmark.

The interest rate re-fixing period of the nominal krona debt can be steered to some extent using derivatives by varying the volume of interest rate swaps.

However, in the case of the inflation-linked debt the Debt Office cannot use derivatives to adjust the interest rate re-fixing period. The interest rate re-fixing period is determined by the distribution between the outstanding bonds and is changed when loans mature, for example.

Figure 10 shows the interest rate re-fixing period for the inflation-linked debt and the nominal krona debt with maturities up to 12 years.

Figure 10 Interest rate re-fixing period

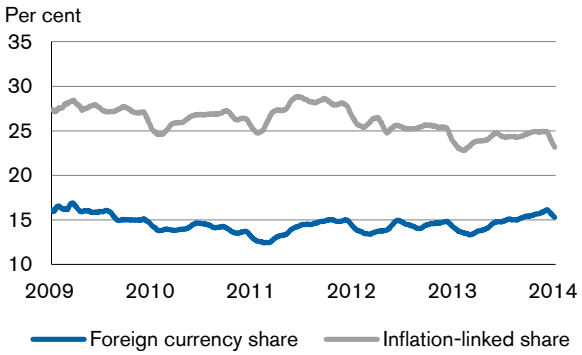


Debt shares

For 2013 the Government decided that foreign currency debt would account for 15 per cent of the central government debt. The share of inflation linked debt was to be 25 per cent in the long term and the remaining 60 per cent was to be nominal krona debt.

During the year these three types of debt stayed close to the shares set in the guidelines. On average the inflation-linked krona debt was 24.2 per cent of the debt. The foreign currency debt was 14.8 per cent of the debt on average and was kept within the control interval of ± 2 percentage points.

Figure 11 Debt shares



Refinancing risk

The *refinancing risk* means the risk that loans reaching maturity can only be rolled over to new loans at very high costs or, in the extreme case, cannot be refinanced at all.

This risk should be distinguished from the *liquidity risk* that a loan reaching maturity cannot be paid or can only be paid at a very high cost. In more general terms that risk relates to a financing need that arises as a result of maturities or other state payments.

It is important to note than when a bond matures it is comparable to any other state payment at all. A bond that matures does not need to be financed by issuing another bond. Moreover, the sum that is due for payment is the result of borrowing over perhaps 10 years and is therefore much larger than can be raised in a single bond issue.

The net amounts of state payments are often sums corresponding to SEK 30 billion up to SEK 100 billion per day. The liquidity risk relates to the possibility of handling payments and not to the conditions for issuing long-term instruments such as bonds.

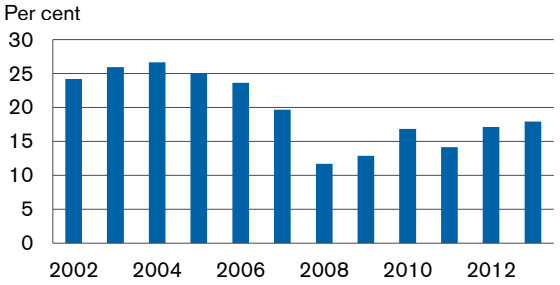
In contrast, the refinancing risk relates to the possibility of issuing bonds in the longer term so that the maturity and the maturity profile can be maintained. All else being equal, the debt becomes a year shorter each year. If the debt becomes too short in the longer term, the annual borrowing requirement rises.

One way in which the Debt Office limits the risks is by trying to maintain an even maturity profile for government and inflation-linked bonds by contributing to the establishment of a well-functioning market in government securities.

With long-term issue planning and small issue volumes in regular auctions, refinancing is spread over a long period of time and old loans have already been replaced to a great extent by new bond loans when they mature.

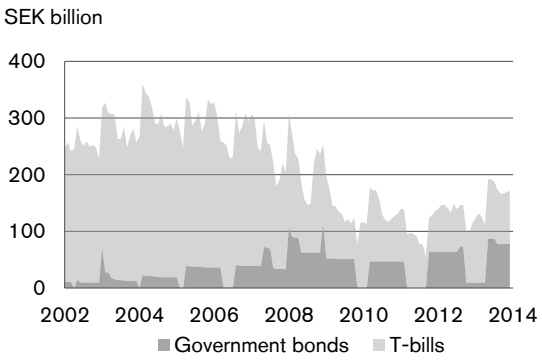
Unlike many other state borrowers the Debt Office reduced the share of short-term financing when the borrowing requirement increased during the financial crisis in 2009. The following diagram shows how large a part of the debt is financed in the money market. This share has decreased from about 25 pr cent before the crisis to around 15 per cent.

Figure 12 Share of debt financed in the money market, annual average



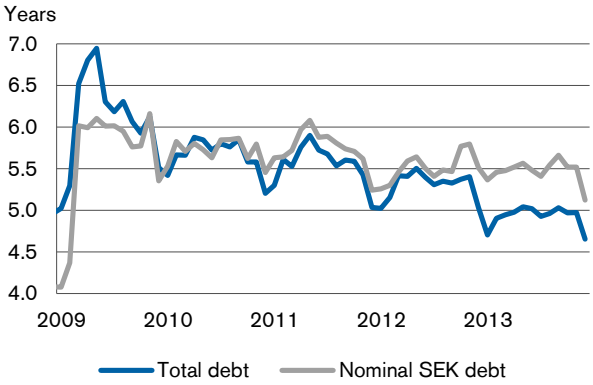
Compared with before the crisis there has been a marked reduction in borrowing in T-bills. This has contributed to the poorer functioning of the market for T-bills today. The assessment of the Debt Office is that the supply of T-bills cannot be reduced further unless the market is closed. The next figure shows how the supply of short government securities has decreased,

Figure 13 Stock of government securities with a maturity of up to one year



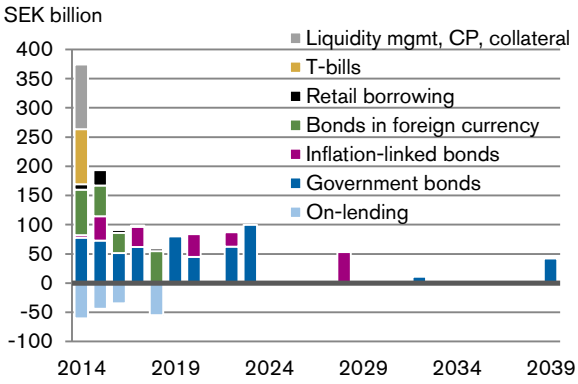
The average maturity of the debt, the outstanding term of the loans to payment, also gives a picture of the refinancing risk. If the loans are spread over a long maturity, this reduces the share that must be refinanced every year. However, the average does not say how even the distribution is. Individual very long loans can make the average maturity clearly longer without a corresponding reduction in the refinancing risk in practice. The following diagram shows how the average maturity increased in 2009 when the Debt Office issued a 30-year bond. At the end of 2013 the average outstanding maturity was 4.7 years for the whole of the central government debt and 5.1 years for the nominal krona debt.

Figure 14 Maturity excluding derivatives



The maturity profile of the debt gives a better picture of the shape of the distribution between different outstanding maturities. Figure 15 shows the size of the sums maturing in each individual year given the outstanding debt at the end of 2013. The figure also shows assets that mature in the form of claims on the Riksbank. These claims match a large part of the foreign currency loans.

Figure 15 Maturity profile in December 2013



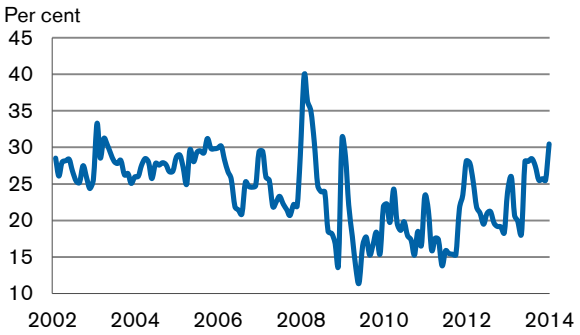
Here it can be worth noting that a large part of the state's annual payments are made in December. This means that short term borrowing in liquidity management increases temporarily.

The central government borrowing requirement varies over the year on both a daily and a monthly basis. The Debt Office makes detailed forecasts so as to be able to manage loans and investments

effectively in its liquidity management. See chapter 5 on forecasts and section 7.2 on liquidity management.

The share of the debt maturing within 12 months is one way of illustrating liquidity risks and is shown in the next figure. Short debt mainly creates liquidity risks but also generates refinancing risks to the extent that it involves rolling over and refinancing an outstanding stock of T-bills and commercial paper.

Figure 16 Share of debt maturing within one year



The share of the debt maturing within one year is at roughly the same level as before the financial crisis even though the Debt Office has increased its borrowing in the capital market to reduce risks. This is because old bond loans with a relatively large outstanding volume have matured.

Counterparty risks

Counterparty risk means the risk that the counterparty in a transaction cannot fulfil its payment obligations or obligations to deliver other collateral. The Debt Office is primarily exposed to counterparty risks in liquidity management but also has exposure in other activities.

On a daily basis the Debt Office borrows or invests funds so as to guarantee that the state can make its payments at as low a cost as possible. In this process there are minimum requirements regarding the counterparty's credit rating. The counterparty's credit rating also steers the limits that apply to 'OTC transactions' and short investments. OTC transactions mean transactions "over the counter" in derivatives that are not standardised and handled via central counterparty clearing.

In addition, the Debt Office has rules for the maximum permitted maturity for investments. There are also restrictions regarding a counterparty's country of origin and that country's credit rating. Regulations of this type are defined and updated continuously in the context of the Debt Office's Finance and Risk Policy.

For the Debt Office to be able to conduct OTC derivative transactions with a counterparty there must be an ISDA agreement with a downgrade clause and an agreement called a Credit Support Annex (CSA) with the counterparty. The CSA agreement contains thresholds that govern the maximum permitted exposure with the counterparty. If the value of the derivative exposure exceeds these thresholds, the counterparty pays collateral to the Debt Office, This collateral is protection in the event that the counterparty is unable to meet its commitments. The Debt Office's agreements are bilateral in the sense that the Debt Office not only accepts but also provides collateral if the market value of the derivative falls instead.

4 Summary of borrowing in 2013

This chapter gives a summary overview of borrowing requirements and borrowing in 2013.

The net borrowing requirement, and also the deficit in the central government budget, was SEK 131 billion in 2013. This is an increase of SEK 106 billion compared with 2012. On-lending to the Riksbank accounted for SEK 104 billion of the net borrowing requirement in 2013 compared with SEK 5 billion in 2012. In contrast, the net borrowing requirement decreased by SEK 42 billion on account of sales of state assets.

Interest rates remained low both in Sweden and internationally, but were slightly higher than in 2012. There was a rise in interest rates on longer maturities in the second half of the year. Issues of nominal bonds with a maturity of 10 years were made at an average rate of 2.14 per cent, which can be compared with 1.67 per cent in 2012.

Table 3 Gross borrowing requirement

SEK billion	2012	2013
Net funding requirement	**25**	**131**
Business day adjustment [1]	**-16**	**1**
Retail borrowing & collateral, net [2]	**-1**	**18**
Money market redemptions [3]	**170**	**206**
T-bills	72	105
Commercial paper	43	77
Liquidity management	55	24
Bond redemptions	**123**	**39**
Government bonds	64	10
Inflation-linked bonds	21	0
Foreign currency bonds	39	30
Exchanges & buy-backs, net	**6**	**5**
Government bonds	2	1
Inflation-linked bonds	4	4
Foreign currency bonds	0	0
Total gross funding requirement	**307**	**402**

[1] *Adjustment for the difference between settlement day and business day. The net borrowing requirement is cashflow-based (settlement day) as opposed to funding and outstanding debt.*

[2] *Net change in retail borrowing and collateral*

[3] *Initial stock maturing within 12 months*

On-lending to the Riksbank is financed by the Debt Office raising foreign currency loans that are, in principle, earmarked for the purpose. Therefore other central government borrowing is not affected by the on-lending, even though it is a substantial operation for the Debt Office. The Riksbank reimburses the Debt Office for the cost fort the loans and also for its administrative costs. See chapter 8 for further information.

The total gross borrowing requirement was SEK 402 billion in 2013. Central government borrowing increased by SEK 95 billion in 2013 compared with 2012. The increase in the borrowing requirement is chiefly due to on-lending to the Riksbank.

Table 4 Total gross borrowing

SEK billion	2012	2013
Money market funding [1]	**206**	**180**
T-bills	105	94
Commercial paper	77	39
Liquidity management	24	47
Bond funding	**101**	**222**
Government bonds	59	74
Inflation-linked bonds	7	12
Foreign currency bonds	35	137
of which on-lending to the Riksbank	35	131
Total gross funding	**307**	**402**

[1] *Outstanding stock as at year-end.*

The planned issue volume of nominal bonds remained constant at SEK 74 billion throughout the year, and this was also the volume issued. The planned issues of index-linked bonds were raised from SEK 9 billion to SEK 12 billion at the start of the year. The volume issued was SEK 11.5 billion.

The Debt Office used foreign currency bonds to borrow SEK 131 billion on behalf of the Riksbank in 2013. The Debt Office only issued one bond, corresponding to SEK 6 billion, on behalf of the state. This was less than originally calculated, which is explained by the fact that the Debt Office had not included the income from the sale of the state's shares in Nordea in its calculations.

The Debt Office has been instructed by the Government to increase the volume of bonds with maturities of more than twelve years to SEK 70 billion. This is a benchmark that is to be achieved in the long term. The Debt Office made the assessment that from a cost perspective it was not appropriate to sell any long-term bonds in 2013.

Financing and exposure

The Debt Office mainly finances the central government debt by selling government bonds, inflation-linked bonds and T-bills in Swedish kronor (SEK) and bonds in foreign currencies. These instruments are usually divided up by maturity: instruments with a maturity of more than one year are called capital market borrowing and instruments that are shorter than one year are called money-market borrowing.

To achieve the risk exposure in the debt set out in the Government's guidelines and the Debt Office's 'Finance and Risk Policy' the Debt Office also uses derivative instruments. Derivatives in the management of central government debt make it possible for the Debt Office to be more flexible in its underlying financing while the transaction costs are lower since derivative markets are more liquid.

The underlying financing can, for example, be arranged at longer maturities than would otherwise be possible, which reduces the refinancing risk in the debt. For given benchmarks and debt shares it is also possible to be more flexible in distributing borrowing between SEK and foreign currencies than by making a purely proportional distribution in the light of the development of the central government debt.

The Debt Office chiefly uses swaps to shorten the interest rate re-fixing period and to attain the foreign currency debt share of 15 per cent. Foreign exchange forwards are used to achieve the distribution between different currencies in the foreign currency debt. By using derivatives the targets for interest rate re-fixing risk and currency risk in the debt are achieved without affecting the refinancing risk.

5 Forecasts of the net borrowing requirement

This chapter evaluates the Debt Office's forecasts of the net borrowing requirement on a yearly, monthly and daily basis in relation to outcomes. A comparison is also made with forecasts made of the annual borrowing requirement by other government agencies.

The central government net borrowing requirement is the single most important factor for the development of the central government debt. The Debt Office therefore makes detailed forecasts of the net borrowing requirement, both in the short and the long term. The purpose of these forecasts is to create conditions for stable issue plans and effective liquidity management.

In general it can be said that the annual forecasts steer bond borrowing and the monthly forecasts borrowing through T-bills, while the daily forecasts affect day-to-day liquidity management.

Annual forecasts for 2013

In 2013 the net borrowing requirement was SEK 131 billion. Out of this, SEK 104 billion was due to on-lending to the Riksbank. In contrast, the net borrowing requirement decreased by SEK 42 billion on account of income from sales of state owned assets.

In December 2012 the Riksbank asked to borrow the equivalent of SEK 100 billion in foreign currencies from the Debt Office in order to strengthen the foreign currency reserve. This on-lending was carried out at the beginning of 2013.

In 2013 the state sold its remaining holding of shares in Nordea Bank AB. The sale brought in SEK 41 billion. In addition, Vectura Consulting AB was sold for just under SEK 1 billion.

The table shown below presents the annual forecasts for 2013 published by the Debt Office from autumn 2012 to autumn 2013. The forecast of the net borrowing requirement was SEK 55 billion in October 2012. The increase in the Riksbank loans only became known by the time of the first forecast in 2013 and the forecast increased to SEK 165 billion. In the final forecast the sales had been carried out and the Debt Office's assessment of the new net borrowing requirement decreased to SEK 126 billion.

One-time effects such as sales and on-lending can arise at short notice without any advance information. These factors are therefore genuinely difficult to forecast. The table also presents forecasts and outcomes excluding these factors.

Table 5 Annual forecasts for 2013

SEK billion	2012:3	2013:1	2013:2	2013:3	Outcome
Primary borrowing requirement	**41**	**150**	**169**	**110**	**115**
of which on-lending	*2*	*102*	*112*	*109*	*106*
of which sales of state assets	*0*	*0*	*0*	*42*	*42*
Interest payments on central government debt	**14**	**15**	**14**	**16**	**16**
Net borrowing requirement	**55**	**165**	**183**	**126**	**131**
Net borrowing requirement excl. on-lending and sales of state assets	**53**	**63**	**71**	**60**	**67**

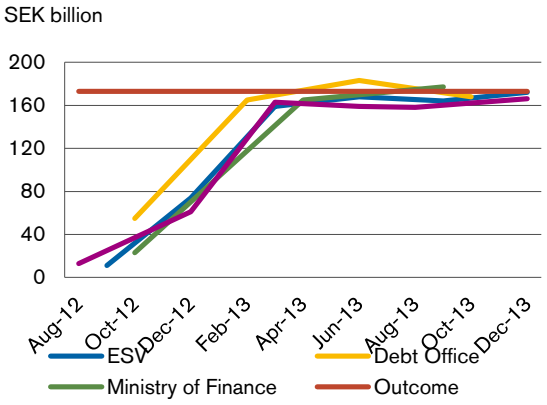
Excluding sales and on-lending the forecasts have been relatively stable. The deviation between the outcome for 2013 and the forecast from October 2012 is only SEK 14 billion. In the last four forecasts the net borrowing requirement has been underestimated three times and overestimated once. However, in general the deviations are small, see table 5 above.

The deviations in the forecasts cannot be attributed to any great extent to misjudgements of macroeconomic developments. All the forecasts are based on a weak macro picture, with low GDP growth and moderate growth of tax bases.

Comparison with forecasts by other government agencies

In addition to the Debt Office, two government agencies and the Government itself make forecasts of the central government net borrowing requirement: the National Institute of Economic Research (NIER), the National Financial Management Authority (ESV) and the Ministry of Finance.

Figure 17 Comparison with other government agencies



The agencies and the Ministry of Finance have different principles for dealing with sales income in forecasting contexts. To simplify comparisons the sales income has been excluded from both forecasts and outcomes in the above graph.

In general, the forecasters have made similar forecasts from January 2013.

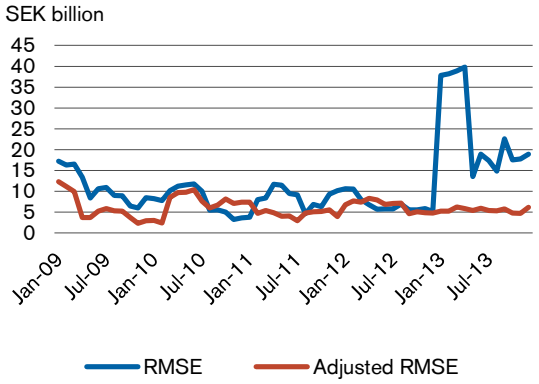
Monthly forecasts

In the case of monthly forecasts the deviations compared with outcomes were much larger than normal during the year. However, this is due almost entirely to the Riksbank loans and sales income.

At present the Debt Office is the only government agency to publish monthly forecasts of the net borrowing requirement. This means that comparisons cannot be made with other forecasters. The measure that the Debt Office uses to monitor the precision of its monthly forecasts is the Root Mean Square Error (RMSE).[1]

Put simply, this measure can be interpreted as the average value of the absolute error, which means that the values are always positive. The difference compared with an ordinary absolute error is that the RMSE is slightly higher since it also captures the variation in the size of the errors. The time period evaluated is a rolling four-month period.

Figure 18 Deviations in monthly forecasts according to RMSE 2009-2013



The above graph shows the development of the RMSE since 2009. It can be seen that the RMSE rose sharply in 2013. However, if the measure is adjusted for on-lending and sales income the precision of the forecasts was at the same level as before.

Daily forecasts

The Debt Office also makes daily forecasts so as to plan its liquidity management. This means that the monthly forecasts are spread over all business days. The forecasts are spread over business days at least six months into the future. Unlike the annual and monthly forecasts, the daily forecasts are updated continually when new information becomes available.

In 2013 the average deviation per day was SEK 64 million. Figure 19 below shows the outcome and forecast per day in 2013. The distance to the 45 degree line is the deviation in the forecast for each day. If there was no information value in the forecasts, these points would have been randomly distributed.

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[1] *The Debt Office has chosen to define the RMSE as*

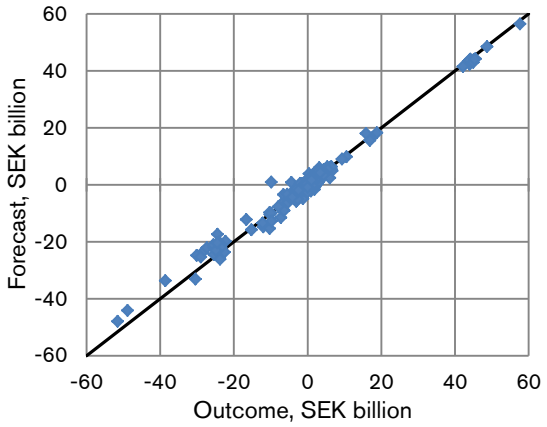
$$rmse = \sqrt{(e_1^2 + e_2^2 + e_3^2 + e_4^2)/4}$$

Where e_t = (outcome of net borrowing requirement for month$_t$ – last published forecast for month$_t$).

Where t goes from month 1 to 4. The reason for choosing four periods is that the Debt Office updates its forecast every fourth month (three times a year).

The diagram below shows forecasts and outcomes on a daily basis in 2013 for central government primary net borrowing requirement excluding the Debt Office's net lending.

Figure 19 Forecast and outcome on a daily basis



6 Capital market borrowing

This chapter presents borrowing in government bonds, inflation-linked bonds and foreign currency bonds. It also describes the Debt Office's policy for borrowing in each of these instruments.

6.1 Government bonds

Government bonds are the Debt Office's largest and therefore most important borrowing instrument. As a result, government bonds have higher priority than other instruments in borrowing by the Debt Office. The total volume that the Debt Office expects to borrow at auctions is of key importance for the liquidity and pricing of government bonds in the secondary market.

The Debt Office offers many regular issues according to a pre-determined issue plan. Selling small volumes on many occasions avoids exposure to unfavourable market situations and reduces the refinancing risk. At the same time investors are offered continuous access to the primary market. The size of the issues is chiefly influenced by the net borrowing requirement in the long term.

Policy

- The Debt Office gives priority to borrowing in government bonds so as to maintain a liquid bond market.
- Fluctuations in the borrowing requirement are primarily handled using other instruments.
- The Debt Offices seeks to maintain an even maturity profile up to ten years. New ten-year government bonds are introduced regularly at intervals of 12–18 months. When the borrowing requirement is small, the Debt Office chooses to have a greater interval so as to be able to build up a large enough volume of each bond, thereby ensuing good liquidity.
- The Debt Office primarily issues ten-year maturities.
- Issues of five-year and two-year maturities are made to finance the borrowing requirement or to support liquidity in the futures market.
- When the market situation permits this, the Debt Office can also issue bonds that are longer than 12 years.

Deliberations during the year

Issue volumes

The issue rate was constant at SEK 74 billion on a yearly basis throughout 2013. However the forecast for the total borrowing requirement (net borrowing requirement plus redemptions) has varied. The borrowing requirement increased up until June 2013 when the report Central Government Borrowing 2013:2 was published. However, this was addressed by increasing borrowing in other instruments. Table 6 shows planned issue volumes of government bonds and the change in the funding requirement.

Table 6 Borrowing in government bonds

SEK billion	Planned issue volume			Change in the gross funding requirement	
	2013	2014	2015	2013	2014
2012:3	74	84		+40	
2013:1	74	84		+13	+15
2013:2	74	84		+17	+38
2013: revision	74	74			
2013:3	74	74	74	-45	-67
Realised	74				

Shortly after the publication of Central Government Borrowing 2013:2 the state sold shares in Nordea and Vectura for SEK 20 billion. This led the Debt Office to put out a forecast update. The forecast of the net funding requirement for 2013 was reduced by SEK 20 billion from SEK 183 billion to SEK 163 billion.

This revision did not entail any change in borrowing in government bonds in 2013. However, the planned increase of the issue rate in 2014 was reversed.

In September the state sold shares in Nordea for a further SEK 22 billion. Despite this, the issue volume in government bonds of SEK 74 billion per year until and including 2014 was retained in forecast 2013:3, which was published in October. Instead the Debt Office drew down the volume of foreign-currency bonds in 2013. In the short term the sale income was handled within the Debt

Office's liquidity management; for further information, see section 7.2 on liquidity management.

Long bonds

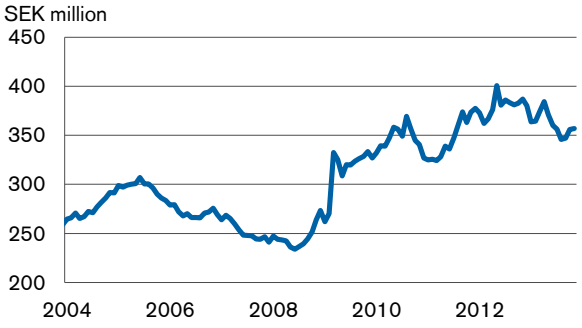
In November 2012 the Government decided to increase the benchmark for the outstanding stock of loans with maturities of more than 12 years from SEK 60 billion to SEK 70 billion. The benchmark is to be achieved in the long term. This means that the stock is to increase gradually at a rate determined by demand.

There was little demand for long bonds throughout 2013. Interest decreased when Finansinspektionen *[the Swedish Financial Supervisory Authority]* announced its intention to introduce new principles for the discount rate in life insurance companies in line with the coming EU Solvency II regulations. The new method was introduced at the start of 2014 and meant that the discount rate is less dependent on market rates than it used to be. As a result there has been a marked decrease in the need for life insurance companies to use long bonds to match their undertakings.

This is one reason why the Debt Office has made the assessment that it has not been appropriate to issue bonds with maturities of more than 12 years. The cost would be too high. At the same time, the Debt Office has said that limited volumes can be sold in auctions should clear indications of demand appear in the future.

In this context, the large difference between short and long bonds in terms of market risk is also worth noting. From the perspective of investors the total market risk in the government bond portfolio gives a better picture of supply than the stock measured in nominal terms.

Figure 20 Market risk in government bonds



The above figure shows the effect on the price of the outstanding stock of government bonds of a change in market interest rates of one basis point (in all maturities). Since the end of 2008 the supply of government bonds has almost doubled in terms of market risk. This has also contributed to the greater difficulty encountered in selling bonds with long maturities. The higher risk is mainly due to the increase in the volume of long loans, but the fall in interest rates has also been a factor.

Result of borrowing activities

All sales of bonds have been held as auctions. There were 21 auctions, each with a volume of SEK 3.5 billion. In terms of maturities there were 14 auctions for bonds with an initial maturity of ten years, four auctions for bonds with a maturity of five years and three for bonds with a maturity of two years.

Table 7 Volume issued and average yield [1]

Bond[1]	No. of auctions	Volume sold	Yield[2]
SGB 1049	2	7 000	0,90
SGB 1050	1	3 500	1,08
SGB 1052	4	14 000	1,63
SGB 1057	14	49 000	2,14
Totalt		73 500	

[1] *2-year maturity: SGB 1049 (2015) and SGB 1050 (2016)*
5-year maturity: SGB 1052 (2019)
10-year maturity: SGB 1057 (2023)

[2] *Average yield in the auctions*

Table 8 Cover ratio and average yield

Per cent	2009	2010	2011	2012	2013
Cover ratio[1]	2,35	2,33	2,43	2,12	2,38
Average rate[2]	2,86	2,63	2,42	1,57	1,87

[1] *Volume of bids received in relation to offered issue volume, 2009 syndication not included.*

[2] *Only outright auctions; exchange auctions and syndication are not included.*

The result of issues during the year is set out in Table 7 above. Table 8 shows how average issue yields and cover ratios have developed.

Table 9 Exchanges of government bonds

Auction date	Loan sell	Loan buy	Average yield	Buy back yield
2013-03-12	SGB 1057	SGB 1054	2,08	1,96
2013-03-11	SGB 1057	SGB 1047	2,11	1,85
2013-03-08	SGB 1057	SGB 1054	2,08	1,96
2013-03-07	SGB 1057	SGB 1054	2,08	1,96

Bonds exchanges were offered in March 2013. The Debt Office sold SEK 20 billion of SGB1057 maturing in 2023 since this became the new

benchmark for ten-year bonds in June 2013; at the same time parts of the closely related loans SGB 1054 maturing in 2022 and SGB 1047 maturing in 2020 were bought back. The result of the exchange is set out in table 8 above.

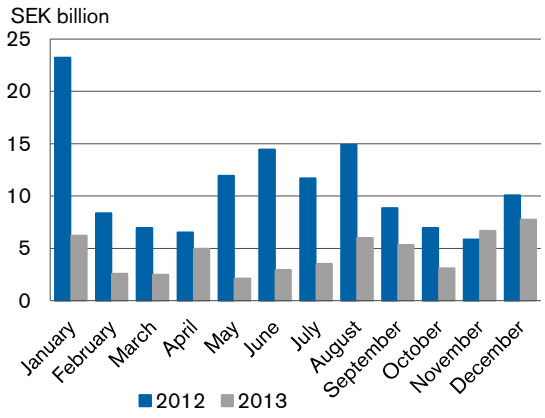
Market conditions

Demand for government bonds was good during the year. The average cover ratio for Debt Office issues increased to 2.38 in 2013 from 2.12 in 2012. Many investors think that the auctions are good opportunities to buy large sums at current market prices. One manifestation of this is that on five occasions during the year one participant took the whole issue.

Market maintenance

Market-maintaining repos of government bonds were at a lower level during the year than in the preceding year. This is mainly because an increasing number of market participants were willing to lend government bonds in the repo market, leading to less need for repos from the Debt Office, which charges more.

Figure 21 Market-maintaining repos [1]



[1] *Monthly average*

6.2 Inflation-linked bonds

Borrowing in inflation-linked bonds supplements borrowing in government bonds. With inflation-linked borrowing the Debt Office reaches a larger part of investors' asset portfolios and the burden on nominal government bonds is reduced. This is mainly an advantage when the debt is large or growing.

Policy

- The Debt Office aims at an even maturity profile for its inflation-linked debt.
- The long-term ambition is to spread the inflation-linked debt across more maturities with a smaller outstanding volume of each bond.
- New inflation-linked bonds are matched in terms of maturities with government bonds.
- Auctions are held regularly and the volumes are small. This enables the Debt Office to avoid exposure to unfavourable market situations while offering investors access to the primary market.

Deliberations during the year

Action to counter the decrease of the inflation-linked share

The Government's guidelines state that in the long term inflation-linked debt shall make up 25 per cent of the total central government debt. The forecast for the inflation-linked share in the next few years has tended to be below the benchmark. Therefore the Debt Office has twice increased the planned borrowing volume of inflation-linked bonds in 2013 when making forecasts. The purpose is to gradually increase the supply of inflation-linked bonds at a rate that the market can cope with. In the February forecast the volume for both 2013 and 2014 was increased from SEK 9 billion till 12 billion annually. In the June forecast the planned issue volume for 2014 was raised to SEK 15 billion.

The first forecast for 2015 was published in October 2013. In it the planned annual rate of this borrowing was SEK 18 billion.

However, increasing the supply of inflation-linked bonds only has a limited effect in the share of inflation-linked debt. The explanation is that the inflation-linked share depends to a large extent on the development of the net borrowing requirement and central government debt. Large increases or decreases in the net borrowing requirement cannot be addressed with the issue volume of inflation-linked bonds. The Debt Office is unable to use derivatives to adapt the share of inflation-linked debt in the same way as in the foreign currency debt. Moreover, the cost of carrying out exchanges between inflation-linked and nominal government bonds would be excessive.

This is why the benchmark for the share of inflation-linked debt is a long-term benchmark and the Debt Office does not have to take immediate action to achieve the target. The surplus target for public sector finances means that the central government debt is expected to fall in the long term, as a result of which the inflation-linked share is expected to rise.

Table 10 Change in inflation-linked debt in 2013

Outstanding stock, 2012-12-28, SEK billion	**192,9**
Auctions	11,5
Net of Exchanges	-0,4
Redemptions	0
Net of market supporting exchanges	-3,8
National Debt Savings, Inflation-linked	-0,2
Bonds taken over	0
Inflation adjustment	-2,2
Outstanding stock, 2013-12-30	**197,8**

Result of borrowing activities

Sales of inflation-linked bonds take place in several ways. The Debt Office conducts both regular auctions and market-maintaining exchanges, and both these sale channels affect the outstanding stock.

The main channel is auctions, twelve of which were held during the year. These auctions have been divided between two inflation-linked bonds, with maturities of four and nine years. The reason why more inflation-linked bonds were not offered in the auctions is that the number of outstanding bonds is small. The other bonds either have too short a maturity or too large a volume to be issue candidates.

Table 11 Issue volume and average yield per loan and break-even inflation[1]

Bond	Volume sold, SEK billion	Average yield, per cent	BEI, per cent
SGB IL 3107	5,75	0,02	1,30
SGB IL 3108	5,75	0,45	1,61

[1] Break even inflation (BEI) is an estimated interest rate difference between nominal an inflation-linked government bonds on the issue date. SGB IL 3107 matures in 2017 and SGB IL 3108 matures in 2022.

In December exchange auctions were held as part of the Debt Office's exchange facility for reducing the stock of short inflation-linked bonds with a volume in excess of SEK 25 billion. The volume bought back of the two-year loan was SEK 5 billion. At the same time SEK 4.6 billion of the four-year loan was sold.

Table 12 Cover ratio, average yield and break-even inflation per year

	2009	2010	2011	2012	2013
Issue volume[1], SEK billion	-1,8	11,9	0,6	7,18	11,1
Volume sold[2], SEK billion	3	7,7	6	6,5	11,5
Cover ratio[3]	4,96	5,34	5,24	5,83	3,88
Average yield[4], per cent	1,46	0,51	0,55	-0,01	0,23
BEI[5], per cent	1,67	1,73	1,89	1,48	1,46

[1] Total volume issued in auctions during the year, net after outright auctions, exchanges and buybacks.

[2] Total volume sold in auctions, excluding exchanges and buybacks.

[3] Bid volume received as a proportion of issue volume offered, pure auctions.

[4] Weighted average issue yield over the year in outright auctions.

[5] Average break even-inflation in outright auctions.

The market conditions for the sale of inflation-linked bonds have been very good even if the cover ratio in the auctions fell from 5.83 in 2012 to 3.88 in 2013. One explanation for this decrease is that the Debt Office almost doubled supply from SEK 6.5 billion to SEK 11.5 billion in the same period. At the same time the total volume of bids received rose from SEK 36.3 billion to SEK 44.7 billion. So the increase in supply from the Debt Office has been met by good demand. As previously mentioned the Debt Office plans to further increase inflation-linked borrowing in coming years.

Market maintenance

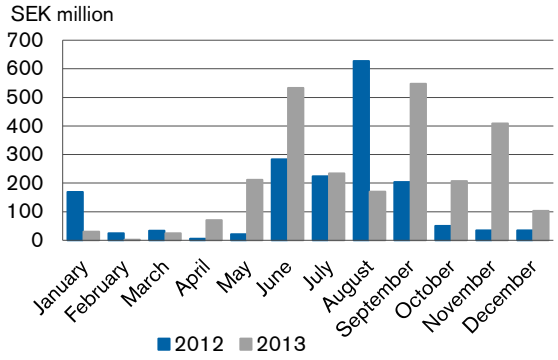
The Debt Office offers primary dealers on tap exchanges of inflation-linked bonds in order to improve liquidity in the inflation-linked bond market. During the year the Debt Office decided that this offer would no longer include inflation-linked bonds that are shorter than one year.

For these short loans primary dealers are instead offered a limited buyback facility at a considerable premium. Moreover, in good time before these inflation-linked bonds become shorter than one year, several exchange issues are offered. The aim is that inflation-linked bonds going to maturity will not have an outstanding volume of more than SEK 25 billion. Excessive volumes can put a strain on the market and be a reinvestment risk for investors.

The Debt Office's long-term strategy of spreading the inflation-linked debt over several maturities will eventually mean that exchanges and repurchases of short inflation-linked bonds will no longer be needed. Then the outstanding stocks will be of a size that will make it possible for inflation-linked bonds to mature without, for example, causing excessive reinvestment problems.

When borrowing has increased, the Debt Office has sought to increase the number of auctions rather than to increase the volume per auction. The purpose has been to provide continuity in the primary market, thus contributing to better liquidity in inflation-linked bonds.

Figure 22 Market-maintaining repos per month.



6.3 Foreign currency bonds

Foreign-currency bonds are a way of financing the central government debt and broadening the investor base as well as of creating exposure in foreign currency. Under the current guidelines the share of foreign currency exposure is to correspond to 15 per cent of the central government debt. The Debt Office can also create exposure in foreign currency by using swaps. Bonds in foreign currencies and Swedish kronor are therefore substitutable when seeking to achieve a certain amount of exposure. This section only discusses borrowing in bonds and commercial paper denominated in foreign currencies.

Policy

- Bonds in foreign currencies are primarily a supplment to bonds in Swedish kronor. The volume of foreign currency bonds sold depends mainly on the size of the net borrowing requirement.
- The Debt Office also issues small amounts in foreign currency when the net borrowing requirement is small in order to ensure a market presence and thereby a broad investor base.
- The Debt Office also finances on-lending to the Riksbank through bonds and commercial paper in foreign currency.

The Debt Office gives priority to borrowing in government bonds. A small net funding requirement normally means that foreign currency loans are refinanced through borrowing in SEK which is swapped to foreign currency. If the loan requirement is larger, the Debt Office can complement borrowing in government bonds with foreign currency bonds.

Borrowing in foreign currency bonds spreads the underlying financing across more markets and broadens the investor base. This creates conditions for a low cost in the long term for the whole central government debt. If the government bond stock increases too quickly, the stresses on the market would be greater, resulting in higher interest rates.

Borrowing in foreign-currency bonds also provides established funding channels that are valuable as preparedness for crisis periods so/when the Debt Office may have to borrow very large amounts.

The choice of the time for an issue and the choice of a price (interest rate) at the issue date can be crucial for a successful result. For the Debt Office the aim is to succeed in borrowing the volume planned and doing so as cheaply as possible from a longer-term perspective. This makes it important to choose both the point in time and the interest offered at the sale in a well-considered way. It should be remembered that borrowing is a repeat activity. If investors are to be interested in participating on the next occasion, it is an advantage if investors feel that the issuer is not only the one who made a good deal. So there is reason to set a price that means that not all investors receive an allocation. This means that there is still demand after the issue and that the interest rate will, at any rate, not rise in the secondary market.

Deliberations during the year

The Debt Office handled the lower net funding resulting from the sale by the state of further shares in Nordea by reducing the volume of foreign currency bonds for its own part, see also section 6.1.

Result of borrowing activities including on-lending

In January 2013 the Debt Office decided, following a request by the Riksbank, to increase its on-lending by SEK 100 billion in foreign currency in order to strengthen the currency reserve; see chapter 8 for a separate presentation of on-lending.

New borrowing and refinancing of loans to the Riksbank meant that the Debt Office financed very large sums in the international capital market. In all, borrowing totalled SEK 137 billion in 2013, with SEK 131 billion relating to on-lending to the Riksbank.

The financing of further on-lending to the Riksbank was carried out in a very short period of time and on favourable terms. Approximately SEK 80 billion was borrowed in four days. On 20 February the assignment had been completed.

Carrying out borrowing corresponding to SEK 80 billion in four days was a challenge, even for a state issuer. The risk is that the borrowing is seen as a signal of financial problems or risks, which can by itself drive up borrowing costs. The extensive volume, as such, can also create problems if lenders demand a higher return for so quickly assuming exposure to the Swedish state. A higher interest cost tends to have spill-over effects both on other instruments such as government bonds and on future borrowing. If a higher interest cost in relation to other issuers is established, then it is hard to press it down again.

The challenge thus involved both communication about the purpose of the borrowing, i.e. it was not a cyclically-driven or crisis-driven increase of the budget deficit, and finding the right instruments, volumes, maturities and a suitable time to borrow. The choice of borrowing SEK 80 billion in four days involved a mix of government bonds and commercial paper that it was assessed the market could cope with without any real impact on interest rates.

It is difficult to judge to what extent the extensive foreign currency borrowing affected the state's general borrowing costs. To some extent an effect can arise because certain investors can buy a foreign currency bond issued by the Debt Office and sell government bonds at the same time. This did happen to some extent.

Interest rates on government bonds rose after the large-scale foreign currency borrowing. The correlation in time could indicate a causal connection. However, the Debt Office's assessment is that the rise in interest rates was mainly driven by an international rise in interest rates. Another reason is that some Swedish investors reallocated their portfolios to shares and, to some extent, housing bonds rather than to foreign currency bonds issued by the Debt Office. Thus it looks as though there is quite a high degree of segmentation between the markets for Debt Office bonds issued in SEK and in foreign currency. However, it is not possible to rule out the possibility that the large-scale on-lending to the Riksbank forced up the general level of interest rates for government bonds by a few points in the first quarter. It is difficult to demonstrate long-term effects but the assessment of the Debt Office is that such effects are probably very small.

It is worth mentioning here that Risk Magazine made the Debt Office its Sovereign of the Year, the main reason given being that the on-lending to the Riksbank in January had been carried out in an impressive way.

On behalf of the state the Debt Office raised a two-year Floating Rate Note of SEK 6 billion. The SEK 131 billion on behalf of the Riksbank was covered by eight loans totalling SEK 13.5 million in USD and two loans totalling EUR 5 billion. This means that 59 per cent of the borrowing was in USD and 41 per cent in EUR. The maturities of the loans varied between 1 and 5 years. The maturities of the loans raised to finance the on-lending to the Riksbank were governed by the wish of the Riksbank not to borrow at longer maturities than 5 years.

Since the borrowing requirement in foreign currency bonds for the year was large, the Debt Office could benefit by also making use of the demand for private placements. More than a third of the borrowing requirement was financed through private placements, see the information box on the following page. Otherwise, during years with smaller needs of borrowing in foreign currency bonds, only public bonds are used in order to help to maintain a broad international investor base.

The Debt Office was able to raise new loans on very favourable terms despite the large issue volume. The low borrowing interest rates were due both to a low level of interest rates globally and to the great interest shown by investors in government bonds with high creditworthiness. In most cases the interest rate was, in fact, lower than for other large state borrowers, excluding the Germany and the US. These countries can be said to be benchmarks for issues by other countries in EUR and USD. Three of the public bonds were issued in much higher amounts than had been issued by the Debt Office in previous years. This was done at a marginally higher cost. At the same time the loans

have been given a positive reception by investors who value large liquid loans. There was a limited supply of bonds with high creditworthiness in the international markets in 2013. As a result the value of the bonds rose in the secondary market after issue, despite low issue interest rates.

Public bonds and private placements

The Debt Office sells foreign currency bonds through syndication. This means that we engage a group of banks, a syndicate, which handles the sale. In syndication the bonds are marketed in public by the syndicate and investors are offered the opportunity to subscribe to buy the bonds. Such a bond is called a 'Public Bond' for the reason that it is sold openly to many investors.

A 'Private Placement' is also a bond, but it is not marketed and is only aimed at one or a few investors who have shown interest. Here normally only one bank is used. The bank is also used to sell the bond in this case.

Both public bonds and private placements are sold with documentation under English law and are therefore not government bonds but eurobonds. The term eurobond only refers to the fact that the bond is not sold under US legislation but under English law in this case, and it can be denominated in USD, EUR or some other currency.

One example of the pricing of Swedish loans is the Debt Office's Eurobond from November, which was priced at 28 interest points below the swap curve.[1] A comparison with the levels in the secondary market for corresponding maturities on the issue date shows that the Debt Office's interest rate was 12 interest points above Germany but at the same level as Finland and four points below the Netherlands. Bonds issued by other countries in the eurozone are at much higher levels. Note also that the interest rate on the issue is often higher than the listings in the secondary market. This must be regarded as a very low interest rate since the Debt Office, unlike countries in the eurozone, cannot offer large liquid issues in EUR. This means that the Debt Office must pay a liquidity premium. The Debt Office must therefore be deemed to be borrowing on very good terms.

The USD bonds were issued at a cost of on average 5 interest points under the three-month USD Libor. The EUR bonds were issued 11 interest points under the six-month Euribor. USD Libor and Euribor are standardised bank interest rates that are used here to give historical comparability.

Basis swaps can be used to translate the cost of USD bonds into Euribor so as to be able to make comparisons with the cost of the loans in EUR. Since 2002 USD loans have been the foremost and most favourable source for the Debt Office's bond borrowing in foreign currency. However, in autumn 2013 the cost of EUR loans with a maturity of three years was largely comparable to the corresponding cost of a USD loan. This enabled the Debt Office to lend USD to the Riksbank by swapping the final EUR loan.

Market conditions and investor relations

Uncertainty about US monetary policy and assessments that the US economy would gain strength made US interest rates rise during the year. This caused volatile market conditions for USD borrowing. The uncertainty made Asian central banks put off investments in USD for a period around the end of June. Despite this the Debt Office succeeded in selling three-year USD bonds in August with a good result. The good borrowing terms in 2013 show that the Debt Office has a very broad investor base spread across different categories and geographical areas. Overall, central banks represented the largest single category of investors. The majority of investors were European.

Table 13 Relative funding cost of foreign currency bonds

	2009	2010	2011	2012	2013
USD Libor[1]	3	0	-9	-15	-5
Euribor[2]	20	-	-55	-51	-11

[1] *Three-month floating bank interest rate*

[2] *Six-month floating bank interest rate*

[1] *Pricing practice in the bond market is to use the swap curve (swap rates for different rates) in each currency as a reference. The price is expressed as a spread between the bond and the swap rate of corresponding maturity.*

Foreign currency exposure via derivatives

The Debt Office can create exposure in foreign currency in two ways:

1. By issuing foreign currency bonds or
2. By swapping bonds in SEK into foreign currency. The swap is an 'interest rate swap' between SEK and foreign currency (cross-currency swap).

Currency exposure using swaps takes place in the following stages:

- The Debt Office issues a government bond denominated in SEK.
- The fixed interest payment on the government bond is swapped to a floating rate in SEK via an interest rate swap.
- The floating rate in SEK is swapped to a floating rate in foreign currency through a basis swap.
- Within the basis swap transaction, the amount in SEK is exchanged into foreign currency in a spot transaction. The exchange is financed with the proceeds from the government bond issue. In practice the Debt Office has then 'borrowed' in foreign currency with interest payments in foreign currency.
- The final element of the basis swap is to exchange foreign currency to SEK forward, with payment due when the basis swap – and the government bond – mature. The amount and exchange rate are the same as in the spot transaction.

When the government bond and the swap both mature, the Debt Office must buy the foreign currency in order to carry out the final exchange. The purchase is made at an exchange rate that is unknown today.

When a bond in foreign currency is due for payment, the Debt Office must buy foreign currency in the same way so as to be able to amortise the bond. Hence, borrowing in foreign currency with a swap gives the same foreign currency exposure as when a bond in foreign currency is issued.

7 Money market borrowing

This chapter presents the Debt Office's borrowing in T-bills and commercial paper as well as loans and investments in the Debt Office's liquidity management.

7.1 T-bills

The primary purpose of T-bills is to handle seasonal fluctuations in the net borrowing requirement and forecasting deviations. T-bills are issued regularly at auctions.

Policy

- The Debt Office sells T-bills with maturities of up to six months.
- Every three months the Debt Office issues a six-month bill. In the other months a new three-month bill is introduced.
- The two T-bills with the shortest maturity are issued on tap when required, as are liquidity T-bills (T-bills with customised maturities).

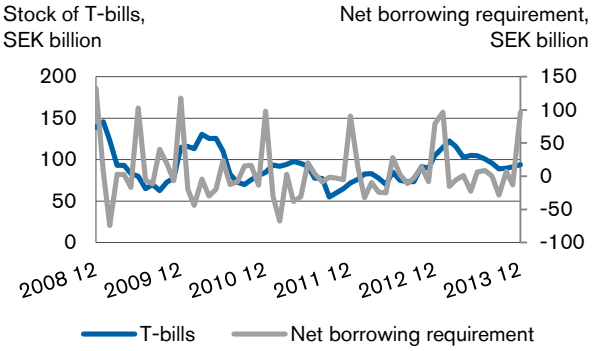
Deliberations during the year

At the beginning of the year the T-bill stock was expected to increase slightly compared with the previous year due to an increased borrowing requirement in 2013. Instead the outstanding stock of T-bills decreased slightly compared with the previous year. The main reason for this was that the sale by the state of its shareholding in Nordea was handled in the short term via lower issue volumes of T-bills.

The volume of T-bills per auction varies over the months of the year since the state's borrowing requirement varies. As a rule the state has large borrowing requirements at the end of the year. As shown in the figure below, the stock of T-bills therefore rises at the end of the year.

The Debt Office can also supplement T-bill borrowing by funding in commercial paper, short-term loans in foreign currency. These loans are hedged against SEK and are, in practice a replacement for T-bill funding. The Debt Office can also top up existing one- and two-month bills via on tap sales outside auctions.

Figure 23 T-bill stock and net borrowing requirement



Result of borrowing activities

The average issue yield in the auctions was slightly lower than in the previous year. In part this reflects the fact that the repo rate was lower in 2013 than in 2012. The cover ratio shows that demand in the auctions was slightly higher than in the previous year.

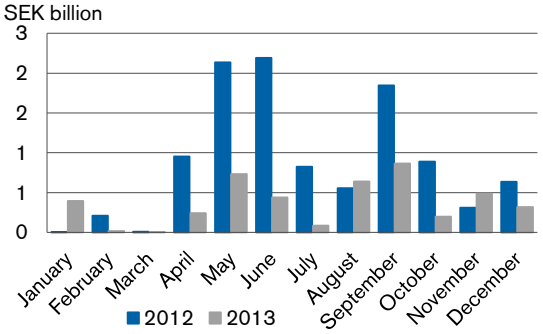
Table 14 Cover ratio and average yield

Per cent	2009	2010	2011	2012	2013
Market interest rate buy	0,56	0,54	1,68	1,21	0,94
Market interest rate sell	0,42	0,44	1,57	1,03	0,78
Cover ratio[1]	2,32	1,91	1,80	2,15	2,14
Average ratio[2]	0,43	0,47	1,60	1,14	0,90

[1] *Bid volume received as a proportion of issue volume offered.*

[2] *Only outright auctions, i.e. exchange auctions not included.*

Figure 24 Market-maintaining repos



Market maintenance

The volumes of market-maintaining repos were at lower levels in 2013 compared with the previous year. One reason is the lessening of financial unrest. This has meant that the demand for safe investments in Swedish T-bills has decreased, chiefly from abroad. The access to bills in the repo market has also improved since other actors participate to a greater extent in the repo market.

To satisfy demand the Debt Office raised the volume limit for market-maintaining repos from SEK 2 billion to SEK 5 billion for each primary dealer. The restriction refers to the maximum volume of repos in T-bills that the Debt Office has outstanding in relation to an individual primary dealer at any time.

7.2 Liquidity management

In liquidity management money is borrowed or invested so that the state will always meet its payment commitments on a daily basis through the Debt Office.

The Debt Office handles both the state's long-term and medium-term borrowing, *regular borrowing*, and the state's short-term financing and investment needs, *liquidity management*. There is no sharp dividing line between regular borrowing and liquidity management. One example of this is that borrowing in T-bills is used both to finance the underlying central government debt and to cope with fluctuations in cash flow between the months of the year. Variations in T-bill borrowing are therefore a part of liquidity management. Short-term forecasting deviations in the net borrowing requirement can also be handled using T-bills.

The instruments that are used in liquidity management over and above these are bank loans and bank deposits, repos, on tap sales and repurchase of T-bills, liquidity bills (T-bills with customised maturities), three-party repos (repos against a basket of collateral with a third party handling the collateral) and commercial paper. The Debt Office mainly conducts transactions in SEK, but also conducts transactions in foreign currency.

Policy

- The Debt Office will handle the state's day-to-day borrowing requirement and investment requirement in a safe and cost-effective way in both SEK and foreign currency.
- The state's incoming and outgoing cash flows are matched as much as possible.
- Currency exchanges between SEK and other currencies are spread evenly over the year.

Market conditions and deliberations during the year

Ever since the start of the financial crisis in 2008, there has been considerable unrest in the European market regarding access to liquidity. This unrest has also affected the Swedish market. Normally the difference between the daily overnight rate and the interest rate that banks are willing to pay to borrow from one another increases in periods of unrest. As this unrest has moderated, the credit risk premiums have also been normalised in Sweden. At the same time interest rates, especially interest rates for short maturities, continue to be very low in a historical perspective.

However, some changes that have taken place since the financial crisis began in 2008 have persisted. For example, it is not as easy for banks to have large deficits in the overnight market. As a result, it has become easier for the Debt Office to borrow money than to invest money in the overnight market. This means that the Debt Office can take action to avoid having large surpluses in the overnight market.

One way to do this is to make investments that are financed with overnight loans. The Debt Office chiefly uses reverse repos in housing and government bonds, which generally give a better return than the repo rate. The Debt Office also buys back T–bills before maturity, both to have a more even liquidity position over the month and to satisfy the market's need of financing.

The Debt Office's forecasts of the state's net borrowing requirement on a daily basis are of great importance for the potential for good forward planning in liquidity management. This leads both to reduced risks and lower costs. Sometimes there are large payments that are hard to foresee. In 2013 such events are exemplified by the income from the state's sales of Nordea shares, which meant that the Debt Office had to handle larger surpluses than planned. The investment need was mainly handled using reverse repos and three-party repos, which are investments secured by collateral.

During periods with large borrowing requirements that extend over a week or two borrowing in foreign currency is sometimes justified.

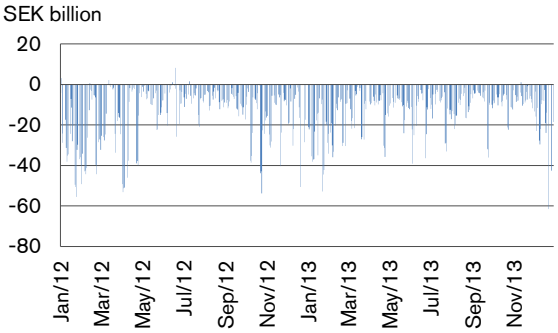
The Debt Office does this through commercial paper. When the Debt Office has sold a commercial paper, the sum is converted into SEK. At the same time the Debt Office buys back the foreign currency in a forward agreement at the same time as the paper matures. The procedure of converting today and buying back in a forward agreement is usually called an FX swap. In this way the Debt Office does not take any currency risk and the borrowing can be treated as equivalent to selling short T-bills in SEK.

The major difference between commercial paper and short bills is that commercial paper provides a possibility of making use of the international demand for short T-bills. This means that the Debt Office is able to borrow large sums in foreign currency at short notice in order, for example, to cope with variations in the state's cash flow.

Result of borrowing activities

As regards the result of liquidity management it is worth noting that the cost chiefly depends on the volumes of state payments and the overnight interest rate at which the Debt Office borrows in the deposit market. There the Debt Office does most of its borrowing at the repo rate, but also borrows a few points below this rate in certain situations.

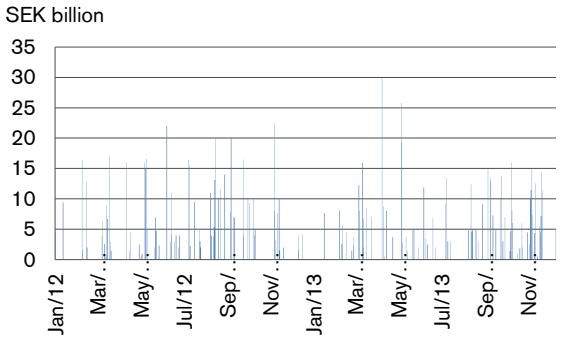
Figure 25 Overnight volume on a daily basis



Good forward planning enables the Debt Office to reduce its cost. One way to do so is to invest in three-party repos, which give better terms than investments in the deposit market. In addition the investment is made in repos with collateral.

In 2013 the Debt Office issued commercial paper for the equivalent of SEK 237 billion. More than half of this, SEK 123 billion, was issued on behalf of the Riksbank, while the remainder was issued for current liquidity management. The bulk, SEK 213 billion, was issued in USD. The remainder was split between the equivalent of SEK 10 billion in GBP and the equivalent of SEK 14 billion in EUR.

Figure 26 Volume in reverse repos and three-party repos 2012-2013



Commercial paper in liquidity management had a maturity of one week to four months. The average maturity during the year was about one month. The commercial paper issued at the start of the year had a borrowing cost around or just under the repo rate. The repo rate is the cost that the Debt Office pays to finance the outstanding borrowing requirement at the end of the day in the deposit market.

As the market gradually began to discount a reduction of the repo rate after the summer, borrowing in commercial paper and swapping to SEK became cheaper and cheaper. In the autumn and winter the cost of borrowing was between 2 and 11 points below the repo rate.

Flows in foreign currency/currency conversions

Maturing loans, interest payments, EU payments and accounts with collateral generate current flows in foreign currency that have to be converted into SEK. To meet the Government's demand of an evenly distributed rate of currency conversions the Debt Office uses both the spot and the forward market. In the case of large maturities in foreign currency the Debt Office buys currency in forward exchange agreements before the final payment. In this way the net flow is distributed evenly over the months of the year. The Board of the Debt Office decides on the maximum deviation from such an even conversion path. In 2013 the deviations were below this limit for all months. In the day-to-day management of currency conversions occasions with good liquidity are used to reduce costs.

8 On-lending in foreign currency

This chapter describes the Debt Office's on-lending in foreign currency to the Riksbank and to other states.

In connection with the financial crisis in 2009 the Debt Office decided, following a request by the Riksbank, to borrow SEK 100 billion in foreign currency in order to strengthen the currency reserve. In January 2013 this on-lending was expanded by SEK 100 billion following a new request by the Riksbank, and the total scope for loans to the Riksbank is therefore SEK 200 billion.

The loans to the Riksbank have the same amount, maturity, currency and yield as the bonds and the commercial paper the Debt Office issues to finance the on-lending. The Riksbank pays interest to the Debt Office that corresponds to the costs of the loan including administrative fees according to the Budget Act.

The on-lending to the Riksbank is invested in the currency reserve in fixed income securities. Since the Debt Office's borrowing cost for loans with bonds in, for example, USD is slightly higher than corresponding investments in, for example, US government bonds, there is a cost for the state as a whole that corresponds to this interest rate difference. In SEK terms this cost is about SEK 400 million per year for the total on-lending of SEK 200 billion.

As discussed in section 6.3 the on-lending to the Riksbank has only had a marginal upward effect on the state's funding cost in other instruments.

The new borrowing in 2013 was carried out in a very short period of time and on favourable terms. After only four days 80 per cent had been financed.

New borrowing and refinancing of loans to the Riksbank meant that in 2013 the Debt Office financed very large sums via the international capital market. The equivalent of SEK 131 billion was covered by eight bonds totalling USD 13.5 billion and two bonds totalling EUR 5 billion, see also section 6.3.

In addition the Debt Office sold commercial paper for the equivalent of SEK 123 billion with an average maturity of 101 days. The cost was 9 basis points below USD Libor. The Debt Office also lent the equivalent of SEK 2.6 billion to Ireland in 2013.

On-lending in foreign currency

The Debt Office does not conduct any earmarked borrowing for on-lending to other states. The payments made by the Debt Office in connection with lending to states, government agencies and state-owned companies are handled like other payments within central government.

On instructions from the Riksdag and the Government the Debt Office has provided credit facilities for Iceland and Ireland. The loan to Iceland was signed in 2009 with Sweden, Denmark, Norway and Finland as the lenders. Sweden's share of the total loan was EUR 495 million. In May 2012 a loan agreement was signed between Sweden and Ireland for a total of EUR 600 million. Ireland has made use of the entire loan facility.

Lending to the Riksbank and other states is presented in the Report 'Sweden's Central Government Debt' under the heading of on-lending. On-ledning is included in the budget balance and is therefore part of the Debt Office's net borrowing requirement. However, on-lending is not included in central government net lending. The asset position of central government is not affected by on-lending since central government has a claim of the same size.

In the Debt Office's steering of central government debt on-lending is set off against the debts incurred in financing. This means that debt shares and maturity measures are not affected.

9 Swaps

This chapter presents how the Debt Office uses swaps in the management of central government debt. The derivative instruments used to handle currency conversions are discussed in more detail in section 7.2 on liquidity management.

9.1 Interest rate swaps

Interest rate swaps are used to shorten the interest rate re-fixing period of the debt. These swaps enable the Debt Office to issue more funding in bonds and borrow less at short maturities thus reducing the refinancing risk.

Interest rate swaps are also used along with basis swaps between currencies in order to create currency exposure and maintain the foreign currency share of 15 per cent of the debt.

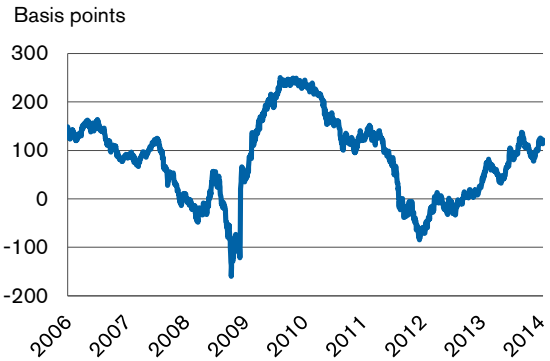
Policy

- The maturity of the swaps is adapted to the maturity of the government bonds issued during the year.
- The swap transactions are spread evenly over the year.

The swaps help to reduce the expected cost of the debt by making it possible to shorten the interest rate re-fixing period. At the same time the Debt Office can maintain good liquidity in the market for government bonds, which also contributes to lower costs.

Over time short-term interest rates are expected to be lower than long-term interest rates, i.e. the yield curve tends to have an upward slope. The figure below shows the slope of the swap curve, which has been positive on average.

Figure 27 Slope of the swap curve between three months and five years



It would probably be difficult to achieve the same interest rate re-fixing periods without swaps by replacing long borrowing with short borrowing. The market for T-bills is not as deep as the market for government bonds and the refinancing risk would be too great.

Interest rate swaps

The Debt Office uses interest rate swaps to shorten the interest rate re-fixing period. This is done in the following way:

1. The Debt Office issues a government bond with, for example, a ten-year maturity and a particular coupon rate.

2. Debt Office obtains a fixed interest rate and pays a floating three-month interest rate (3M Stibor) in an interest rate swap for ten years.

The net cost is

3. 3M Stibor – the fixed swap interest rate + the bond interest rate

The fixed interest rate on the swap is higher than the corresponding government bond interest rate. The difference is called the swap spread. So the Debt Office pays:

- 3M Stibor – the swap spread

Instead of a fixed ten-year bond interest rate the Debt Office pays floating three-month Stibor with a deduction for ten years.

Deliberations during the year

During 2013 the Debt Office swapped a total of SEK 8 billion of bond funding to short interest rate exposure in SEK. This is slightly more than was planned at the start of the year. The explanation is

that the borrowing requirement was less than expected at the same time as borrowing in government bonds was unchanged. However, the difference of SEK 3 billion between the forecast swap volume at the beginning of the year and the outcome is quite small in the context. The swap volume was adapted to bring the interest rate refinancing period to the middle of the interval 2.7-3.2 years.

Result of activities

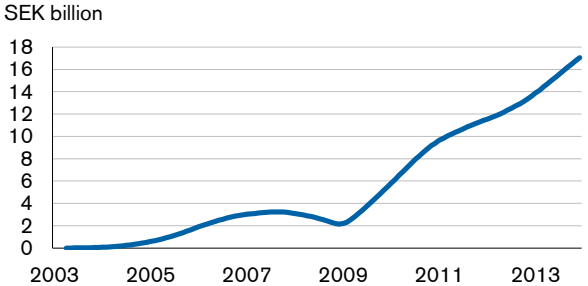
The average swap spread in the SEK 8 billion of interest rate swaps enterd into during the year was 41 basis points. The swap spread gives the difference between the interest rate on a swap and the interest rate on a government bond with the same maturity.

The Debt Office also entered into interest rate swaps combined with basis swaps. This way SEK 20 billion of fixed interest rate in SEK was exchanged for a floating interest rate in the foreign currency, see section 9.2 below. For these interest rate swaps the swap spread was 46 basis points.

The result of the swaps depends on the difference between the fixed interest rate that the Debt Office locks in at a swap transaction and the floating Stibor interest rate that the Debt Office pays until the swap matures. If the Stibor interest rate is lower on average than the fixed interest rate the swap gives a saving. The swaps entered into in 2013 had an average maturity of just over eight years. It will therefore be some time before the final result of these swaps can be calculated.

The figure below shows the calculated result since the introduction of swaps in SEK borrowing in 2003. The result corresponds to the difference between the floating interest payments made by the Debt Office and the fixed interest payments received so far in the swaps.

Figure 28 Accumulated result of interest rate swaps



Since it started in 2003, the use of swaps has reduced the cost of central government debt by SEK 17 billion if the borrowing in government bonds is taken for granted. It should be noted here that only part of this result has been realised. The final result of the outstanding swaps cannot be calculated until they mature in a number of years.

In 2013 the calculated result increased by SEK 3.4 billion. This is because the three-month Stibor was much lower during the year than the average fixed interest rate that the Debt Office receives in the swaps.

9.2 Basis swaps

The Debt Office can use basis swaps from SEK to foreign currency to translate loans in SEK into exposure in foreign currency. This is done to achieve the benchmark of the foreign currency debt share of 15 per cent.

Policy

- The maturity of the swaps is adapted to the maturity of the government bonds issued during the year.
- The swap transactions are spread evenly over the year.

Deliberations during the year

During 2013 interest rate swaps of SEK 20 billion were combined with a basis swap in which the floating rate in SEK was exchanged for a floating rate in foreign currency. The volume of swaps in foreign currency borrowing decreased slightly during the year compared with the assumption at the start of the year. The main reason was a smaller net borrowing requirement and therefore a smaller central government debt than expected. This meant that the exposure in foreign currency did not need to be as large as calculated at the beginning of the year. The volume of swaps and foreign currency bonds is adapted to keep the share of the foreign currency debt at the benchmark of 15 per cent.

During the year liquidity in basis swaps was poorer and only a few banks were able to offer attractive levels continuously. The spread to Stibor in a basis swap from SEK to EUR decreased compared with previous years. This means that it was less favourable to swap SEK borrowing to EUR.

Result of activities

In an evaluation of other currencies pricing was more favourable in JPY and CHF. From mid-2013 the Debt Office therefore started using basis swaps instead of forward foreign exchange contracts to maintain exposure in these currencies. This enabled the Debt Office to achieve a higher spread to Stibor than was possible using basis swaps only to EUR.

The table shows the spread in basis points in relation to Stibor for currency exposure via interest rate swaps combined with basis swaps.

Table 15 Currency exposure via swaps

Basis points	2009	2010	2011	2012	2013
SEK/EUR	-46	-73	-97	-100	-66
SEK/JPY					-123
SEK/CHF					-93
Of which interest rate swaps	**-24**	**-29**	**-65**	**-67**	**-46**

10 Positions

The conditions for and the result of the Debt Office's position-taking in foreign currency in 2013 are described below.

By trying to foresee fluctuations in the financial markets the Debt Office seeks to reduce both costs and risks in the foreign currency debt.

Policy

- These activities are conducted both internally and with the assistance of external managers. Diversification in risk-taking helps to limit the risks in position-taking.
- The results of these activities are measured and evaluated separately from the underlying debt portfolio.

Macroecomomic environment 2013

During the evaluation period (five years) the Debt Office's positions showed a positive result overall. For individual years the result has been both negative and positive. The negative return has come in different periods from both the internal and external current management. The correlation in world financial markets has been high during the period as the economic cycles of different countries followed one another closely in connection with the global financial crisis in 2008/2009 and its aftermath. When interest rate levels all over the world have fallen towards zero, the development of markets has chiefly been steered by extraordinary monetary policy measures and political initiatives, and to a lesser extent by normal macroeconomic correlations.

However, in the past year macroeconomic developments in different parts of the world have begun to diverge again. The development in the US has been stronger than in most other large economies and unemployment in the US fell to 7 per cent during the year while it rose to over 12 per cent in Europe. As a result of this economic divergence monetary policy is now also beginning to strive in different directions. The Japanese and European central banks have increased their expansive measures while the US central bank has announced a first step towards reducing its quantitative easing.

In general, macroeconomic data continued to improve during the year and most commentators agree that the world economy in general and the US economy in particular are in better condition than they were a year ago.

Position mandate

In 2013 the Government gave the Debt Office a mandate for positions amounting to SEK 450 measured as daily 95 per cent Value-at-Risk. The Board has delegated SEK 220 million of this risk mandate to current positions. During the year SEK 33–40 million of the running position-taking was delegated to external managers. The figure varied as a new manager started its activities during the year.

Each individual manager is given their corresponding share of the VaR mandate. If the mangers were perfectly correlated with one another it would also be possible to add up the total use of risk. But this is not the case, and the different managers show very low correlation instead. During the year the total use of risk for current position-taking has been about 15 per cent of what was delegated by the Board. This takes account of all correlation effects.

10.1 A positive result for the year

The result of the positions taken was SEK 200 million in 2013. Out of this amount SEK 235 million comes from internal current position-taking, corresponding to 14 basis points of the managed amount. The result from the external managers was SEK -35 million, corresponding to -10 basis points of the managed amount.

Table 16 Annual result of positions[1]

SEK bn	2009	2010	2011	2012	2013	Total	Average
Own	2 997	5 475	88	-176	235	8 619	1 724
of which board decisions	2 616	6 061	250	0	0	8 927	1 785
of which running	381	-586	-163	-176	235	-309	-62
External	84	264	-1	-24	-35	288	58
Total	3 081	5 739	86	-200	200	8 906	1 781

[1] *Historical results can differ slightly from those reported in previous years since a major development project carried out in 2013 included changes in business systems and accounting principles. The changes have been applied consistently to historical data.*

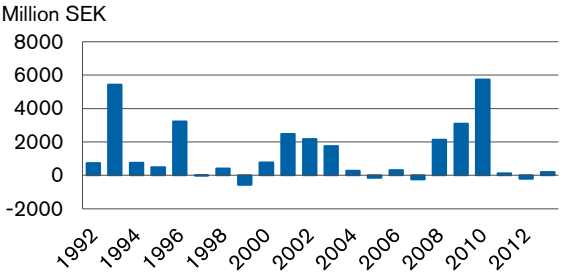
The bulk of the positive result in internal position-taking came from currency positions, but the interest rate positions also had a positive result.

During the year internal position-taking focused on the divergence in growth rates between the US and Europe, but also other parts of the world. The positive foreign currency result came about because the USD debt decreased with a rise in debt in other currencies such as the JPY, GBP and AUD. However the periodically higher share of debt in EUR gave a poorer result since the EUR strengthened by more than 5 per cent against the USD during the year. This was despite a weak labour market, falling inflation and the ECB reducing the interest rate. Until and including May the profits built up from internal position-taking were about SEK 400 million.

On the interest rate side the Debt Office took positions to lock in the very low levels of interest rates in the first months of the year. The assessment made was that the interest rate levels reflected an extremely negative view of economic developments even though many indicators were pointing towards a gradual improvement, especially in the US. During the interest rate upturn in the summer these positions were reduced as the assessment was made that the potential for a further rise had disappeared.

In May, Fed Chairman Ben Bernanke introduced the term 'tapering', i.e. a gradual scaling down of asset purchases by the Federal Reserve. This was the start of a period of higher volatility in both interest rate and foreign currency markets. When uncertainty increased, the internal position-taking reduced its use of risk. Before the Federal Reserve's September meeting expectations were high that the announced tapering would be started. However, the Federal Reserve chose to wait which surprised most market participants. The lack of an announcement led to a period of even higher volatility; the US ten-year interest rate fell from 3.0 per cent to 2.5 per cent and the US dollar was weakened against most currencies. This was a challenging period for both internal and external position-taking at the Debt Office and resulted in shrinking profits for the year despite the lower use of risk.

Figure 29 Annual result of positions



External managers

For the Debt Office's external managers 2013 presented major challenges, which is reflected in the negative result of SEK -34 million, corresponding to -10 basis points of the average managed amount. The major part of the negative result is explained by positions for lower interest rates. This resulted in losses when interest rates rose sharply during the summer.

Evaluation of the activities in the long term

The result of the Debt Office's position-taking varies from year to year and is therefore evaluated in five-year periods. In 2009–2013 the average profit was about SEK 1.8 billion per year. The strategic position taken for a stronger SEK in 2009-2011 accounts for by far the largest contribution.

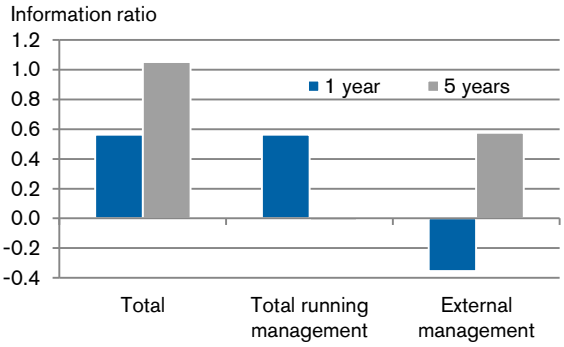
The external management contributed a surplus of SEK 58 million per year. The ongoing internal management gave a deficit of SEK 62 million per year. See table 16 and figure 29.

Risk-adjusted result

In 2013 current position-taking shows an aggregate profit of SEK 200 million. As described above the positive result comes from the internal position-taking and the external management made a small loss. In previous years the situation has been the opposite. This illustrates the value of diversification. Diversification in management reduces the variation in the overall result.

The 'information ratio' is a generally used measure to report a risk-adjusted result.[1] A high information ratio means that the management has achieved a strong result in relation to the risk taken to achieve the result. Figure 30 shows the risk-adjusted result for the aggregate position-taking, the current position-taking and the external managers as a group. The information ratio for aggregate management shows the overall position-taking and therefore takes account of all diversification risks.

Figure 30 Risk-adjusted result expressed as an information ratio



[1] *The information ratio is calculated using monthly data. The annualised information ratio reported is obtained by dividing the average yearly result expressed in basis points by the standard deviation of the monthly results recalculated on an annual basis.*

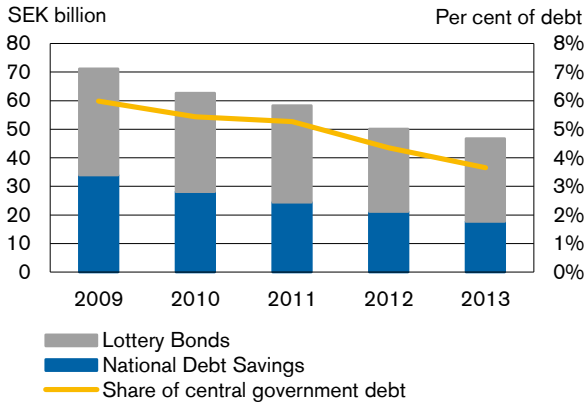
$$\frac{\Sigma \text{ results in basis points/number of years}}{\sigma \times \sqrt{12}}$$

11 Retail borrowing

The result of borrowing in the retail market is presented here. The objective is to achieve the largest possible cost saving in relation to corresponding borrowing in the institutional market.

The Debt Office borrows not only in the institutional market but also by selling lottery bonds and offering savings accounts to individuals and small investors. At the end of 2013 retail borrowing financed 3.7 per cent of the central government debt, see Figure 31.

Figure 31 Retail borrowing as a share of central government debt



Retail borrowing reduced the cost of the central government debt by SEK 97 million in 2013. This can be compared with SEK 129 million in the previous year. The main reason for the decrease is that the result in 2012 was improved by revenue from time-barred lottery bonds. This revenue ended as of 2013 since all older bonds are now time-barred.

Table 17 Cost saving, retail borrowing

SEK million	2009	2010	2011	2012	2013
Lottery Bonds	170	171	130	126	81
National Debt Savings	36	12	11	4	17
Total saving	206	183	142	129	97

There is a positive effect of SEK about 22 million on the calculated result because, as of 2013, the Debt Office is using a new key for distributing overhead costs. The new cost distribution means that a smaller share than before is now allocated to retail market activities.

For the five-year period 2009–2013 the aggregate cost saving was SEK 758 million, see Table 17.

11.1 Lottery bonds

The result for lottery bonds decreased by SEK 45 million to SEK 81 million. If the revenue from time-barred bonds is deducted the reduction is SEK 16 million instead. The explanation is that the lottery bond that matured in 2013 was sold with a better result than the two new bonds issued during the year.

Lottery bond 13.1 was sold in May and lottery bond 13.2 in October, both with a maturity of five years. The sales volume was SEK 2.1 billion on both occasions. Lottery bond 13.2 gives a result of SEK 25 million seen over the whole term of the bond, while the cost saving for 13.1 is SEK 8 million. The low margins are because market interest rates are generally at historically low levels.

11.2 National Debt Savings

The result for National Debt Savings was SEK 17 million, which is an increase of SEK 13 million on the previous year. The main explanation for the improvement is the new cost distribution. Revenue decreased because borrowing via National Debt Savings continued to fall.

The Board of the Debt Office decided in May 2013 to close National Debt Savings down in 2015. The reason is that the increasing competition in the savings market makes it impossible to retain profitability in the long term.

Market share shrinking

At the end of the year lottery bonds and National Debt Savings accounted for 3.0 per cent of the interest savings market in Sweden (bank deposits, fixed income funds and private bonds). This is a reduction of 0.3 percentage points during the year.

Lower deposits in National Debt Savings along with overall growth in the savings market is the explanation for the lower market share. This reflects, in turn, the fact that banks and other private players

are competing hard for interest savings. In many cases they therefore offer higher deposit interest rates than the Debt Office, whose interest rates are linked to interest rates in the institutional market. One factor that contributes to certain players being able offer high deposit interest rates is that they are covered by the state deposit guarantee. The charges paid by the banks in that system do not take any real account of what risk the players take with deposits.