RIKSGÄLDEN
SWEDISH NATIONAL DEBT OFFICE

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Basis for evaluation

Central government debt management 2015

Basis for evaluation 2015

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The year in brief

In 2015 the Riksbank (the Swedish central bank) reduced its repo rate from zero to –0.35 per cent and announced that it intended to buy government bonds with a nominal value of SEK 200 billion. As a result, longer rates fell too. The borrowing cost for government bonds fell to such low levels that the issuance of lottery bonds could no longer contribute to reducing the cost of the central government debt. The purchases of government bonds by the Riksbank may also have contributed to the deterioration of liquidity in the market for Swedish government securities.

The cost of the central government debt fell as a result of the general decline in interest rates. During the year the Debt Office sold government bonds at an average yield of 0.48 per cent, a decrease from 1.35 per cent in the preceding year. See chapters 3 and 6.

The Debt Office sold government securities at a negative interest rate.
For short maturities central government was paid for borrowing. The government bond maturing in March 2019 was sold at an average yield of –0.16 per cent. The Debt Office also borrowed at a negative rate through T-bills and commercial paper. See chapters 6 and 7.

Two new lottery bond loans were sold at a loss since the interest rate on corresponding government bonds was negative. The Debt Office's other savings product for private individuals, National Debt Savings, was wound up as planned in 2015. See chapter 11.

Poorer liquidity in government securities.
Market actors consider that liquidity in the market for government securities deteriorated during the year. Regulations, the low interest rate and the Riksbank's purchases of government bonds are reasons given. See chapter 2.

The request for the Debt Office's market commitments increased in pace with purchases of government bonds by the Riksbank. The demand for the Debt Office's repos of government bonds rose in the second half of 2015. See chapter 6.

The central government budget deficit was more than halved. The net borrowing requirement, i.e. the deficit in the central government budget, was SEK 33 billion compared with SEK 72 billion in the preceding year. Strong growth in Sweden led to unexpectedly high tax payments. See chapters 4 and 5.

The Debt Office amortised the foreign currency debt. As a step in the Government's decision to gradually reduce the foreign currency exposure of the central government debt, the Debt Office bought JPY 318 billion, corresponding to about SEK 22 billion. See chapter 3.

1 Objectives and evaluation

The overall objective is to minimise the cost of the central government debt in the long term without the risk becoming too high. The Debt Office has also identified a number of intermediate objectives that are easier to influence and measure. This chapter describes how the management of the central government debt is governed and the possibilities of evaluating the management of the debt.

1.1 Mandate

The Swedish National Debt Office (the Debt Office) borrows money on behalf of central government, chiefly by issuing government bonds in the Swedish and international capital market. These loans finance deficits in the central government budget. When the budget shows a surplus, the Debt Office amortises the central government debt.

In addition to continuously handling surpluses and deficits in the central government budget the Debt Office raises loans to replace loans that mature. This means that old deficits in the central government budget are refinanced.

So the Swedish and international investors who buy Debt Office bonds are lending money to the Swedish State. These investors may, for example, be insurance companies, banks, investment funds and central banks.

A small part of the central government debt is financed by private individuals, chiefly through lottery bonds.

1.2 Objectives and governance

The overall objective for the management of the central government debt is to minimise the cost of the central government debt in the long term without the risk becoming too high. In practice this means first setting the level of risk that can be accepted in the management of the debt. This is followed by the determination of the cost of the prevailing market prices when each loan is raised.

At a general level the Government governs the management of the debt by adopting *Guidelines for central government debt management* each year. The basis for that decision includes the Debt Office's proposed guidelines. The government guidelines determine, for example, the distribution of the debt between nominal krona debt, inflation-linked krona debt and foreign currency debt. The government guidelines also regulate the maturity of the different debt types.

The guidelines limit the exposure of the central government debt to different risks. However, the guidelines say nothing about financing as such, i.e. the types of debt and the maturities actually used by the Debt Office in its borrowing. The Debt Office uses derivative instruments so as to be able to borrow in a flexible and effective way while keeping risks within the limits set out in the guidelines.

The government guidelines provide that the Debt Office is to adopt internal guidelines. They are intended to regulate the composition of the foreign currency debt, principles for market and debt maintenance and certain other matters. The Board of the Debt Office adopts these internal guidelines in the *Financial and Risk policy*.

The Debt Office's main contribution to minimising the cost of the central government debt is to work to make the market for Swedish government securities attractive to as many investors as possible. If many investors want to lend money to the Swedish State, the cost of the central government debt will be lower. This also promotes liquidity in the market, which then stimulates demand for government securities. Another aspect is that the financing risk is lower if many lenders are prepared to lend money to the Swedish State.

At the margin the Debt Office can also influence the cost of the central government debt by making use of occasions when the pricing in the market is favourable.

Background to the current guidelines

Shares of different types of debt

The purpose of borrowing in several different types of debt is to be able to attract a broad range of investors and spread risks. This lowers the aggregate risks in the debt management.

Nominal krona debt

The most important type of debt is nominal government bonds. Here the Debt Office has an important task to promote the functioning of the market and market infrastructure, partly by meeting the need for bonds with different maturities.

The Debt Office also issues T-bills in order to borrow at short maturities. Along with short-term borrowing in foreign currencies (see below), the T-bills are mainly used to cope with seasonal variations in the borrowing requirement.

Inflation-linked krona debt

By issuing inflation-linked krona bonds the Debt Office can attract investors who want to avoid the risk of inflation eroding the value of their bonds.

Foreign currency debt

In the international capital market the Debt Office is able to borrow large amounts in a short space of time. So there are reasons for borrowing regularly in foreign currency even when the borrowing requirement is small since this maintains the preparedness to borrow large amounts if needed.

In a recent reassessment of the cost and risk of foreign currency debt, the Debt Office has not been able to demonstrate that currency exposure reduces costs in the long term. However, it adds to the cost variation. The Government has therefore decided to gradually reduce the currency exposure. This means that, to a greater extent that in the past, foreign currency borrowing will be converted into Swedish kronor by use of derivatives.

Maturity of the central government debt

Historically, short (floating) rates have been lower than long (fixed) rates, so it has usually been cheaper to borrow in short than in long maturities. On the other hand, the cost of the central government debt varies more with short-term borrowing since the interest rate is altered more frequently.

The maturity is decided by weighing the benefit of minimising cost (borrowing at floating interest rates) against the benefit of having low cost variation (borrowing at fixed interest rates). In the past ten years the maturity of the central government debt has been between three and four years measured as duration.

For some time now the costs of short-term and long-term borrowing appear to have moved close to one another. So the advantage of short-term borrowing has decreased. The Government has therefore decided to extend the maturity of the central government debt.

Practical aspects

The choice of maturity is also influenced by other aspects. For example, it is in the interest of the Debt Office to ensure that all bond loans in the Swedish krona market, whatever their maturity, are large enough for bond trading to function well.

Well-functioning derivatives markets facilitate the steering of the maturity of the central government debt. In the nominal krona debt the Debt Office is able to allow the maturity to deviate from the maturity of the bond loans by using interest rate swaps. However, the Debt Office has made the judgment that it does not want to be too big a participant in the Swedish swap market.

For the inflation-linked krona debt there is, in practice, no possibility of using derivative instruments to steer maturity. Therefore the maturity of the inflation-linked krona debt is steered solely by the maturity of the bonds.

In foreign currencies there are well-functioning markets for interest rate swaps and here the Debt Office is a relatively small participant. The maturity of the foreign currency debt can therefore be steered without influencing the market.

Government guidelines for 2015

According to the government guidelines for 2015 the central government debt is to have the following composition:

- the share of inflation-linked krona debt in the central government debt is to be 20 per cent in the long term.
- the foreign currency exposure of the central government debt is to decrease by no more than SEK 30 billion per year.
- the remaining part is to consist of nominal krona debt.

According to the government guidelines for 2015 the maturity of the various types of debt, measured as duration, is to be

- Foreign currency debt: 0.125 years
- Inflation-linked krona debt: 6 – 9 years
- Nominal krona debt:
  - Instruments with a maturity of up to twelve years[1]
    (until and incl. 11 March) 2.3 – 2.8 years
    (as of 12 March) 2.6 – 3.1 year
  - For instruments with maturities of more than 12 years, the long-term benchmark for the outstanding volume is to be SEK 70 billion.

Under the government guidelines the Debt Office may take positons in the market to reduce the cost of or risk in the central government debt. Positions in foreign currency may not exceed SEK 300 million, measured as daily Value-at-Risk with a 95 per cent confidence level. Positions in the krona exchange rate are limited to a maximum of SEK 7.5 billion.

Evaluation and intermediate objectives

Under the guidelines the evaluation of the management of the debt is to be carried out in the light of the knowledge available at the time of the decision. However, evaluating the overall objective of cost minimisation is a complicated matter. The cost depends on the prevailing market interest rates, and the government securities offered by the Debt Office influence these interest rates. To know whether the Debt Office did minimise the loan cost it would, in principle, be necessary to know what costs alternative borrowing strategies would have resulted in.

So it is difficult to set quantitative objectives for central government's borrowing cost. Nor is it obvious that comparisons with other borrowers give good answers. The Debt Office borrows more cheaply than any other borrower in the Swedish capital market, and compared with many other borrowers it also has low costs for borrowing in foreign currencies (see section 6.3).

As already mentioned the Debt Office works to make the government securities market as attractive as possible for investors. To concretise this work the Debt Office has broken down the overall objective into several intermediate objectives. They support the overall objective but are easier to influence and measure.

The most important intermediate objectives are that

- the market in government securities is liquid and has well-functioning infrastructure
- Swedish government securities attract a broad range of investors
- the Debt Office has transparent and open communication
- the Debt Office is clear and predictable
- the Debt Office has good counterparty and investor contacts
- the Debt Office achieves lower cost or risk in the central government debt by taking derivative positions in foreign currencies.

The Debt Office uses several management strategies to achieve its intermediate objectives. An annual questionnaire survey in which primary dealers and investors are asked to rate the outcome and importance of the Debt Office's strategies and activities is one means used to evaluate how well the Debt Office is fulfilling these objectives.

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

The result of position taking is reported in chapter 10.

[1] *As a result of the sharp decrease in interest rates around the end of 2014 and beginning of 2015 the Board of the Debt Office proposed an increase of 0.3 years in the maturity interval on 18 February 2015. The Government made a decision in accordance with the proposal of the Debt Office on 12 March 2015.*

2 Debt management strategies

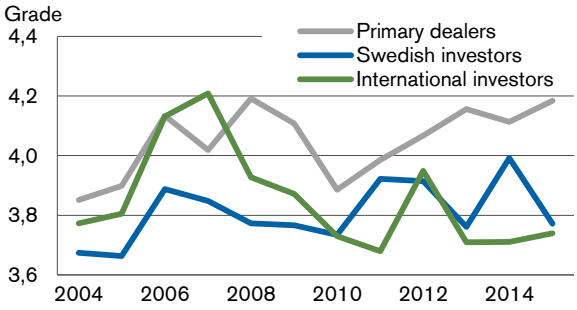
This chapter describes the management strategies intended to achieve the Debt Office's intermediate objectives. The chapter also reports what primary dealers and investors think about how the Debt Office is implementing these strategies.

The Debt Office's management strategies can be divided up into two categories. The first consists of the strategies that support liquidity and infrastructure in the government securities market. The second covers those that promote transparency, predictability and clear communication.

Since 2004 TNS Sifo Prospera (called Prospera below) has conducted a questionnaire survey each year among the Debt Office's primary dealers and investors.[2] The respondents were asked to rank the *importance* of the various strategies (see section 2.3) and to give grades on a five-grade scale as to how well they consider that the Debt Office is *implementing* the strategies.

Prospera also makes an overall assessment in which all the grades are weighted on the basis of the perceived importance of the strategies. Figure 1 shows the development of the overall assessment over time.

Figure 1 Overall assessment



The grade given by Swedish investors went down compared with 2014, mainly because the investors wanted to have more frequent contacts with the Debt Office. Foreign investors and primary dealers gave a slightly higher grade instead. Apart from a slight fall in 2010 the grades have been around four over time. According to Prospera a grade of more than four should be interpreted as "excellent".

[2] *The survey was conducted between 16 November and 29 December 2015. Seven primary dealers and 54 investors were polled. The response rate was 89 per cent.*

2.1 Liquidity and infrastructure

Usually the demand for government securities is based on their low credit risk and good liquidity. The low credit risk follows from the fact that they are securities issued by the State. In addition, Sweden has strong central government finances, its own currency and its own central bank. Their attractiveness is also due to a great extent to the liquidity that the government securities market can offer. What is meant here is the possibility of selling or buying large volumes of government securities without any appreciable effect on their price.

To attract as broad a range of investors as possible the Debt Office is working actively to promote the liquidity and infrastructure of the government securities market. This is mainly done by:

- active market and debt management measures with switches and repo facilities
- concentrating borrowing to a limited number of benchmark bonds
- maintaining several effective sales channels, partly with the aid of a system of primary dealers.

Market and debt commitment

To reduce the risk of the Debt Office's primary dealers in government securities not obtaining bonds or bills that are particularly sought after, the Debt Office offers repos in government securities. The knowledge that the repos are available makes it easier for primary dealers to quote prices, which then benefits liquidity of the market.

From experience, repos of government securities are viewed as important when primary dealers rank Debt Office activities. It is therefore satisfying that the Debt Office has been given the excellent grade of 4.3.

The Debt Office also offers switches of less liquid government securities for more liquid issues. New

bonds are normally introduced using switches so that the new bonds quickly gain good liquidity.

In 2015 the Debt Office offered larger switch volumes of inflation-linked bonds than in the past, partly in connection with the introduction of two new bonds, but mainly after liquidity deteriorated following rumours that the Riksbank was going to buy inflation-linked bonds for monetary policy purposes.

The action taken by the Debt Office in the inflation-linked bond market can be read off in the results of this year's survey. The grade for switches of inflation-linked bonds through the standing facility was 4.0 for 2015 compared with 3.5 for the preceding year. This is a significant improvement. Section 6.2 discusses work on market commitment in the inflation-linked bond market in more depth.

Few benchmark bonds

Borrowing in government bonds and inflation-linked bonds is usually concentrated to a few benchmark bonds in order to make sure that the outstanding volume of these bonds is sufficient to ensure good liquidity. This is accentuated when the central government debt shrinks. When issue volumes are large, there is less need to concentrate borrowing.

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

The Debt Office endeavours to maintain a relatively even maturity profile in its bond stock. By offering bonds with both short and long maturities the Debt Office is able to attract different types of investors. If the maturity profile is even, the refinancing risk is also smaller since this means that only a small part of the central government debt matures each 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. It also contributes to better liquidity and good possibilities of borrowing large volumes in a possible crisis situation in the future.

When the Debt Office sells bond in foreign currencies, it does so through 'syndication'. This means that the Debt Office engages a group of banks, a syndicate, to handle the sale.

Liquidity has deteriorated but is still good

The Debt Office can only create the conditions for good liquidity in the market, but has small possibilities of influencing liquidity directly. This year's survey shows that both investors and primary dealers consider that liquidity in the Swedish government bond market has deteriorated. The reasons usually stated are the low interest rate and new regulations. In addition, the Riksbank's purchases of these bonds have reduced the outstanding stock of securities available for trading (see the box *The Riksbank's purchases of government bonds)*.

However, the liquidity of government bonds is still regarded as good even though traded volumes are lower. Swedish investors give good grades for both liquidity and price transparency, while primary dealers and international investors are slightly more negative.

The survey shows that liquidity is also thought to have deteriorated in the market for inflation-linked bonds. Here, however, liquidity is always lower than for nominal bonds. Essentially this is because investors do not have the same interest in active trading in inflation-linked bonds. Nor is there a developed market in derivative instruments here. As already mentioned, the Debt Office made special efforts during the year to support liquidity by increasing its commitment to switch between different inflation-linked bonds.

Liquidity in the market for T-bills has deteriorated further from an already low level. The outstanding stock of bills has been more than halved in five years, and investors are increasingly using other instruments to invest money in the short term.

2.2 Transparency, predictability and clear communication

To create an attractive market for government securities, these securities have to be managed with transparency and predictability. This means that all communication with the market should be as open and consistent as possible. If counterparties and investors have a good knowledge of the Debt Office's issue plans and are aware of how the Debt Office responds to external change, this creates stable rules and less uncertainty.

The Riksbank's purchases of government bonds

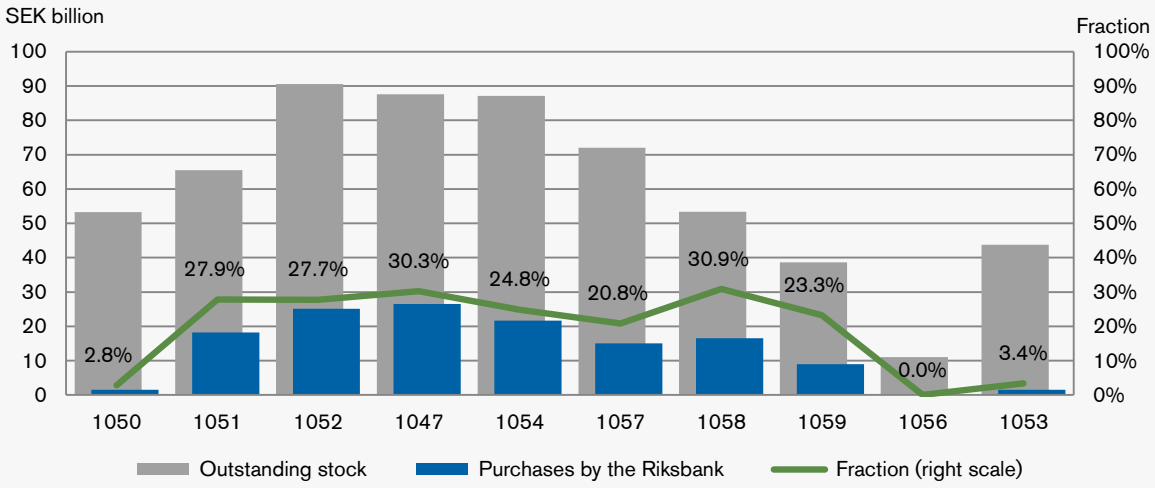
In 2015 the Riksbank purchased nominal government bonds in order to press down the general level of interest rates, which is, in turn, intended to contribute to higher inflation.

The Riksbank bought bonds with a nominal value of SEK 135 billion, corresponding to 22.4 per cent of the outstanding stock of nominal government bonds. In 2016 the Riksbank intends to purchase bonds for a further SEK 65 billion and is expected, in June 2016, to hold a third of the outstanding stock.

The Debt Office finances the central government deficit and manages the government debt. The Riksbank's purchases of government bonds do not alter either the financing requirements of central government or the direction of the management of the debt.

However, the Riksbank's purchases do change the size of the outstanding stock of bonds traded actively on the market. Therefore it cannot be rule out that liquidity deteriorates as a result of the Riksbank's purchases of government.

The Riksbank's purchases of nominal government bonds and outstanding stock, 31 December 2015



The Debt Office tries to achieve the objectives of transparency, predictability and clarity by:

- maintaining good investor relations
- regularly publishing forecasts of the borrowing requirement for coming years handling borrowing in a consistent way with clear principles
- having 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: riksgalden.se.

Investor relations

Ultimately a broad investor base results in lower interest costs. Working for good investor relations is therefore one of the Debt Office's most important management strategies.

Primary dealers have the most active role in sales of government securities. They provide investors with analysis and information about the Debt Office's issues. However, the Debt Office does not rely solely on information given via its primary dealers. It is important that investors can receive, without intermediaries, the information they consider they need. The Debt Office therefore meets Swedish and foreign investors at both personal meetings and large conferences. The Debt Office also holds investor meetings when new borrowing forecasts are presented.

In 2015 there were visits to investors in Europe, South America and the US. Representatives of the Debt Office participated as speakers at several seminars and conferences in Sweden and abroad.

In this year's survey the Debt Office got a grade of 3.5 for contacts with investors. So there is potential for improvement here. Swedish investors gave a

grade of 3.3 for the reason that the Debt Office must listen more to the market as a result of the poorer liquidity. During the year the Debt Office has increased its attentiveness to the market, in part by offering two bonds at most auctions to a greater extent than before (see section 6.1).

For the second year in a row the interest of investors in having closer contacts with the Debt Office increased. Most prefer personal meetings, but many also show interest in the Debt Office's investor meetings. Almost 80 per cent of Swedish investors want to have contact once a quarter or once every six months. In general, the international investors are satisfied with one contact per year.

Predictability and clear communication

The report *Central government borrowing – forecast and analysis* is important for the Debt Office to communicate its plans to all market players 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 issue plan is based on a forecast of the net borrowing requirement and information about refinancing needs and interest payments on the existing debt. The Debt Office adapts borrowing so as to fulfil the conditions in the government guidelines. The issue plan and the forecast for the net borrowing requirement normally remain in place until the next report is published. Good forecasts are necessary in order to be able to act in a predictable way (see chapter 4 for a description of the forecasts).

Sweden's Central Government Debt is published on a monthly basis and contains detailed information about the composition of the debt.

For 2015 the Debt Office was given a grade of 4.1 for communication about borrowing requirements and financing and a grade of 4.0 for clear and consistent action. These grades are marginally poorer than those for 2014.

The website riksgalden.se

During the year the Debt Office has expanded the information about borrowing and the debt on its website. It is now possible to gather information interactively on the website for downloading.

The Debt Office's website remains the most important channel for information about the borrowing requirement and financing, auction terms and auction outcomes. 92 per cent of the primary dealers use the Debt Office website. Among Swedish and international investors the corresponding figures are 97 and 66 per cent. Almost 100 per cent of those who visit the website consider they find the information they are looking for.

2.3 Confidence in the Debt Office

Prospera's summary of this year's results reads as follows: "The rating among primary dealers can be characterised as very high. Among Swedish and international investors the rating is lower, but can still be described as good."

The survey shows that confidence in the Debt Office remains high and that, as before, the Debt office is given a high ranking for its transparency compared with other Debt Offices.

When respondents were asked to rank the importance of the Debt Office's strategies, market commitment through repos came top. Table 1 shows the five most important demands made by market players.

Table 1 The most important requirements

Requirements	Grade
Market commitment through repos	4.8
Communication about borrowing requirements and financing	4.7
Clear and consistent actions	4.5
Information about volumes and other conditions concerning government securities	4.5
Market commitment through switches of inflation-linked bonds	4.3

When the same market players graded the ability of the Debt Office to implement the strategies, the ranking was the same, see table 2. A reasonable conclusion from this is that the Debt Office is focusing on the rights things.

Table 2 The Debt Office's main strengths

Strengths	Grade
Market commitment through repos	4.3
Communication about borrowing requirements and financing	4.1
Clear and consistent actions	4.0
Information about volumes and other conditions concerning government securities	4.0
Market commitment through switches of inflation-linked bonds	4.0

3 Cost and risk

This chapter gives an account of various measures of cost and risk in the central government debt. It also describes how the composition and maturity of the debt have been steered on the basis of the guidelines that applied in 2015.

The overall objective of the management of the central government debt is to minimise the long-term cost of the debt while taking account of risk.

However, evaluating whether the overall objective has been met is a complicated matter. Since the Debt Office is the dominant borrower in Swedish kronor, there are no natural comparisons against which to evaluate the strategy. Comparisons with hypothetical alternatives are also difficult to make, partly because the size of the central government debt means that interest rates are affected by the borrowing strategy actually implemented.

The evaluation of the cost of the government debt therefore has to make use of several measures. The risks in the management of the debt are described in both quantitative and qualitative terms.

3.1 Costs

The cost of the central government debt can be derived from the cash flows (payments) that the debt generates in the future. In the case of the nominal krona debt, the cash flows are solely due to the interest rate at which the loan was raised. In the case of the inflation-linked debt, the cash flows also depend on inflation, and for the foreign currency debt cash flows are affected by exchange rates.

It is difficult to calculate the cost of the central government debt in a simple way using a single figure. The Debt Office therefore reports the cost using three different measures:

- interest payments
- period cost
- average issue yield

Interest payments show how much is paid in a single year. The measure is linked to the cash flows. This means that when an instrument is issued at a premium (in relation to its nominal value) the difference between the actual and the nominal amount is counted as revenue immediately instead of being spread over the term of the loan. In the same way, the cost is charged immediately when an instrument is issued at a discount. Nor are the outcomes of repurchases accrued.

The measure *period cost* includes virtually all cash flows.[3] Assumptions are made about future inflation and exchange rates in order to forecast cash flows. These are then related to the actual (rather than nominal) amounts that have been borrowed and are spread over the term of the loan.

Average issue yield is a weighted average of the yields at which currently outstanding loans were raised. This measure does not take account of either inflation compensation or changes in exchange rates and only gives a snapshot of the average borrowing cost.

Interest payments

Interest payments amounted to SEK 22 billion in 2015. This is almost SEK 19 billion more than for 2014, which is chiefly explained by the temporary reduction in interest payments in 2014 due to high premiums and foreign currency gains. In 2015 the effects operated in the other direction instead, increasing interest payments. For example, currency exchange losses of around SEK 5 billion were incurred in CHF as a result of the Swiss central bank's decision to abandon the link to the euro in January 2015. Currency exchange losses were also incurred in USD and GBP in 2015.

Interest payments were also affected by the payment of around SEK 5 billion in accrued inflation compensation when inflation-linked bond *SGB IL 3105* matured in December 2015.

Otherwise the lower levels of market interest rates have helped to reduce central government interest payments. This is seen both through the positive cash flows generated by the interest rate swaps

[3] *Cash flows attributable to FX Forwards are not included in the measure.*

entered into by the Debt Office and through the decrease in the coupon rate (interest payments) as old loans are replaced by new ones.

Period cost

The period cost contains all the components that affect the cost of the central government debt: interest, inflation compensation and exchange rate fluctuations.

The cost for a particular period is calculated by relating the amounts borrowed to the cash flows that will be paid in the future, taking account of when in time the payments will be made. For the inflation-linked debt, the foreign currency debt and swaps future cash flows are not known. It is therefore assumed that future inflation will follow the break-even inflation, i.e. the inflation derived from the market pricing of inflation-linked bonds in relation to nominal bonds. Future exchange rates and short-term interest rates are assumed to stay at the same level as at the end of 2015.

Over time these assumptions are replaced by the actual outcomes, which mean that earlier costs can be revised. The earlier cost is also affected when the Debt Office buys back government securities since gains or losses are then realised and replace the assumption that all loans are held to maturity.

The cost of every instrument is spread evenly over its term. For a foreign currency loan, for example, this means that day-to-day fluctuations in exchange rates do not affect the cost if they are not realised. It is only the exchange rates that affect the actual cash flows that have an effect on the cost.

Figure 2 Period cost for all types of debt[4]

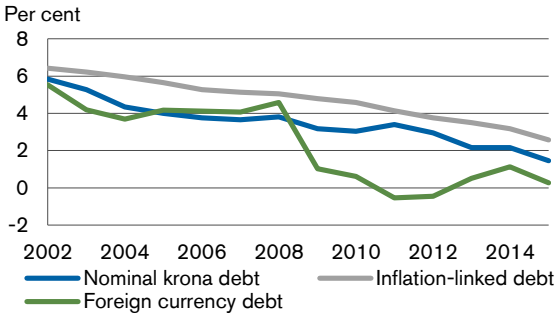
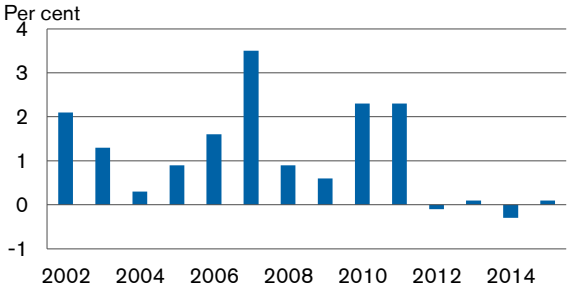


Figure 2 shows the period cost for all types of debt. For the nominal krona debt the cost was 1.5 per cent in 2015. The cost has shown a falling trend for a long period, reflecting the general decline in interest rates.

In 2015 the cost of the inflation-linked debt was 2.6 per cent. The cost of the inflation-linked debt has also shown a falling trend for a long period as real interest rates have fallen. Moreover, inflation has been unusually low, as illustrated in figure 3.

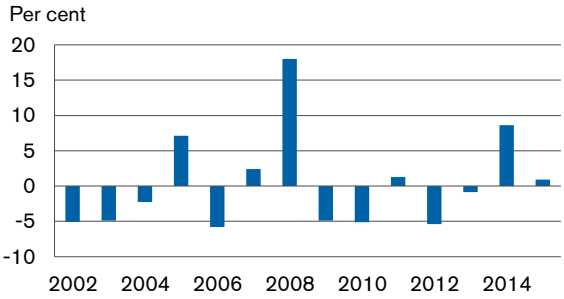
Figure 3 Inflation rate, annual CPI change



The cost of the inflation-linked krona debt has been higher than the cost of the nominal krona debt for a long time. This is mainly because the maturity of the inflation-linked krona debt is longer, so the inflation-linked debt stock contains a larger share of loans raised long ago at much higher interest rates.

For the foreign currency debt the cost was 0.3 per cent in 2015. One explanation of the low cost is the very short maturity of the foreign currency debt. As a result, low market rates impact quickly on cost. But the cost calculation for the foreign currency debt is not complete since FX forwards are not included in the cost measure.

Figure 4 Annual change in the krona exchange rate in relation to the foreign currency debt



The krona exchange rate is of great importance for the cost of the foreign currency debt. In 2015 the krona weakened against most currencies but strengthened against the euro, which accounts for the bulk of the foreign currency exposure. Overall the krona weakened by about one per cent in relation to the foreign currency debt, see figure 4.

[4] *Here the calculation of the cost of the foreign currency debt includes foreign currency bonds and the legs of swaps that are denominated in foreign currency.*

How quickly exchange rate fluctuations impact on the cost of the foreign exchange debt depends on how the debt was created. A large part has arisen by swapping krona borrowing for foreign currency (see the box on page 28 for details). The maturity of these swaps is relatively long, and this means that exchange rate fluctuations will affect the cost gradually over a long period of time.

In the case of the part of the debt that comes from borrowing in foreign currencies, exchange rate fluctuations have a quicker impact.

Figure 5 Period cost for various government securities

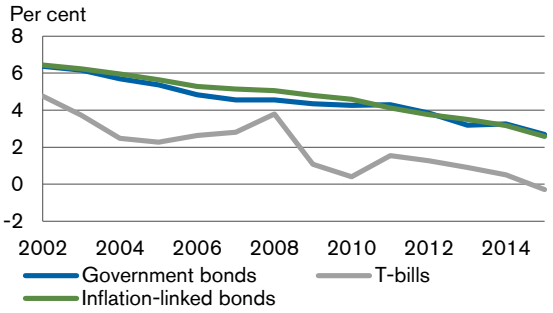
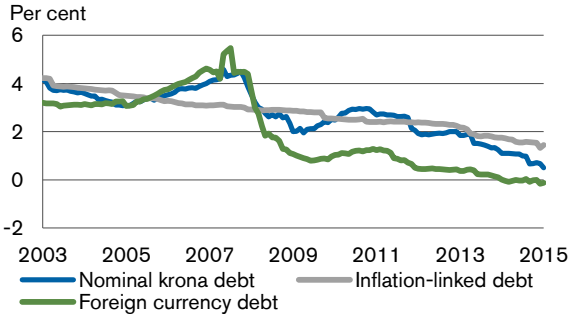


Figure 5 shows the period cost for various government securities. This cost has been lower and more varied for T-bills since their maturity is shorter so that interest changes have a quicker impact. In 2015 the cost was negative, -0.3 per cent. For government bonds the cost was 2.7 per cent, and it was 2.6 per cent for inflation-linked bonds.

Average issue yield

For the nominal krona debt the average issue yield was 0.5 per cent at the end of 2015, a decrease from 1.1 per cent in 2014, see figure 6. The low yield is due to the general decline in interest rates.

Figure 6 Average issue yield



For the same reason, the average real issue yield also fell. At the end of 2015 it was 1.5 per cent, which is 0.3 percentage points lower than a year previously.

The average issue yield for the foreign currency debt adjusts quickly to the fall in market rates since the maturity of the debt is short. At the end of 2015 the issue yield was -0.1 per cent. This is 0.1 percentage points lower than a year previously.

It should be noted that the issue yields for different types of debt are not fully comparable. In the cases of the inflation-linked and foreign currency debt, the whole cost is not shown since inflation compensation and exchange rate fluctuations are not included in the calculations. In addition, the debt types have different maturities.

3.2 Risks

Amended guidelines

Ahead of 2015 the Government decided to change the principles for the calculation of maturities and shares in the steering of the central government debt. The change means that maturity is to be calculated as duration and that the shares are calculated using nominal amounts at the current exchange rate including inflation compensation.

As a result of the new principles, changes were made to the benchmarks for the maturity of the nominal and inflation-linked krona debt and for the share of inflation-linked bonds in the debt. But the actual composition of the debt was not altered.

Another change to the guidelines was that the benchmark for the currency exposure of the central government debt was replaced with a target to reduce the currency exposure by no more than SEK 30 billion per year (the box on page 3 describes the background to that decision).[5]

Maturity

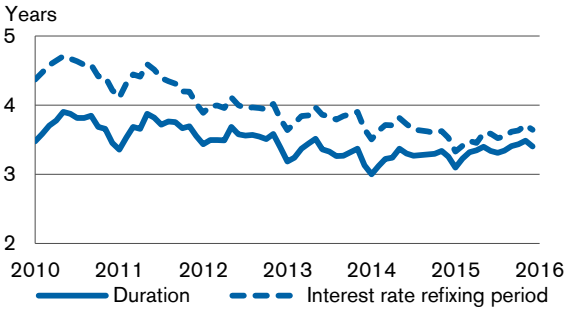
According to the guidelines that applied at the start of the year, the duration of the nominal krona debt consisting of instruments with a maturity of up to twelve years was to be between 2.3 and 2.8 years. This was a translation of the old measure of interest rate refixing period (IRRP) adjusted for the increase in maturity that followed from the decrease in foreign currency exposure.

[5] *Changes in the SEK exchange rate are excluded when calculating the exposure.*

After the government decision on new guidelines in November 2014 there was a sharp fall in market rates. Since duration is a measure that is affected by market rates, the relationship between duration and the old measure of IRRP changed. In March 2015 the Government therefore decided to raise the duration by 0.3 years to between 2.6 and 3.1 years. This decision meant that the Debt Office was able to follow the issue plan that it had in place.

Figure 7 shows the duration of the central government debt as a whole. To simplify historical comparisons the old measure of IRRP is also shown. The figure shows how the measures have converged as interest rates have fallen.

Figure 7 Duration and IRRP for the whole central government debt



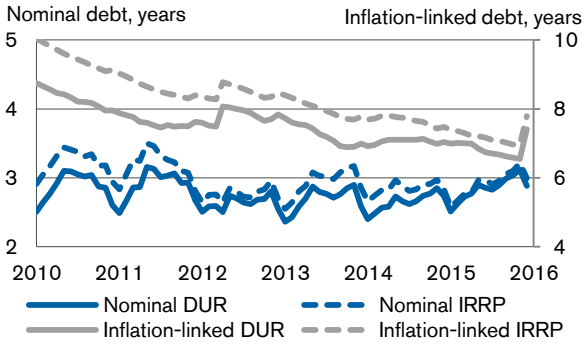
For nominal instruments with a maturity in excess of twelve years the Government decided that the long-term benchmark for the outstanding volume was to stay at SEK 70 billion.

The duration of the inflation-linked krona debt was to be between six and nine years, while it was to be 0.125 years for the foreign currency debt.

The duration of the nominal krona debt varies because central government payments are uneven over time. On days with large deficits the Debt Office borrows more at short maturities and vice versa. Borrowing is planned so as to hold the duration between 2.6 and 3.1 years. However, it is not the intention of the interval to force the Debt Office to make transactions so as to steer maturity if exogenous events have resulted in the duration being longer or shorter than intended. The Government has therefore decided that temporary deviations from the maturity intervals are permitted.

Figure 8 shows the duration and IRRP for the nominal and inflation-linked krona debt. In 2015 the average duration of the nominal krona debt was 2.8 years, while it was 6.8 years for the inflation-linked krona debt. The average duration of the foreign currency debt was only 0.1 years.

Figure 8 Duration and IRRP for nominal and inflation-linked debt

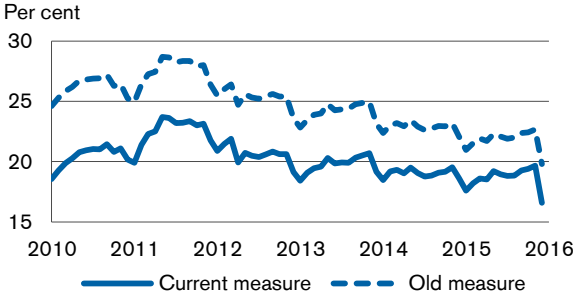


The conditions for steering duration are different for the different types of debt. In the international capital market the Debt Office is a small participant, and it is easy to steer the duration of the foreign currency debt using interest rate derivatives. The duration of the nominal krona debt can also be steered to some extent by varying the volume of interest rate swaps. But when it comes to the inflation-linked debt, there is no possibility of using derivatives to adjust duration. The duration of the inflation-linked debt is therefore determined solely by the maturity of the outstanding bonds.

Inflation-linked krona debt

According to the guidelines the inflation-linked krona debt was to be 20 per cent of the total debt.[6] On average it was 18.6 per cent in 2015. The benchmark of 20 per cent is a long-term figure and the share is hard to steer in the short term. For example, it falls a great deal when a bond loan matures. This explains why the inflation-linked share fell sharply at the end of 2015, see figure 9. The figure also shows the old composition measure in order to facilitate comparisons over time.

Figure 9 Inflation-linked share

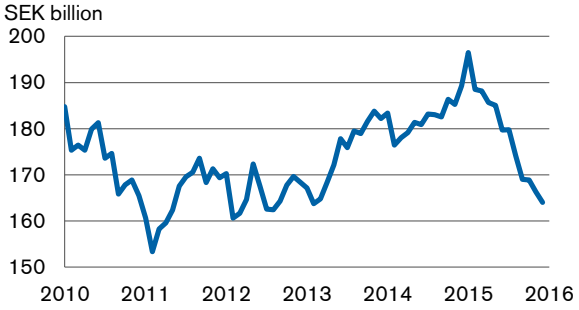


[6] *This share is calculated on the basis of the nominal amount of the inflation-linked krona debt including accrued inflation compensation.*

Foreign currency debt

The foreign currency debt consists of several currencies. In 2015 the Debt Office reduced the foreign currency debt by exchanging JPY 318 billion, corresponding to SEK 22 billion calculated using the year-end exchange rate. The reason why the reduction was made exclusively in JPY was that this was judged to be the most effective way of reducing the risk in the foreign currency debt. The exchanges were made at an even pace over the year to avoid making them at a few unfavourable points in time.

Figure 10 Foreign currency debt at current exchange rate



The size of the reduction of the total foreign currency debt during the year can be measured in several ways. Measured at current exchange rates it decreased by about SEK 25 billion in 2015, see figure 10. If exchange rate fluctuations are excluded according to the method used by the Debt Office, the reduction is instead SEK 28 billion.

Refinancing risk

Refinancing risk is the risk that loans reaching maturity can only be replaced with new loans at very high costs or, in the extreme case, cannot be refinanced at all. The refinancing risk is generally held to be higher the larger the loans that are maturing in the immediate future. To some extent this is a simplification since a bond that is maturing seldom needs to be financed right away by issuing another bond. With long-term issue planning and small issue volumes at regular auctions refinancing is spread over a long period of time and old bond loans are often replaced before maturing.

Bond maturities work just like other government payments. The net amount of daily payments varies and can total SEK 100 billion on certain days. The refinancing risk is therefore only part of what is usually called liquidity risk (or financing risk), which is to do with the possibility of managing payments more generally.

Nevertheless the refinancing risk should be controlled. The ways in which the Debt Office tries to limit it is by working to maintain an even maturity profile for government and inflation-linked bonds and by contributing to the establishment of a well-functioning market in government securities.

Figure 11 Maturity profile in December 2015

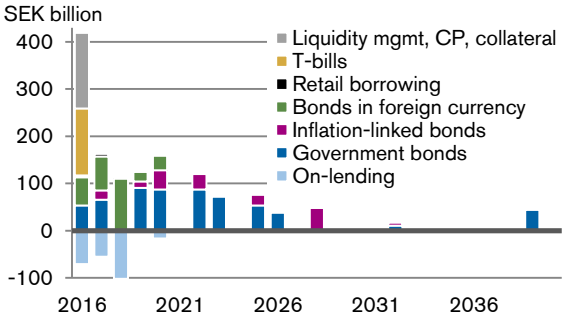


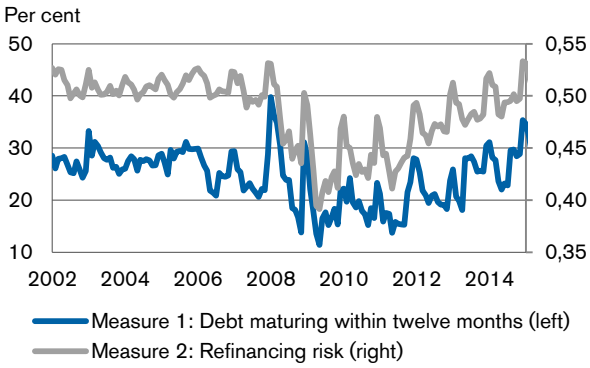
Figure 11 shows the maturity profile of the central government debt, i.e. the size of the sums in the outstanding debt that mature in every single year. The figure also shows claims that mature in the form of on-lending to the Riksbank. These claims match the bond loans in foreign currency to a great extent.

Normally a large part of the debt falls due in the coming year. This is because of the comprehensive liquidity management and the handling of seasonal fluctuations in the net borrowing requirement. At the end of the year the short-term maturities are at their largest level since a large part of central government payments take place in the month of December. These payments are financed initially by money market borrowing and are then gradually replaced by borrowing at longer maturities. Chapter 7 gives a more detailed description of money market borrowing.

Otherwise the maturity profile is relatively even up until ten years, and this influences future refinancing risks as time passes. An uneven maturity profile could give rise to greater risks in the future when large maturities must be refinanced. However, what is most important for risk at a given point in time is what is maturing in the near future.

Figure 12 shows two measures of refinancing risk. The first shows what share of the debt will mature within twelve months. The second is defined by giving a loan maturing immediately the value of one while a loan that never matures is given the value of zero. All loans are then weighted together and this results in a figure between zero and one for the total central government debt.

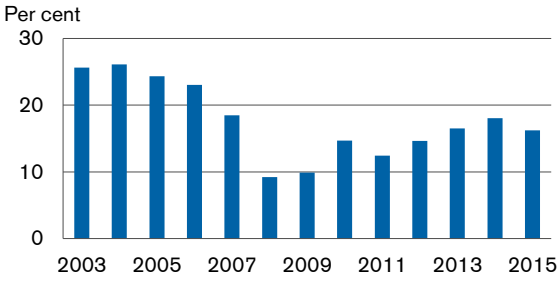
Figure 12 Refinancing risk



The measures show the same pattern even though the second one does not have the sharp break at 12 months. The figure also shows a clear seasonal variation on account of the extensive money market borrowing around the turn of each year.

The refinancing risk decreased during the financial crisis in 2008/09. Unlike many other government borrowers, the Debt Office was able to reduce the share of short-term financing when the borrowing requirement increased. Since then the refinancing risk has gone up again on account of an increase in short-term borrowing. The share of the central government debt financed in the money market is illustrated in figure 13. In 2015 that share was 16 per cent on average.

Figure 13 Share of debt financed in the money market



Counterparty risk

Counterparty risk means the risk that the counterparty in a transaction cannot fulfil its obligations to pay or deliver collateral.

Counterparty risks arise both when placing surpluses in liquidity management and when the Debt Office enters into derivative transactions without central counterparty clearing. The risks in investments and derivative transactions are handled differently, but in both cases the Debt Office sets minimum requirements concerning the credit rating of its counterparty.

Through liquidity management the Debt Office borrows or places funds on a daily basis so as to guarantee that central government can make its payments at as low a cost as possible. To handle the counterparty risk for these placements there are limits based on the counterparty's credit rating that restrict the maximum exposure and maturity.

Derivative transactions are used to steer the maturity of the central government debt and to take positions in day-to-day position-taking. Transactions can either be closed bilaterally or through central counterparty clearing.

To enable the Debt Office to handle derivative instruments that are not cleared centrally, the Debt Office and its counterparty draw up an ISDA agreement with a downgrade clause and a Credit Support Annex (CSA). The CSA agreement contains thresholds that govern the maximum permitted exposure to the counterparty. If the value of the exposure exceeds these thresholds, the counterparty must provide the Debt Office with collateral. This collateral provides protection in the event that the counterparty is unable to meet its commitments. The size of the threshold depends on the counterparty's credit rating. The Debt Office's ISDA/CSAs are bilateral in the sense that the Debt Office not only accepts but also provides collateral if the counterparty has a positive exposure in relation to the Debt Office.

Regulations of this type are defined and updated in the context of the Debt Office's Financial and risk policy.

In 2015 there were no material events that had an effect on the Debt Office's credit risk. But counterparty risk was affected by the fact that a number of counterparties were given higher or lower credit ratings. Two counterparties had their credit rating reduced to below the Debt Office's minimum permitted level (A-). There were outstanding deals with them at the time of the reduction. After weighing the cost of closing the outstanding deals prematurely against the risk in retaining the deals, the Debt Office chose to retain them.

4 Borrowing requirement forecasts

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

The net central government 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, in both the short and the long term. The purpose of these forecasts is to create conditions for stable issue plans and effective liquidity management. In somewhat simplified terms, the annual forecasts steer long-term bond borrowing and the monthly forecasts steer short-term borrowing in commercial paper and T-bills, while the daily forecasts affect day-to-day liquidity management.

Annual forecasts for 2015

In autumn 2013 the forecast of the net borrowing requirement in 2015 was SEK 18 billion. Then it was assumed that 2015 would be characterised by a strong recovery of the global economy and that the Swedish economy would therefore gain momentum from international developments. But this did not happen and up until autumn 2014 the Debt Office underestimated the net borrowing requirement.

Table 3 Annual forecasts for 2015

SEK billion	2014 Dec	2015 Feb	2015 Jun	2015 Oct	Out-come
Primary borrowing requirement	**30**	**52**	**46**	**22**	**11**
of which on-lending	5	10	10	10	10
of which income from sales	0	0	0	0	0
Interest on the central government debt	**21**	**29**	**25**	**24**	**21**
Net borrowing requirement	**51**	**80**	**71**	**45**	**33**
Net borrowing req., excl. on-lending and sales income	**46**	**71**	**61**	**36**	**23**

In late 2014 and early 2015 there was a downward revision of the assumptions about global growth. Geopolitical tensions in the Middle East and Ukraine and weaker developments in the emerging economies dampened expectations for the future. This led to the upward revision of forecasts of the net borrowing requirement. In the first central government borrowing report (2015:1) the forecast was SEK 80 billion, see table 3.

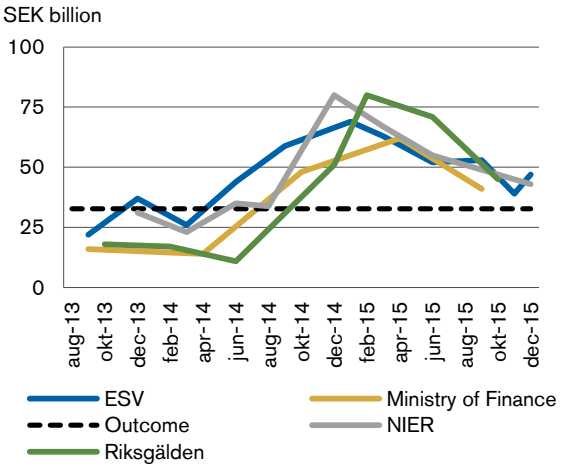
Global growth in 2015 was moderate. Despite this the Swedish economy showed surprisingly strong growth, driven by domestic demand. The forecasts of the net borrowing requirement were adjusted downwards gradually in the second half of the year, mainly because tax payments exceeded expectations. But the net borrowing requirement was still over-estimated. The deviation between the final forecast and the outcome was just under SEK 13 billion.

Comparison with forecasts by other government agencies

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

These agencies and the Ministry of Finance have different principles for dealing with sales income in forecasting contexts. To simplify comparisons this income has been excluded from figure 14, see below. All the forecasters had a similar profile in their forecasts. In autumn 2013 and in early 2014 the net borrowing requirement was underestimated. After that the forecasts were revised strongly upwards on account of weak global prospects for growth.

Figure 14 Comparison with other agencies



In the second half of 2015 the forecasts were gradually revised downwards. Nevertheless all these forecasters overestimated the net borrowing requirement in their final forecasts for the year.

Monthly forecasts

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 Debt Office follows up the precision of its monthly forecasts using the measure of Root Mean Square Error, RMSE.[7]

Figure 15 Deviation in monthly forecasts according to RMSE, 2011–2015

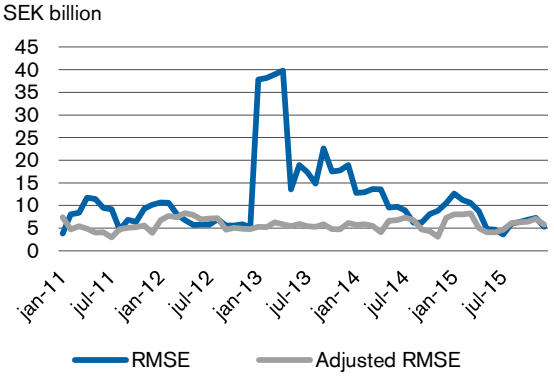


Figure 15 shows the development of RMSE since 2011. It can be seen that RMSE decreased in 2015 compared with 2014.

[7] *RMSE is defined as*

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

where e_t is the forecasting error (outcome of the net borrowing requirement as a proportion of the last published forecast) for month t. The Debt Office updates its forecast every four months, so the RMSE is based on the forecasting error in the past four months.

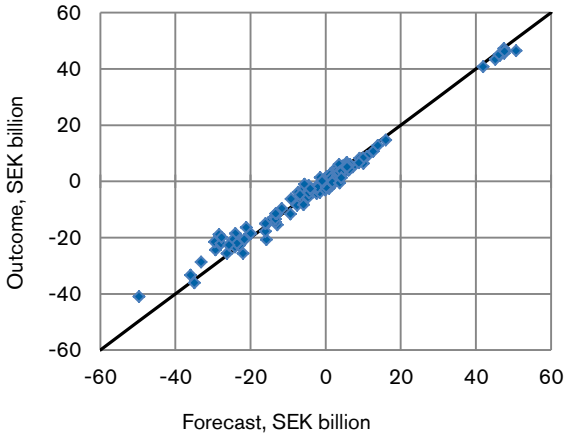
On occasion the net borrowing requirement has been affected strongly by the Debt Office's on-lending and income from sales of state-owned enterprises. For this reason an adjusted RMSE excluding these items is also presented. Expressed in terms of this measure, the precision of forecasts has been relatively even during the period.

Daily forecasts

The Debt Office also makes daily forecasts for the coming six months so as to plan its liquidity management. Unlike the annual and monthly forecasts, the daily forecasts are updated continually as new information becomes available.

The average deviation per day was SEK 131 million in 2015. Figure 16 shows daily outcomes and forecasts for central government's net primary borrowing requirement when the Debt Office's net lending to all other agencies has been excluded. The distance to the 45 degree line is the deviation in the forecast for each day. If the forecasts did not have any information value, the points in the figure would be distributed randomly.

Figure 16 Forecast and outcome on a daily basis



The largest deviations at the daily level concerned tax income. Compared with previous years the pattern of payments for tax income changed in 2015. A larger share of taxes was paid in early in the month and a considerably smaller share than before was paid on the due date.

This change in the payment pattern could be an effect of the low level of interest rates. Since tax accounts gave tax-free interest of 0.56 per cent in 2015, there was an incentive to bring tax payments forward. Nor can the possibility that companies have used their tax account to place liquid funds be ruled out.

5 Summary of borrowing

This chapter gives a summary overview of the Debt Office's borrowing requirement and borrowing in 2015. Even though the budget deficit decreased, gross borrowing increased by SEK 46 billion.

At year-end the central government debt was SEK 1 403 billion. The net borrowing requirement in 2015, i.e. the deficit in the central government budget, was SEK 33 billion, which is SEK 40 billion lower than for 2014. In contrast, gross borrowing increased by SEK 46 billion and reached SEK 479 billion. The increase is due to large maturities of money market loans in 2015, as shown in table 4.

Table 4 Gross borrowing requirement

SEK billion	2014	2015
Net borrowing requirement	**72**	**33**
Business day adjustment etc.[1]	**–4**	**0**
Retail market & collateral, net[2]	**3**	**31**
Maturities, money market[3]	**180**	**256**
T-bills	94	88
Commercial paper	39	124
Liquidity management instruments	47	44
Maturities, switches and buybacks, capital market	**182**	**160**
Government bonds	89	75
Inflation-linked bonds	8	31
Foreign currency bonds	86	54
Total borrowing requirement, gross[4]	**433**	**479**

[1] *Adjustment for difference between settlement date and business date.*
[2] *Net change in retail market borrowing and collateral.*
[3] *Initial stock maturing within 12 months.*
[4] *Refers to borrowing requirement in the institutional market.*

Interest rates fell to record low levels in 2015. Ten-year government bonds were issued at an average yield of 0.48 per cent, compared with 1.35 per cent in 2014.

The Debt Office continued to give priority to borrowing in government bonds, which is the most important borrowing instrument in the long term. A total of SEK 86 billion was issued compared with SEK 77 billion in 2014 (see table 5).

In the case of inflation-linked bonds the planned issue volume was SEK 18 billion. The amount issued reached SEK 17 billion since some issues were not fully subscribed.

Table 5 Total gross borrowing

SEK billion	2014	2015
Money market, borrowing	**256**	**284**
T-bills	88	141
Commercial paper	124	87
on behalf of central government	117	78
on-lending to the Riksbank	6	9
Liquidity management instruments	44	56
Capital market, borrowing	**177**	**194**
Government bonds	77	86
Inflation-linked government bonds	17	17
Foreign currency bonds	84	91
on behalf of central government	25	38
on-lending to the Riksbank	59	53
Total gross borrowing	**433**	**479**

During the year the Debt Office raised bonds in foreign currencies corresponding to SEK 91 billion, compared with SEK 84 billion in the preceding year. The increase is primarily due to an increase in borrowing on behalf of central government to SEK 38 billion from SEK 25 billion. The remainder, SEK 53 billion, related to refinancing of loans to the Riksbank. A further SEK 9 billion of the Riksbank's maturing loans was refinanced with commercial paper.

The Debt Office was able to borrow in foreign currencies on good terms during the year despite periods of uncertainty about US monetary policy and volatility in the interest and stock market.

The outstanding stock of T-bills amounted to SEK 141 billion at the end of 2015. This is SEK 53 billion more than the preceding year. The Debt Office uses T-bills both in its regular debt management and in its liquidity management. The increase in the T-bill stock in 2015 is because the Debt Office issued more as part of its liquidity management.

6 Capital market borrowing

Most of the central government debt is financed by issuing government bonds, inflation-linked bonds and foreign currency bonds. This chapter describes the Debt Office's policy for borrowing using each of these instruments and to what extent the instruments were used in 2015.

6.1 Government bonds

Government bonds are the Debt Office's largest and most important funding source. Government bonds are therefore given higher priority than other instruments in borrowing. The volume issued is of great importance for the liquidity and pricing of these bonds in the secondary market.

The Debt Office offers regular issues according to a pre-determined issue plan. Selling small volumes on many occasions reduces the risk of needing to borrow large volumes in unfavourable market situations. 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 money market instruments.
- The Debt Offices seeks to maintain an even maturity profile up to ten years. New ten-year government bonds are introduced at intervals of 12–18 months. When the borrowing requirement is small, the Debt Office can choose to have a longer interval between these issues in order to ensure a sufficient volume of and good liquidity in the bonds.
- The Debt Office primarily issues in ten-year and five-year maturities.
- Issues in two-year maturities are made to support liquidity in the forward market or to spread borrowing when the borrowing requirement is large. Issues may also be made of bonds with maturities between 2, 5 and 10 years to support liquidity in situations of shortages.
- When the market situation permits, the Debt Office may issue bonds with a maturity longer than 12 years.

Considerations during the year

Issue volumes

In the first borrowing forecast for the year (2015:1) the planned issue rate for government bonds was increased from SEK 77 billion to SEK 88 billion per year.[8] Since then the planned issue rate has been unchanged, see table 6.

Table 6 Planned borrowing in bonds

SEK billion	2015	2016	2017
2014:3	77	77	
2015:1	86	88	
2015:2	86	88	
2015:3	86	88	88
Outcome	86		

New ten-year government bond in 2015

A new ten-year government bond, *SGB 1059*, was introduced in May 2015. The bond became reference bond in December 2015. According to established practice, switches were offered to the new bond in connection with the introduction and further switches were also offered before the bond became the reference bond.

Long bonds

According to the government guidelines the long-term benchmark for the stock of government bonds with maturities of more than twelve years is to be SEK 70 billion.

The Debt Office regularly examines market interest in long bonds. The Debt Office judged during the year that the interest was not sufficient to issue long bonds. The outstanding stock of long bonds at the end of the year was SEK 54.8 billion, which is the same volume as at the start of the year.

Result of borrowing activities

All sales of bonds were held as auctions. In January and February the volumes offered were SEK 3.5

[8] *Since a number of issues had already been made at the lower annual rate, the increase meant that the plan for 2015 was increased to SEK 86 billion.*

billion per auction, but as of March this was increased to SEK 4 billion. Auctions were held on 22 occasions and at 17 of them the auction volume was divided between two bond bonds.

During the year a lower share of reference bonds was issued than in previous years. Since the issue volume was relatively large, there was not the same need as before to concentrate borrowing on ten-year bonds, see table 7.

Table 7 Volume issued and average yield

Bond	Volume issued SEK million	Average yield, per cent
SGB 1052 4.25% 12 Mar 19	11 250	–0.16
SGB 1047 5% 1 Dec 20	4 000	0.14
SGB 1054 3.5% 1 Jun 22	21 500	0.39
SGB 1057 1.5% 13 Nov 23	17 650	0.63
SGB 1058 2.5% 12 May 25	23 500	0.62
SGB 1059 1.0% 12 Nov 26	8 000	1.00
Total	85 900	0.48

The reference bonds in the electronic interbank market were SGB 1051 (2 years), SGB 1047 (5 years) and SGB 1058 and 1059 (10 years).

In addition to the auctions, switches to the new ten-year bond *SGB 1059* were offered during the year. In these switches, new bonds were sold for more than SEK 30 billion at the same time as the Debt Office bought back parts of bonds *SGB 1057* and *SGB 1058.*

Market conditions

The demand for bonds was good during the year. Only one auction sold less than the volume offered. Many investors think that the auctions are good opportunities to buy large sums at current market interest rates. One illustration of this is that on two occasions during the year one participant took the whole volume of an issue. The average cover ratio decreased to 2.51 from 3.03 in the previous year, see table 8. The average for the last five-year period is 2.49.

Table 8 Cover ratios and average issue yield

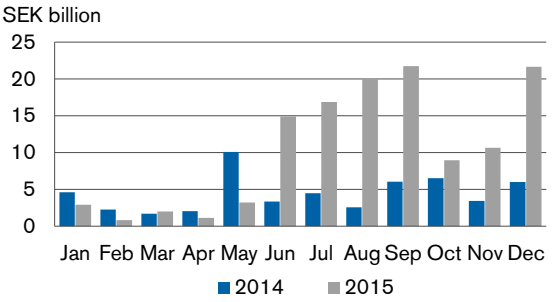
	2011	2012	2013	2014	2015
Cover ratio[1]	2.43	2.12	2.38	3.03	2.51
Average issue yield, per cent[2]	2.42	1.57	1.87	1.35	0.48

[1] *Bid volume received as a proportion of issue volume offered.*
[2] *Outright auctions only, i.e. exchange auctions and syndication not included.*

Market commitment

Figure 17 shows that repos of government bonds were much larger in 2015 than in 2014. This may be a sign that liquidity in the market for government bonds has deteriorated. During the year the Riksbank bought government bonds amounting to a nominal value of SEK 135 billion (see the box on page 7). Some of these bonds were previously owned by investors who were prepared to repo them. But the Riksbank does not repo any bonds, and this may explain why the Debt Office's repo facility has been used more than before.

Figure 17 Market-commitment repos, monthly average



6.2 Inflation-linked government bonds

Inflation linked government bonds are a complement to nominal government bonds. By issuing inflation-linked bonds the Debt Office can attract investors who want to avoid the risk of inflation eroding the value of their bonds.

Policy

- The Debt Office seeks to maintain 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 with government bonds in terms of maturities as far as possible.
- Auctions are held regularly and with small volumes so as to reduce the risk of borrowing large volumes in unfavourable market situations.

Considerations during the year

Countering the low share of inflation-linked bonds

According to the government guidelines inflation-linked debt is to make up 20 per cent of the total central government debt. This share is a long-term benchmark and the Debt Office does not take any

immediate action to reach this target. However, the inflation-linked share has been below the benchmark for several years, see figure 9 in chapter 3.

The inflation-linked share mainly depends on the development of the net borrowing requirement and the central government debt. Large increases or decreases in the net borrowing requirement cannot be addressed by large changes in the stock of inflation-linked bonds. Nor is the Debt Office able to use derivatives to adapt the share of inflation-linked debt in the same way as it does with the foreign currency debt.

The Debt Office planned to issue SEK 18 billion in inflation-linked bonds in 2015, which was judged to be the supply that could be handled by the market in the prevailing market situation. Table 9 shows that the issue volume reached SEK 17.3 billion as some issues were not fully subscribed.

Table 9 Change in inflation-linked debt

Outstanding stock at the end of 2014	**203.2**
Auctions	17.3
Net outcome of auction switches	–1.6
Maturities	–23.3
Net of market supporting exchanges	–6.3
National Debt Savings, inflation-linked	–0.2
Assigned bonds	–0.1
Other market maintenance	0.3
Inflation adjustment	–6.0
Outstanding stock at the end of 2015	**183.3**

During the year bond *SGB IL 3015* matured and this reduced the stock of inflation-linked bonds by SEK 23.3 billion. The stock also decreased as a result bond exchanges. The inflation-linked bond stock fell by just under SEK 20 billion.

Measures to make the maturity profile more even
The Debt Office introduced two new inflation-linked bonds in 2015. First, a four-year bond intended contribute to a more even maturity profile in the short part of the real yield curve, and, second, a bond with a maturity of 17 years. The purpose of issuing a new long bond was to offer a complement to the longest bond that makes up a large part of the inflation-linked debt.

Result of borrowing activities

Sales of inflation-linked bonds take place in several forms. The Debt Office conducts both auctions and switches. Auctions were held on 18 occasions during the year. On 15 of them the action volume was divided between two different bonds. This enabled the Debt Office to draw on the interest in bonds with different maturities. The Debt Office issued five different inflation-linked bonds with maturities of between four and 17 years. The issue volumes are presented in table 10.

Table 10 Volume issued and average yield

Inflation-linked bond	Volume issued (SEK billions)	Average yield, per cent
SGB IL 3110 (2019)	5.3	–1.10
SGB IL 3102 (2020)	1.0	–1.13
SGB IL 3108 (2022)	2.7	–0.66
SGB IL 3109 (2025)	7.1	–0.66
SGB IL 3111 (2032)	1.3	–0.05
Total	17.3	–0.78

In addition, the Debt Office held switch auctions during three periods. In February exchanges were carried out in connection with the introduction of the four-year bond. Exchanges were also carried out when the 17-year bond was introduced. Finally, exchanges were carried out in December as part of the Debt Office's policy of reducing the stock of short bonds whose volume exceeds SEK 20 billion.

Market conditions

In 2015, as in the preceding year, the market conditions for sales of inflation-linked bonds were sometimes difficult and unpredictable. Ever lower inflation expectations in combination with the decline in interest rates resulted in strong variations in demand. Despite this the Debt Office was able to keep the annual volume offered at the same level as in the previous year. The bid volume was slightly higher than in the previous year and all but two of the auctions were fully subscribed. The cover ratio in the auctions rose from an average of 2.98 in 2014 to 3.41 in 2015, see table 11.

Table 11 Cover ratio and average issue yield

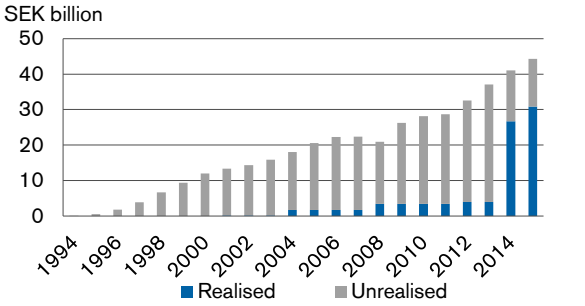
	2011	2012	2013	2014	2015
Cover ratio[1]	5.24	5.83	3.88	2.98	3.41
Average issue yield, per cent[2]	0.55	–0.01	0.23	0.03	–0.78

[1] *Bid volume received as a proportion of issue volume offered.*
[2] *Outright auctions only, i.e. exchange auctions not included.*

Cost evaluation of inflation-linked borrowing
Since inflation-linked bonds were introduced in 1994, inflation has been lower than the average break-even inflation in the issues. The cost of the inflation-linked debt has therefore been less than for a hypothetical nominal debt with the same maturity.

Figure 18 shows that the calculated result since 1994 has accumulated to SEK 44.3 billion, of which SEK 30.8 billion has been realised. A large part comes from the initial years when the inflation-linked stock was built up. At that time break-even inflation was much higher than it has been recently. The result for 2015 was SEK 3.3 billion.

Figure 18 Result of inflation-linked borrowing



The inflation adjustment in 2015 was 0.1 per cent measured as CPI growth.[9]

Market commitment

The Debt Office offers switches of inflation-linked bonds in order to improve liquidity in the market. When the Riksbank started buying government bonds in spring 2015, there was speculation in the market that the bank would also buy inflation-linked bonds. The Debt Office's primary dealers felt then that liquidity in the market for inflation-linked bonds deteriorated. To counter this, the Debt Office decided to increase switch volumes.

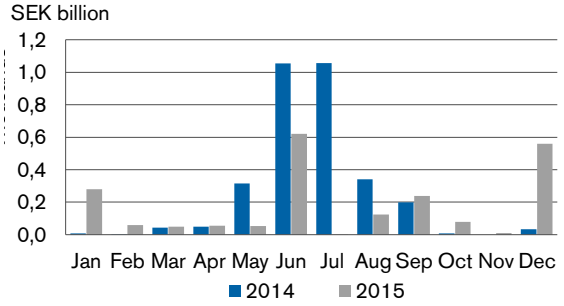
When an inflation-linked bond has one year left to maturity the switch offer ends. Instead a limited buyback facility is offered. The objective is for no bond to be larger than SEK 20 billion when it matures.

For several reasons the Debt Office has the ambition of spreading the inflation-linked debt over more but smaller issues. If the size of the issues is smaller, this reduces the need for switches and buybacks on bonds with short maturities. The idea is that a bond should be only so large that it can mature without causing problems. Moreover, investors usually have restrictions on how much they can invest in an individual bond. This can inhibit demand for large issues. Smaller issues also make it easier for primary dealers to handle risks when they quote prices for inflation-linked bonds.

[9] *Inflation-linked bonds are indexed to the CPI with a lag of three months. This figure therefore refers to inflation in the period October 2014 to October 2015.*

The repos in inflation-linked bonds have considerably lower volume than corresponding repos in government bonds. In 2015 the average repo volume was about 180 million compared with about SEK 260 million in 2014, see figure 19.

Figure 19 Market-commitment repos, monthly average



6.3 Foreign currency bonds

Issuing foreign currency bonds spreads the financing of the central government debt across more markets and broadens the investor base. In contrast to the auctioning of government bonds, the Debt Office uses syndication to sell public bonds in foreign currencies (see the box on the next page).

In the international capital market the Debt Office is able to borrow large sums in a short space of time. So there are reasons for borrowing regularly in foreign currency even when the borrowing requirement is small since this maintains the preparedness to borrow large amounts if needed. For the same reason the issuance of public bonds has priority ahead of private placements when foreign currency borrowing is small.

Policy

- Foreign currency bonds are a complement to bonds in Swedish kronor. The volume issued in foreign currencies depends primarily on the size of the net borrowing requirement.
- The Debt Office issues small volumes in foreign currencies even when the net borrowing requirement is small so as to maintain its market presence.
- The Debt Office also finances on-lending to the Riksbank by issuing bonds and commercial paper in foreign currencies.

The timing of and conditions for an issue determine whether the issue is successful. This means that both the Debt Office and investors have to be

satisfied. For the Debt Office, the point is to borrow at as low a cost as possible. But for investors to be satisfied there must still be demand for the bond after the issue. Well-considered terms create a demand that is so large that most, but not all, investors receive an allocation in the issue. This may prevent the value in the secondary market from falling. Satisfied investors are more likely to participate in the next issue than dissatisfied investors.

Considerations during the year

When the Debt Office adjusted the net borrowing requirement upwards in February, planned foreign currency borrowing was also raised from SEK 25 to 40 billion. That plan then remained in place for the rest of the year.

Result of borrowing activities

In 2015 the Debt Office borrowed a slightly larger amount via the international capital market than in the previous year. This is explained by an increase in borrowing on behalf of central government. The total borrowing was SEK 91 billion, of which SEK 53 billion related to on-lending to the Riksbank. On behalf of central government, the Debt Office issued a two-year private placement and two public bonds with maturities of three and five years, all in USD. On behalf of the Riksbank, the Debt Office issued two bonds totalling USD 4.8 billion and a bond of EUR 1.5 billion.

Market conditions

The Debt Office was also able to raise new bonds on favourable terms in 2015, and this was due both to the continued low level of interest rates and to the interest shown by investors in government securities with high credit ratings. The international supply of bonds with the highest credit rating was limited in 2015. Only Germany and the United States could borrow at lower interest rates than Sweden.

Uncertainty concerning the Fed's monetary policy and the ECB's buyback programme periodically generated volatile markets. As a result the Debt Office and equivalent borrowers had, in the autumn, to pay interest rates that were above the US swap curve.[10] Despite the at times turbulent market, the Debt Office's issues were oversubscribed. This led to an increase in the value of the bonds in the secondary market after the date of the issue.

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

Public bonds and private placements in foreign currencies

The Debt Office sells foreign currency bonds through what is called syndication. This means that the Debt Office engages a group of banks, a syndicate, to execute the sale. The bonds are marketed publicly and investors are offered the opportunity to subscribe to buy bonds. Such a bond is called a 'public bond' since it is sold openly to many investors.

A 'private placement' in foreign currency is also a bond but it is not marketed publicly and is sold direct to one investor or a few investors instead. In these cases it is normal to only engage one bank to sell the bond.

Both public bonds and private placements are sold with documentation under English law and are termed eurobonds. A eurobond can be issued in any currency.

The bond in EUR was issued at 24 basis points under six-month Euribor, see table 12. This must reasonably be regarded as a low level since the Debt Office, unlike countries in the euro area, cannot regularly offer large issues in EUR. On average, the USD bonds were issued at 7 basis points under three-month USD Libor. Euribor and USD Libor are standardised bank interest rates used for comparisons.

Table 12 Relative borrowing cost of foreign currency bonds

Basis points	2011	2012	2013	2014	2015
USD Libor[1]	–9	–15	–5	–7	–7
Euribor[2]	–55	–51	–11	–15	–24

[1] Three-month bank interest rate.
[2] Six-month bank interest rate.

The year showed that the Debt Office can borrow on good terms even in periods characterised by great uncertainty. The Debt Office's investor base is broad in terms of both categories and geography. Central banks were the largest single category of investors even though some central banks that have historically been buyers reduced their holdings. Most of the investors were Asian.

7 Money market borrowing

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

In the money market the Debt Office borrows at short maturities, mainly by issuing T-bills and commercial paper. These instruments are used both in regular borrowing and in liquidity management. For example, T-bills are included in the Debt Office's issue plan, but bills can also be used to respond to temporary fluctuations in the borrowing requirement. In other words, there is no sharp dividing line between regular borrowing and liquidity management.

7.1 T-bills

Using T-bills the Debt Office can borrow at short maturities in the Swedish krona market. T-bills are issued regularly via auctions.

To some extent borrowing in T-bills is adapted to seasonal variations in the borrowing requirement. The central government borrowing requirement is generally largest in December, as illustrated by the pattern in figure 20.

Policy

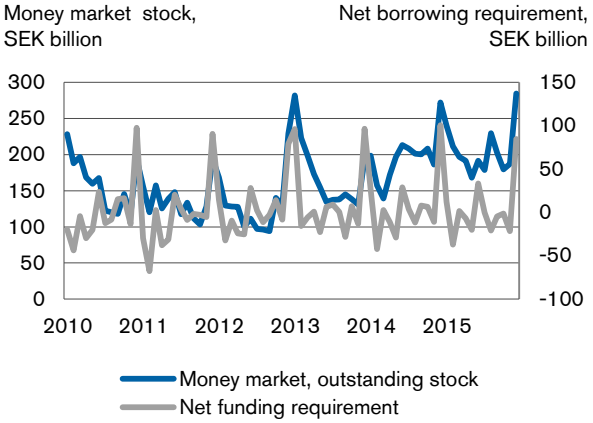
- The Debt Office issues T-bills with maturities of up to six months.
- Every three months the Debt Office issues a new six-month bill. In the other months a new three-month bill is introduced.
- The two T-bills with the shortest maturity are issued on tap when required, as are liquidity T-bills (T-bills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

Deliberations during the year

The Debt Office analysed the possibility of spreading the stock of bills over more, smaller issues. However, following views from market participants the Debt Office judged that the conditions were not in place to increase the number of outstanding T-bills.

At the beginning of the year a rise was forecast in the stock of T-bills on account of the increase in the borrowing requirement. During the year the outstanding stock then increased from SEK 88 billion to SEK 141 billion at the end of the year. The increase was greater than planned since at the end of the year the Debt Office issued more than expected as part of its liquidity management.

Figure 20 Money market instruments and net borrowing requirement



Result of borrowing activities

The average interest rate in the auctions was lower than in the preceding year, and this is a consequence of the low repo rate. The cover ratio was at the same level as last year, see table 13.

Table 13 Cover ratio and average issue rate

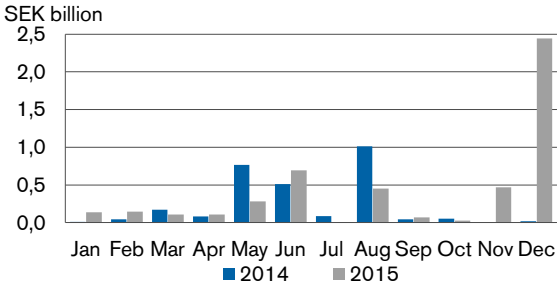
	2011	2012	2013	2014	2015
Cover ratio[1]	1.80	2.15	2.14	2.21	2.15
Average rate, per cent[2]	1.60	1.14	0.90	0.41	–0.34

[1] *Bid volume received as a proportion of issue volume offered.*
[2] *Only pure auctions, i.e. exchange options not included.*

Market commitment

Figure 21 shows that the repo volumes were at about the same level in 2015 as in the preceding year. The exception was the month of December. The background to this may be that the commercial banks often want to shrink their balance sheets before their year-end closing, and this makes them unwilling to accept deposits over the turn of the year. This then means that participants who need to place their liquidity in the short term must look for other placement alternatives, such as T-bills.

Figure 21 Market-commitment repos, monthly average



In the run-up to the end of 2015 many banks appeared to be even more unwilling to accept deposits than had been the case historically. This might be explained by the fact that the size of a bank's liabilities at the end of the year now forms the basis for the new resolution fee. The banks have therefore been given an even stronger incentive to shrink their balance sheets.

7.2 Commercial paper

The Debt Office supplements bill borrowing by issuing commercial paper in foreign currencies, i.e. securities with very short maturities. If the securities are hedged they are, in practice, a replacement for T-bill borrowing,

The advantage of commercial paper is that the Debt Office is able to exploit the international demand for short government securities in foreign currencies. In the international money market the Debt Office is able to borrow large amounts in a short space of time, which is valuable in responding to large variations in the central government cash flow.

In recent years commercial paper has become an increasingly important instrument for the Debt Office. One reason for this is that the T-bill market has not been deep enough to enable the Debt Office to increase the stock of bills rapidly if the borrowing requirement increases at short notice.

Market conditions

The market for commercial paper functioned well during the year. The only event that changed the situation temporarily was when the Federal Reserve increased its key interest rate. The increase was preceded by great uncertainty in the market. After appearing to be very liquid the market came to a halt temporarily. The Debt Office then chose to issue commercial paper in GBP instead.

In 2015 the Debt Office issued commercial paper for the equivalent of SEK 228 billion, of which SEK 207 billion was on its own behalf. SEK 205 billion was issued in USD and the remainder in GBP.

7.3 Liquidity management

In liquidity management the Debt Office borrows or places funds so that central government can meet its payment commitments every day. In addition to T-bills and commercial paper the Debt Office also uses bank loans and bank deposits, liquidity bills (T-bills with customised maturities) and two- and three-party repos (repos with a basket of collateral administered by a third party).

Policy

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

Market conditions

The market was characterised by low inflation expectations and falling interest rates. During the year the Riksbank lowered the repo rate on three occasions, from zero per cent at the start of the year to -0.35 per cent at the beginning of July.

In February the Riksbank decided to buy government bonds. Its purchases increased during the year and at the end of 2015 the Riksbank had bought government bonds for SEK 135 billion (see the box on page 7). The bond purchases meant that the bank system's liquidity surplus in relation to the Riksbank increased from SEK 50 to 214 billion during the year.

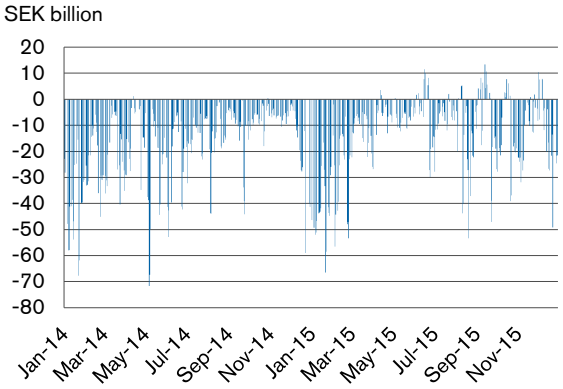
The large liquidity surplus made it easier for the Debt Office to borrow money in the short term than to place money in the deposit market. Previously the Debt Office could both borrow and place money overnight at the repo rate but during the year the interest rate on investments has often been 10 basis points below the repo rate. To avoid overnight placements the Debt Office therefore plans its liquidity so that a borrowing requirement usually arises at the end of the day. This planning requires good forecasts of the central government borrowing requirement on a daily basis. Even

though the Debt Office's daily forecasts generally have high precision (see figure 16 in chapter 4), there are sometimes payments that are hard to foresee.

Result of borrowing activities

The result of liquidity management depends on the size of central government payments and the interest rate at which the Debt Office can borrow and place money. Figure 22 shows the Debt Office's transactions in the part of the deposit market with the shortest maturity, the 'overnight market'. Here it can be clearly seen that the Debt Office usually borrows money overnight.

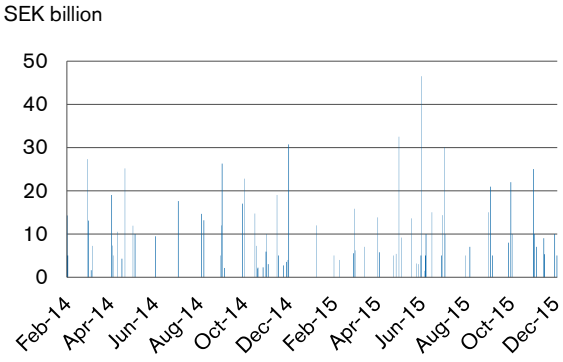
Figure 22 Volumes in the overnight market



By planning the liquidity management efficiently, the Debt Office can borrow and place on better terms. For example by placing surpluses in repos, which give higher interest rates than placements in the deposit market. The Debt Office's placements via repos are illustrated in figure 23.

The commercial paper issued by the Debt Office in its liquidity management had maturities from one week to three months, with an average of about two months. During the year slightly less use was made of commercial paper than in 2014. The borrowing cost was usually under the Riksbank repo rate.

Figure 23 Volume of reverse repos and three-party repos



Flows in foreign currencies and currency exchanges

New and maturing loans, interest payments, EU payments and collateral transfers (CSA flows) are examples of what generates flows in foreign currencies. The Debt Office makes forecasts of foreign currency flows and usually exchanges the net of all flows at an even rate over the forecast period. Since the gross flows are not evenly distributed over time, FX forwards are used to adjust the flows.

During the year the Debt Office made an exception from the principle of keeping a completely even pace of currency exchanges. In order to handle currency exchange losses the pace was increased in June and reduced again in September. This decision did not entail an elevated risk of carrying out the currency exchanges at unfavourable points in time since they took place over a short period. Over and above the currency exchanges that followed from the decision by the Government to reduce the foreign currency debt (see section 3.2), the exposure in euros was also reduced.

8 On-lending of foreign currency

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

On-lending to the Riksbank is financed by the Debt Office raising foreign currency bonds that are, in principle, earmarked for the Riksbank. This borrowing is concentrated in large benchmark bonds in the capital market with maturities of up to five years.

At the end of 2015 this on-lending amounted to EUR 5.5 billion and USD 22.6 billion. Measured using the exchange rates on 31 December 2015, this corresponds to around SEK 240 billion.

In 2015 the Debt Office refinanced bonds on behalf of the Riksbank with a value corresponding to SEK 53 billion: two bonds totalling USD 4.8 billion and one loan of EUR 1.5 billion. In addition, the Debt Office raised the equivalent of SEK 9 billion in commercial paper on behalf of the Riksbank, also to replace maturing bonds.

The Riksbank reimburses the Debt Office for the interest expense and administrative costs the Debt Office has for raising the bonds.

On instructions from the Government, the Debt Office has also provided credit facilities for Ireland as decided by the Riksdag. The Debt Office does not earmark 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. Lending to Ireland amounted to EUR 600 billion on 31 December 2015.

9 Derivative instruments

The Debt Office uses interest rate swaps, basis swaps and FX forwards to achieve the desired interest rate and currency exposure in the central government debt.

By using derivative instruments the Debt Office is able to borrow in a flexible and effective way while keeping risks within the limits set out in the government guidelines.

9.1 Interest rate swaps

Interest rate swaps are used to shorten the duration of the debt, and this has been justified by it being cheaper to borrow in shorter than in longer maturities. Without swaps it would not have been possible to attain the duration that the central government debt has had historically since the market for T-bills is not deep enough. In addition, the refinancing risk would have been high.

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

In 2015 the Debt Office swapped SEK 13 billion of bond borrowing to short interest rate exposure in Swedish kronor. The average swap spread was 44 basis points. The swap spread is the difference between the fixed interest rate on a swap and the interest rate on a government bond with the same maturity.

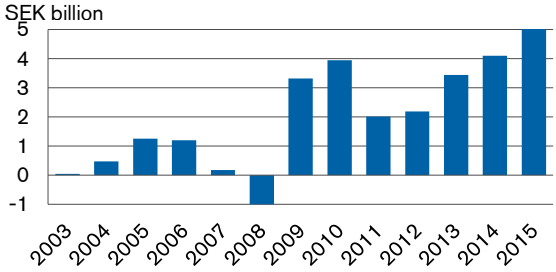
During the year fewer interest rate swaps than planned were carried out since, at the end of the year, the Debt Office made preparations for the extension of the maturity of the central government debt decided by the Government in its guidelines for 2016.

Result of activities

Figure 24 shows the calculated result since swaps were introduced in 2003. The result is calculated as the difference between the floating interest paid by the Debt Office and the fixed interest received by the Debt Office so far in the swaps.

Since the start the use of swaps has decreased the costs of the central government debt by SEK 26 billion. This large saving is mainly because interest rates have been falling for a long time. In periods of rising interest rates the result may be significantly lower and may even be negative. In 2015 the calculated result was SEK 5.2 billion.

Figure 24 Net cash flows in interest rate swaps



Interest rate swaps

An interest rate swap is an agreement to swap a fixed interest rate for a floating interest rate with a counterparty. The Debt Office uses interest rate swaps to shorten the duration of the debt. This is done in the following way:

1. The Debt Office issues a government bond with, for example, a ten-year maturity and a fixed interest rate.
2. The Debt Office enters into an interest rate swap and receives fixed interest in return for paying three month interest (3M Stibor) for ten years.

The net effect is that the Debt Office pays floating interest for 10 years instead of paying fixed interest on the bond.

The fixed interest in the swap is normally higher than the fixed interest in the government bond. The Debt Office therefore pays 3M Stibor with a deduction corresponding to the difference between the swap and bond interest.

9.2 Basis swaps

The Debt Office uses basis swaps to transform Swedish krona bonds into foreign currency bonds (see the box below). The Government has decided that the foreign currency exposure in the central government debt is to decrease. As a result, no new basis swaps were entered into in 2015.

9.3 FX Forwards

FX forwards are used to achieve the desired distribution between different currencies in the foreign currency debt.

Policy

- FX forwards are used to adjust and maintain exposure in individual currencies.
- To keep the duration of the foreign currency debt within 0–1 years, FX forwards with a 3 months maturity are used.

By using derivative instruments the Debt Office can issue bonds in one currency, but create foreign currency exposure in another. Figure 25 shows how the foreign currency debt is financed while figure 26 shows its exposure to different currencies.

The figures show that there is a great difference between financing and exposure. Even though half of the foreign currency debt is financed in USD, the USD exposure is only 10 per cent. The reason why the Debt Office has chosen to reduce exposure to the USD is that its value varies a great deal in relation to the Swedish krona. Instead, the Debt Office has chosen to be exposed to the much more stable euro.

Figure 25 Financing in foreign currency

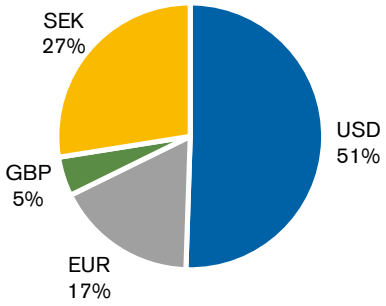
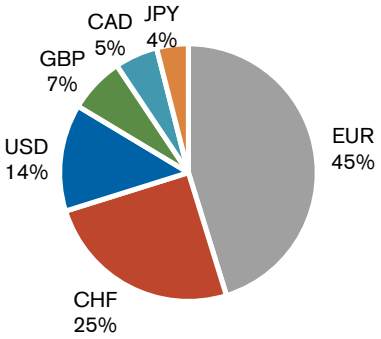


Figure 26 Currency exposure in the foreign currency debt



Market conditions

The market for FX Forwards functioned well during the year and the Debt Office could operate without affecting the price.

Swaps between Swedish kronor and foreign currency

The Debt Office can borrow in foreign currency in two ways:

1. by issuing foreign currency bonds or
2. by issuing government bonds and swapping the Swedish kronor borrowed into foreign currency.

Borrowing combined with swaps takes place in the following stages:

1. The Debt Office issues a government bond denominated in Swedish kronor
2. The fixed interest payment on the bond is swapped to a floating rate via an interest rate swap.
3. The floating rate in kronor is swapped to a floating rate in foreign currency through a basis swap. As part of the swap, the Swedish kronor borrowed are exchanged into foreign currency in a spot transaction (initial exchange), at the same time as the Debt Office undertakes to exchange the foreign currency back into kronor at a predetermined exchange rate when the swap matures (final exchange).

In effect the Debt Office has then borrowed in foreign currency with interest payments in foreign currency.

10 Positions

This chapter describes the conditions for and the result of the Debt Office's position-taking in foreign currency in 2015. It also reports the outcome of the special position initiated at the end of 2014 to lock in a negative interest rate on the Debt Office's debt in Swiss francs.

The Debt Office can take positions in foreign currencies to reduce the cost of or risk in the central government debt. These activities are conducted both internally and with the assistance of external managers.

The result for 2015 was SEK -2 million, of which SEK -47 million can be attributed to internal management and SEK 44 million can be attributed to external management, see table 14.

Table 14 Result of position-taking

SEK million	2011	2012	2013	2014	2015	Total
Internal running management	–163	–176	235	–216	–47	–367
External running management	–1	–24	–35	90	44	74
Board position	250	0	0	0	0	250
Total of positions	**86**	**–200**	**200**	**–126**	**–2**	**–42**

Running management

Internal management

The internal management operated during the year with a new stop-loss that limits losses to SEK 250 million in a rolling twelve-month period. The stop-loss takes effect gradually and already limits the scope for taking positions when small losses have been incurred.

The focus of position taking during the year was on the difference in growth rate and inflation between Europe and the US. The ECB continued to pursue an expansive monetary policy and began buying bonds during the year. The Federal Reserve went in the other direction and in December raised the interest rate for the first time since 2008.

The positions developed well in three out of four quarters of the year, but did less well in the second quarter. At that time German interest rates rose sharply over a short period and the dollar weakened. The Debt Office's new loss block took effect and limited the scope for positions, with the result that the loss was not recovered when the market turned around after a short period. The result for internal management amounted to SEK -47 million for 2015.

External fund management

The aggregate result of the external managers was SEK 44 million, but there was considerable spread between the managers. The external fund managers also focused on the divergence in monetary policy and a stronger dollar.

Special position

At the end of 2014 a special positon was initiated to lock the interest rate on the debt in Swiss francs to -0.16 per cent for up to three years. The design is a kind of insurance policy. The way it functions is that its market value is equal to the (present value) of future cost changes in the underlying debt. When the position matures its value will be zero.

At the end of January the Swiss central bank removed the floor for the Swiss franc and reduced its deposit interest rate to -0.75 per cent. As a result, the market value of the special position fell to SEK -375 million. But the interest rate decrease also meant that the Debt Office's costs for the underlying debt in Swiss francs will be SEK 375 million lower during the term of the position.

So the final result for the Debt Office is the locked-in borrowing cost of -0.16 per cent.

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 the period 2011–2015 internal running management gave a total deficit of SEK -367 million, while external management gave a surplus of SEK 74 million. Most of the difference in results between internal and external management arose in autumn 2014 when the internal management was not in operation and, to some extent, in autumn 2015 when the scope for positions was limited by the stop-loss.

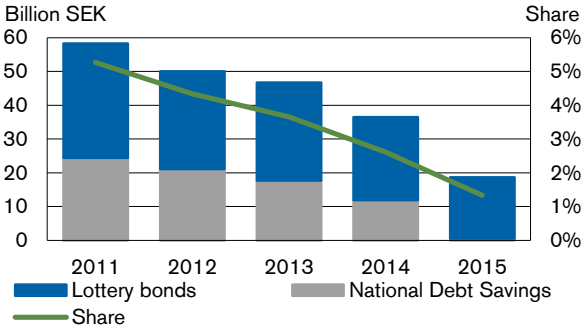
11 Retail market borrowing

The result of borrowing in the retail market is presented here. The objective is to borrow at a lower cost than in the institutional market. Because interest rates in the institutional market have been negative, retail market borrowing was not able to make any contribution to lower costs for the central government debt in 2015.

Negative result from the retail market

The Debt Office borrows not only in the institutional market but also from private individuals and other small investors who place money in lottery bonds and National Debt Savings. At the end of 2015 the retail market financed 1.3 per cent of the central government debt, which is a decrease of 1.3 percentage points compared with 2014, see figure 27.

Figure 27 Retail market share of central government debt



Retail market borrowing increased the cost of the central government debt by SEK 6.6 million in 2015, see table 25. This can be compared with a saving of SEK 71 million in the previous year. The reason for the poorer result is that this borrowing was at positive interest rates even though corresponding interest rates in the institutional market were negative. For the five-year period 2011-2015 the overall cost saving (result) was SEK 432.8 million.

Table 15 Saving from retail market borrowing

SEK million	2011	2012	2013	2014	2015
Lottery bonds	130.5	125.7	80.5	70.8	33.4
National Debt Savings	11.3	3.6	16.7	0.2	–40.0
Total saving	141.8	129.3	97.3	71.0	–6.6

New lottery bonds despite negative interest rate

The result for lottery bonds decreased from SEK 70.8 million to SEK 33.4 million. The poorer result is because the bonds issued during the year were sold at a higher interest rate than government bonds with the same maturity. The new lottery bonds were thus issued at a loss.

The Debt Office decided to issue lottery bonds as planned despite the loss so as to safeguard that form of loan and to promote sales in the longer term. The cancellation of an issue when an old loan matures risks reducing the customer stock and therefore future demand. To keep costs down the Debt Office did not hold a marketing campaign in connection with the issues in 2015.

Lottery bond 15:1 with a maturity of just less than two years was sold in April. The sales volume was SEK 1.3 billion. The lottery interest rate was set at the low level of 0.1 per cent, with the result that the highest prize was reduced from SEK 1 million to SEK 100 000 and the guarantee prize was removed. Despite the low interest rate the issue generated a loss of about SEK 20 million. This was the first time that a lottery bond was sold at a higher interest rate than the institutional borrowing rate.

Lottery bond 15:2 was sold in November on the same terms as lottery bond 15:1. The sales volume was SEK 1.5 billion. This issue also resulted in a loss.

National Debt Savings with floating interest rate closed

The result from National Debt Savings decreased from SEK 0.2 million to SEK -40.0 million since the Debt Office offered 0.01 per cent on the savings accounts despite the negative repo rate.

The Debt Office decided in May 2013 to close National Debt Savings with floating interest rate by the end of 2015. In November 2015 SEK 8 billion was therefore repaid to the account holders. At the end of the year there was still about SEK 120 million that the Debt Office had not been able to repay, due in part to there not being accounts to make payments to. Work on these payments is continuing in 2016.

Fixed-interest accounts were already closed for new account holders in 2012. Existing fixed-interest accounts continue to run to their original due dates. There are still some 7500 accounts with an aggregate value of about SEK 500 million. The last accounts mature at the end of 2020.

Shrinking market share

At the end of the year lottery bonds and National Debt Savings accounted for 1.1 per cent of the interest savings market in Sweden (bank deposits, fixed income funds and private bonds). This is a reduction of 1.2 percentage points during the year. The main explanation is greatly reduced volumes in a growing market

RIKSGÄLDEN
SWEDISH NATIONAL DEBT OFFICE

Besöksadress: Jakobsbergsgatan 13 • Postadress: SE-103 74 Stockholm • Telefon: 08 613 45 00
Fax: 08 21 21 63 • E-post: riksgalden@riksgalden.se • Internet: www.riksgalden.se