

RISK MANAGEMENT OF THE NATIONAL DEBT

Evaluation of the 2012-2015 policies

19 JUNE 2015

Contents

1	Executive Summary	4
1.1	Introduction to the policy area.....	4
1.2	Results	5
1.3	Interest rate risk policy	6
1.4	Implementation of the benchmark	8
1.5	Funding policy	9
1.6	Final conclusions and recommendations.....	10
2	Introduction to the policy area.....	12
2.1	Overview of the document	13
2.2	Current policy framework.....	13
3	Debt financing results.....	16
3.1	Risk profile compared to the benchmark	17
3.2	Realised costs compared to the benchmark	18
3.3	Total costs compared to the benchmark	20
3.4	Conclusion	21
4	Interest rate risk policy	22
4.1	Trade-off between costs and risks.....	22
4.2	Risk reduction	24
4.3	Transparency	24
4.4	Accountability.....	25
4.5	Interest rate risk policy in other countries.....	26
4.6	Conclusion	26
5	Implementation of the benchmark	27
5.1	Credit risk, concentration risk and settlement risk.....	27
5.2	The emergence of Central Clearing Parties (CCPs)	29
5.3	Collateral resulting from the current, exceptionally low interest rate.....	29
5.4	Operational risks	31
5.5	Difference between the sovereign yield curve and the swap yield curve	31
5.6	Implications of the transition to ESA2010	33
5.7	Conclusion	34
6	Funding policy	34
6.1	Predictable issuance	34
6.2	Transparency	35
6.3	Robust secondary market	36
6.4	Diversification of the debt portfolio	37
6.5	Risk reduction	37
6.6	Financing policy in other countries	40

6.7	Conclusion	40
	Appendix: Assessment of external experts.....	41

1 Executive Summary

1.1 Introduction to the policy area

This policy review concerns article 11 of Chapter IX of the budget, Finance and National Debt. The most recent evaluation was held in 2011. This review again evaluates all relevant aspects of the policy. Although the current policy framework runs until 1 January 2016, most of the analyses make reference to the period from 2012 to 2014 because complete figures are only available for these years.

The general objective of article 11 reads as follows: 'Debt financing at the lowest possible interest cost under an acceptable budgetary risk.' The 'budgetary risk' referred to in the objective concerns the extent to which the costs fluctuate year-on-year. This general objective is in keeping with the guidelines of the IMF and the World Bank.

The following aspects of the international guidelines are the most relevant to meeting the general objective:

1. Trade-off between costs and risks;
2. Risk reduction, with the interest rate risk as the most important risk;
3. Transparency;
4. Accountability;
5. Execution of stress tests;
6. Cash management;
7. Diversification of the debt portfolio;
8. Predictable issuance;
9. Robust secondary market.

The main components of the policy regarding the financing of the national debt are the interest rate risk and funding policies. Statements on the effectiveness and efficiency of this policy area can be made at two levels: the formulation of the policy framework and its implementation. Starting point for the evaluation are the IMF and World Bank guidelines referred to above and the questions laid down in the Periodic Evaluation Regulations (*Regeling Periodiek Evaluatieonderzoek, RPE*).¹

The following questions, taken from the RPE, are addressed in this policy review:

- Have the policy objectives been met?
- How effective has the policy been, and have there been any favourable and/or adverse side effects?
- How efficient has the policy been?
- Which policy options are available in a situation with significantly reduced resources, approximately 20% less, to carry out the policy in article 11?
- Which measures can be taken to increase the efficiency and effectiveness of the policy?

The interest rate risk framework lays down how the main budgetary risk - the interest rate risk - is managed both in the short and the long term. The core of the current framework dates back to 2008 and is based on following a benchmark. Talks with ten other Western countries indicate that most countries operate one or more benchmarks or targets to manage their risk.

The Dutch State Treasury Agency (referred to below as 'the DSTA') has used a 7-year centralised portfolio as its benchmark since 2008. A benchmark is an objective standard against which the performance of a debt manager can be measured. A centralised portfolio is one in which a bond with the same maturity and of the same size is continuously issued. The centralised benchmark

¹ Government Gazette 2014 no. 27142.

portfolio theoretically represents an optimum trade-off between costs and risk. In this situation the risk measure is the maximum amount for which the interest must be reset in a given year.

In practice the DSTA does not issue a 7-year bond every day because this strategy is not feasible for various reasons. The DSTA issues debt securities with maturities ranging from three months to more than thirty years. The most important elements of the funding policy are consistency, transparency and liquidity. The combined result of the financing choices yields a specific repayment profile that differs greatly from the benchmark. This outcome is steered towards the interest rate risk profile of the benchmark by using interest rate swaps.

Since 2012 it is possible, under certain conditions, to deviate from the benchmark portfolio. In that case, a bond is issued without entering into interest rate swaps which would adapt the interest rate risk of the issuance to that of the benchmark. One of the arguments in favour of this was that locking in relatively low interest rates for a longer period of time would increase the stability of interest costs and budgetary certainty in the longer term. It is only permitted to deviate from the benchmark if this does not increase the budgetary risk and therefore extends the maturity of the debt portfolio. It must also fit within the budget and not lead to any budgetary setbacks in the short term. Finally, there must be a significant chance that the initial higher interest costs, inherent in the extension of maturity, is recouped in subsequent years.

1.2 Results

The period from 2012 to 2014 was characterised by a combination of rising debts and falling interest rates. Both short- and long-term interest rates reached historically low levels. Annual interest payments in 2014, including income from interest rate swaps, have fallen by over 12% compared to 2012. In 2014 these payments totalled € 8.4 billion, or 1.3% of GDP.

To analyse the results more closely it is necessary to set off the development in actual interest costs against the interest costs in the benchmark, taking account of the risks taken. The principle outcomes in terms of risks and costs are accounted for each year in the annual report sent to parliament.

The costs compared to the benchmark are calculated on the basis of total costs, consisting of the realised and unrealised result. The realised results are the actual interest costs compared to the benchmark in given fiscal years. The unrealised result shows the implications for future interest costs if the current interest rate levels are maintained.

The benchmark has been replicated effectively in terms of the risk profile, the extent to which the budget is exposed to interest rate risks in given years. Differences between the benchmark and the actual portfolio (debt plus interest rate swaps) are largely the result of intentional deviations resulting from not swapping back long-term bonds. These deviations have led to lower future risks than those in the benchmark portfolio. More budgetary certainty is ensured by only allowing extensions of the debt maturity. It was decided to deviate from the benchmark in 88% of all issues with a maturity of longer than 10 years in the period from 2012 to 2014. In 12% of these issues it was judged that the probability of achieving a financial gain in the future by deviating from the benchmark was too small. Opting to deviate from the benchmark has made it possible to achieve a relatively large extension of the average term of the portfolio - from approximately 3.5 to 4.5 years - with a relatively small nominal amount, € 20 billion of a total debt of over € 350 billion.

The policy has also been effective in terms of realised costs. The cumulative interest costs of the actual portfolio in the years 2012 to 2014 were € 5 million lower than those of the benchmark. This implies a minimum positive result compared to the benchmark. Interest costs were € 425 million higher (and the result therefore lower) as a result of the intentional deviations from the benchmark. This is a direct consequence of the fact that the interest rates on the bonds in question

were higher than the 7-year interest rates in effect at the time of issuance. For this reason a higher interest rate will be paid over the first 7 years.

The benchmark is less effectively replicated in terms of overall costs, taking both the realised and the unrealised costs into consideration. The overall result of the actual portfolio compared to the benchmark is minus € 4.7 billion, measured over the period from 2012 to 2014. About three quarters of this result can be explained by the deviations from the benchmark. This result was driven mainly by the falling interest rates in recent years. If it had been decided to enter into interest swaps after all, they would have gained a positive market value through the lower interest rates. Not concluding interest swaps has led to a negative result compared to the benchmark. If the interest rates stay where they were at the end of 2014, the lost interest income from interest rate swaps will be about € 200 million a year for the remaining maturity of the bonds in question. On the other hand, the exposure to the interest rate risk will be reduced in the future, which improves budgetary certainty. After all, the interest rate will not have to be reset every 7 years, but will be fixed for 20 or 30 years. If the average 7-year interest rate over the remaining maturity following the first 7 years is higher than 2.7%, the deviations will not only lead to lower risks, but also to lower budgetary costs. The method used to deviate from the benchmark is in line with the objective of keeping the interest costs as low as possible at an acceptable risk. Without any deviations from the benchmark, the result would have been minus € 1.3 billion. This result can be attributed mainly to the differences between the sovereign yield curve and the swap yield curve. The sovereign curve determines the interest costs in the benchmark, whereas the swap curve determines the actual interest costs of following the swap strategy.

1.3 Interest rate risk policy

The way in which the interest rate risk policy has been formulated is intended to be in keeping with the relevant aspects of the IMF and World Bank guidelines: a trade-off between costs and risks, risk reduction, transparency, accountability and the execution of stress tests. These aspects have been taken as a basis for analysing the extent to which the interest rate risk policy has been effective and efficient. The 'execution of stress tests' aspect is discussed under the risk reduction aspect.

Trade-off between costs and risks

Both the benchmark and the deviations have been individually effective in that they contain explicit cost-risk assessments that have contributed to the objective of financing the national debt at the lowest possible interest rate under an acceptable budgetary risk. The decision to continue the 7-year benchmark after 2012 was based on an analysis showing that in view of the budgetary projections and market conditions at that time, reducing the average maturity of the debt would lead to a relatively large additional risk. Conversely, extending maturity on the basis of the interest rate curve at the time would result in relatively high additional costs.

It was decided in 2011 to make it possible to deviate from the benchmark under certain conditions. This change of policy was supported by the historically low interest rates and, accordingly, the asymmetrical nature of the direction in which interest rates could develop. The conditions under which a deviation is allowed, aim to balance costs versus risks. They limit the additional costs needed to contribute to lower interest rate risks and increased budgetary certainty in the longer term.

The trade-off between costs and risks for the 7-year benchmark and those for the deviations are of a different nature, which has been detrimental to the coherence of the overall policy. This has resulted in the benchmark becoming a less effective steering variable and, accordingly, less suitable as a means of measuring the performance of the debt manager. This is expressed, for example, in the increasing difference between the 3.5 year average maturity of the benchmark and

the 4.5 year average maturity of the actual portfolio at the end of 2014. Also, the benchmark was set for four years and not adapted to the changed circumstances after 2011, whereas the decision to deviate from the benchmark was always taken at the same time that long-term bonds were issued.

Risk reduction

In view of the preference to always set the interest rate for 7 years for new bonds, the benchmark theoretically minimises the interest rate risk and is therefore an efficient instrument for managing this risk. This was previously demonstrated in the evaluation of 2007.²

The 2011 evaluation included a more detailed analysis aimed at calculating the effects of a large interest rate rise and an increasing budget deficit on interest costs. It was concluded that the interest rate risk framework would offer only limited protection against shocks in the budgetary balance and external, structural interest rate shocks. It was, however, demonstrated that the 7-year centralised portfolio would offer sufficient protection against temporary smaller interest rate shocks.

In practice the benchmark is replicated as closely as possible through a combination of debt issuance and interest rate swaps. This strategy features a number of inherent inefficiencies that cause deviations from what is theoretically optimum. The strategy has also become less efficient in recent years owing to a combination of interest rate (and other) developments in the financial markets and the effects of new regulations. How these factors will develop in the future remains uncertain.

Introducing the opportunity to deviate from the benchmark could contribute to budgetary certainty for a period longer than the benchmark's 7-year horizon. This will effectively manage future fluctuations in the interest costs. The condition that deviations must fit within the budget prevents undesirable budgetary setbacks in the short term.

The design of the interest rate risk policy does not take account of risks other than the interest rate risk, such as the counterparty risk, liquidity risk and operational risks. These risks are now managed more or less separately from the management of the interest rate risk. For this reason it is sometimes unclear how various risks relate to each other.

Transparency

The DSTA is transparent about the benchmark and the deviations from it. It was already concluded in the 2011 evaluation that the benchmark has contributed to more transparency about the interest rate risk policy. The benchmark indicates in advance what the DSTA will do when implementing the national debt policy. Also, the conditions that have to be met for deviations from the benchmark have been laid down in advance. The deviations do however reduce advance transparency because it is not immediately clear which bonds will and will not be swapped back.

The benchmark also contributes to more transparency retrospectively. The results compared to the benchmark and the effects of deviations from it are reported in an annual report. It should be noted that the report on the results is difficult to understand for a reader who is unfamiliar with the subject matter. An explanation of the differences between the actual portfolio and the benchmark is usually technical and complex. The introduction of the deviations from the benchmark has made the subject even more complex.

Accountability

² See parliamentary document-31273-1-b1 "Risk management of the national debt, evaluation of the policy 2003-2007 & policy 2008-2011".

The benchmark contributes to accountability. Where applicable, the benchmark is a sound and objective measure against which the debt manager can be held to account. Where applicable, the benchmark has also worked effectively as a steering variable because it precisely sets out what the debt manager has to do. The debt manager is held to account not only for the realised interest costs laid down in the budget, but also for the total cost that includes the unrealised interest costs. Accountability is reduced because developments beyond the control of the debt manager, such as changes to the difference between the sovereign curve and the swap curve now have a substantial impact on the results achieved compared to the benchmark.

1.4 Implementation of the benchmark

The benchmark reflects a theoretically optimum trade-off between costs and risks. The DSTA replicates the benchmark as closely as possible by making use of interest rate swaps. This has made the policy largely effective and efficient. For reasons explained below, various side effects occur as a result of implementing the interest rate swap strategy. These side effects proved manageable in the years 2012-2014, but are too substantial to be ignored.

The first side effect is the existence of *indirect* risk. The DSTA receives collateral to cover the credit risk in relation to parties with whom it concludes interest rate swaps. These interest rate swaps are terminated if a party is unable to meet its obligations. The key principle is that these interest rate swaps must be entered into again as soon as possible with another party. In practice, this will take a certain amount of time. During that time interest rates will fluctuate and the DSTA will be exposed to interest rate risk. This risk has increased in recent years as a result of the increase in the size of the swap portfolio, the lower credit rating of counterparties, a decrease in the number of creditworthy counterparties and the reduced liquidity in the swap market.

The second side effect is that the swap portfolio interferes with the funding policy, which is at odds with the presumption that the interest rate swaps make it possible to separate the interest rate risk policy from the funding policy. Interest rates have fallen sharply, thus giving the swap portfolio a positive value. Counterparties are obliged to put up collateral. Counterparties usually provide this collateral in cash, which reduces the DSTA's remaining funding requirement. Since this collateral has increased sharply since 2011, to over € 20 billion at the end of 2014, the total money market funding, which includes this collateral, has increased. As a result there are fewer options for issuing debt in regular money market instruments, which has an adverse effect on the liquidity of those instruments. The considerable variability of the size of the cash collateral also hampers daily cash management.

The third significant side effect is caused by the fact that the benchmark is based on the sovereign yield curve and the replication of the benchmark is largely based on the swap yield curve. The swap curve fluctuates compared to the sovereign curve for Dutch State Loans (DSLs) - in the order of magnitude of tenths of a percentage point. This largely determines the result.

The rising debt and the introduction of the benchmark in 2008 have caused a sharp rise in the DSTA's number of transactions with financial market parties. Some of these transactions take the form of interest rate swaps and the exchange of collateral. This generally increases operational risks and thus places higher demands on the organisation. The actual occurrence of an operational error in 2011 prompted the DSTA to carry out a project to improve the control of operational risks.³

Finally, the interest flows from swaps are no longer included in the EMU balance since September 2014. As a result of this accounting change interest rate swaps no longer contribute to the management of the interest rate risk in relation to the EMU *balance*. The interest rate risk policy dating back to 2011 does not recognise this as a separate objective because the economic interest

³ See the letter of 21 February 2014, parliamentary document-33750-IX-15.

rate risk and the accounting interest rate risk coincided. Interest rate swaps have also remained useful since the accounting change of September 2014, e.g. for managing the economic interest rate risk involved in managing the *debt*.

1.5 Funding policy

The funding policy prescribes that financing is attracted on the money market, with maturities of up to 1 year, and DSLs are issued on the capital market, with maturities ranging from 3 to over 30 years. The funding plan is formulated each year. The same long-term principles apply: consistency, transparency and liquidity. The funding policy is in line with the relevant aspects of the guidelines of the IMF and the World Bank: predictable issuance, transparency, robust secondary market, diversification of the debt portfolio, risk reduction and cash management. These aspects contribute to lower funding costs for the State. The cash management aspect is discussed under the risk reduction aspect.

Predictable issuance

Consistency is one of the key aspects of the funding policy. In the long term there is a consistent line in the issue of DSLs. The DSTA adheres to the communicated policy on this aspect. This makes the DSTA predictable in the funding policy. At the same time, the current principles operated by the DSTA reduce the ability to respond flexibly to developments in the market and in government finances. Flexibility is found mainly in the money market and to a much lesser extent in the capital market.

Transparency

Transparency is one of the key aspects of the funding policy. The DSTA announces in advance the amount that will be issued in the coming year and its maturity. The actual issuance then corresponds to the announcement. The DSTA operates with a high level of transparency. This is good for the reliability of the State of the Netherlands as a debt issuer. Investors confirm that they regard the methods used by the DSTA as transparent. Aspects of this include the detailed information on the website, the various regular publications and the predictability of the policies.

Robust secondary market

Liquidity is one of the key aspects of the funding policy. The DSTA therefore stimulates the existence of a robust market. The DSTA sees to it that there is a high level of liquidity in the issued instruments so that the Dutch national debt is attractive to national and international investors.

Diversification of the debt portfolio

The DSTA meets the needs of a broad group of investors. The DSTA issues DSLs with various maturities for that purpose. This serves various types of investors. To a limited extent, bonds are also issued in currencies other than the euro.

Risk reduction

In view of the limited amount of flexibility on the capital market provided by the current funding policy, it is relatively important to maintain a properly functioning money market. The liquidity or refinancing risk - the risk that at a given point in time there will be no market funding available, or it will only be available at a high cost - is effectively regulated via the money market. The funding policy assumes a minimum size of the money market in order to manage the liquidity risk in particular. At the same time measures are taken to prevent the money market from becoming too large to control the refinancing risk. The funding policy also takes the money market as a buffer to facilitate adequate cash management. As pointed out in paragraph 1.4, the implementation of the funding policy is hampered by the amount of and the fluctuation in collateral.

The credit risk is effectively managed. There are limits regarding the exposure of temporary excess funds as part of the cash management carried out by the DSTA. The refinancing risk is also managed. When DSLs are issued, steps are taken to limit peaks in the repayment profile. Currency risks following issue in foreign currencies are hedged.

1.6 Final conclusions and recommendations

The questions asked in paragraph 1.1 can be concisely answered as follows.

Have the policy objectives been met?

The main objective of the policy: 'Debt financing at the lowest possible interest rate under an acceptable budgetary risk' has largely been met.

How effective has the policy been, and have there been any favourable and/or adverse side effects?

The policy is in essence effective. It largely adheres to the aspects laid down in internationally accepted guidelines of the IMF and the World Bank. The DSTA pursues its own policy precisely and effectively. Adverse side effects of the policy are as follows: a lack of flexibility in the funding policy; the consequences of the difference between the sovereign yield curve and the swap yield curve; additional risks and costs as a consequence of the sizeable swap portfolio.

How efficient has the policy been?

The policy is in essence efficient. During the period from 2012 to 2014 the conclusion of interest rate swaps as part of the interest rate risk policy was initially efficient, but became less so later, mainly owing to diverging developments of the sovereign and swap yield curves.

The fact that the deviations from the benchmark will result in a higher cost level for the first 7 years is a deliberate choice. The higher costs in the first 7 years are balanced by more budgetary certainty as well as a significant chance that the initially higher costs will be made up for in later years.

The design and implementation of the funding policy contributes to lower funding costs for the State of the Netherlands.

Which policy options are available in a situation with significantly reduced resources, approximately 20% less, to carry out the policy in article 11?

The size of the national debt and interest rate developments are exogenous variables for debt management. The purpose of debt management is to minimise the costs under an acceptable budgetary risk. Costs savings are only possible by shortening the maturity of the debt portfolio. In that case the condition of acceptable risk is violated.

Which measures can be taken to increase the efficiency and effectiveness of the policy?

For the new policy framework, it is advisable to include measures that further enhance its efficiency and effectiveness:

- Define clear risk and cost measures against which the total debt portfolio, i.e. including maturity extensions, can be assessed, on which can be clearly reported and that can be used as a basis for guiding the actions of the DSTA and its Agent.
- Reduce the scale at which interest rate swaps are used in view of the adverse side effects. In that case the obvious choice is to drop the current benchmark because it will be too far

away from the portfolios that can be achieved in practice. Other than that, the effective smoothing of the interest risk profile will remain desirable in a new framework;

- Analyse the extent to which further extending the maturity of the portfolio is desirable in view of the historically low interest rates and the flat yield curve;
- Carry out a further study into whether, and to what extent, more flexibility on the capital market is desirable and possible without adversely affecting predictability of issuance, because disconnecting the interest rate risk policy and the funding policy will be difficult to continue;
- Carry out an interim evaluation of the new policy framework, with special reference to the ability to respond to changing conditions.

2 Introduction to the policy area

This policy review concerns the whole of article 11 of Chapter IX of the budget, Finance and National debt. A policy review is a study into the effectiveness and efficiency of the policies pursued. The policy on the financing of the national debt is reviewed roughly once every four years. The most recent evaluation was carried out in 2011.⁴ This evaluation was sent to the House of Representatives and discussed with the Minister of Finance. This policy review evaluates all of the relevant aspects. Although the current policy framework runs until 1 January 2016, most of the analyses make reference to the period from 2012 to 2014 because complete figures are available only for these years.

The general objective of article 11 reads as follows: 'Debt financing at the lowest possible interest cost under an acceptable budgetary risk.' The 'budgetary risk' referred to in the objective refers to the extent to which the State's interest costs fluctuate year-on-year. The central government's responsibility for the financing of the national debt follows from the Dutch Government Accounts Act 2001. The Minister of Finance bears ultimate responsibility for the financing of the debt. In practice the Dutch State Treasury Agency performs this task for the minister by formulating and implementing the funding policy and the interest rate risk policy. With this general objective the Netherlands acts in keeping with the internationally accepted key principles of debt management as laid down by the International Monetary Fund (IMF) and the World Bank in the *'Revised Guidelines for Public Debt Management'*: *'... to ensure that the government's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk'*.⁵ Most other countries also formulate their debt management objective along these lines.

The following aspects are relevant to the content of the general objective:

1. Trade-off between costs and risks
All debt managers should weigh up the costs on the one hand and the risks on the other. Higher costs may be acceptable if this more than proportionately reduces the risks.
2. Risk reduction
The guidelines recognise the following principle risks: interest rate risk, refinancing risk, liquidity risk, credit risk, currency risk, settlement risk and operational risk. Of these, the interest rate risk is one of the most important. This policy review focuses mainly on the interest rate risk for the Dutch budget, but also addresses other risks.
3. Transparency
A debt manager has to be transparent for two reasons. First, transparency enhances the effectiveness of policy, especially if the commitments and promises made to market participants are honoured. Secondly, transparency enhances accountability.
4. Accountability
A greater degree of accountability contributes to verifiability and to the perception of the debt manager as being reliable.

⁴ Risk management of the national debt, evaluation of the policy 2008-2011 & policy 2012-2015, parliamentary document 33000-IXA No. 5.

⁵ IMF Policy Document 'Revised Guidelines for Public Debt Management', prepared by staffs of the International Monetary Fund and the World Bank, March 2014; <http://www.imf.org/external/np/pp/eng/2014/040114.pdf>

5. Execution of stress tests
To monitor the development of the debt management risks described above it is important for a debt manager to perform regular stress tests regarding economic and financial shocks to public finances.
6. Cash management
The debt manager sees to it that the financing is carried out in such a way that the central government is able to meet its obligations on time.
7. Diversification of the debt portfolio
A range of debt instruments gives various types of investors the opportunity to invest in Dutch debt securities. A debt manager thus creates a broad investor base.
8. Predictable issuance
Acting predictably prevents investors from facing surprises. Acting predictably therefore potentially contributes to raising interest and demand among investors.
9. Robust secondary market
Maintaining a robust secondary market contributes to the confidence of market participants. These parties gain from the ability to buy and sell debt instruments at all times. It is also of great importance to ensure that the debt securities are marketable.

The main components of debt management policy are the interest rate risk policy and the funding policy. Statements on the effectiveness and efficiency of this policy area can be made at two levels: the formulation of the policy framework and its implementation. Starting point for the evaluation are the IMF and World Bank guidelines referred to above and the questions derived from the Periodic Evaluation Regulations (*Regeling Periodiek Evaluatieonderzoek, RPE*) .

Questions derived from the RPE and addressed here are:

- Have the policy objectives been met?
- How effective has the policy been, and have there been any favourable and/or adverse side effects?
- How efficient has the policy been?
- Which policy options are available in a situation with significantly reduced resources, approximately 20% less, to carry out the policy in article 11?
- Which measures can be taken to increase the efficiency and effectiveness of the policy?

2.1 Overview of the document

In this policy evaluation the pursued policies are tested against the guidelines set out above wherever possible. The remainder of this policy review is structured as follows. This chapter explains the current policy framework. Chapter 3 describes the results of the pursued policies. Chapter 4 evaluates the design of the interest rate risk policy; this section explains the 7-year centralised benchmark for the financing of the national debt and the ability to deviate from it. Chapter 5 evaluates the replication of the 7-year benchmark; this chapter discusses the swap policy implemented by the Dutch State. Chapter 6 evaluates the substance of the funding policy, i.e. the debt issuance policy. The appendices contain a glossary and the assessment of the external experts.

2.2 Current policy framework

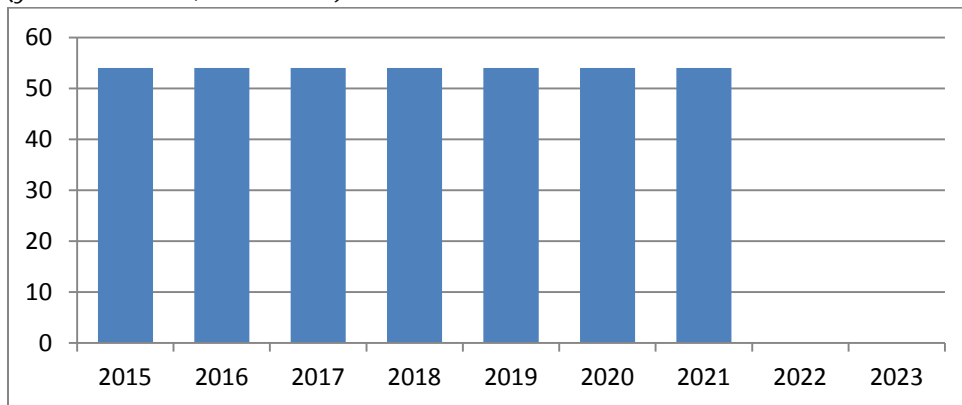
The purpose of the policy is to finance the national debt at the lowest possible interest costs under an acceptable budgetary risk. The trade-off between costs and risks is addressed in the interest rate risk framework. A risk framework consists of policy rules that stipulate the parameters of costs

and risk within which the debt financing has to operate. What degree of risk is acceptable, and what are the related costs?

The Dutch State Treasury Agency (referred to below as 'the DSTA') has been operating a 7-year centralised portfolio as its benchmark since 2008. A benchmark is an objective standard against which the performance of a debt manager can be measured. A centralised portfolio is one in which a bond with the same maturity and in the same amount is continuously issued. Theoretically, the centralised benchmark portfolio represents an optimum trade-off between costs and risk: there is no portfolio with lower costs for a given risk level. Or, for a given cost level there is no portfolio with a lower risk.⁶ In this situation the risk standard is the maximum amount for which the interest must be reset in a given year.

In the benchmark, a small amount of 7-year debt is issued daily⁷ over which the 7-year Dutch State interest rate applicable on the date of issue is paid. This gives the debt in the benchmark a very consistent repayment profile: in each of the subsequent 7 years one seventh of the total national debt matures. See figure 1.⁸

Figure 1: The centralised 7-year portfolio features a smooth repayment profile (year-end 2014, in € billion)



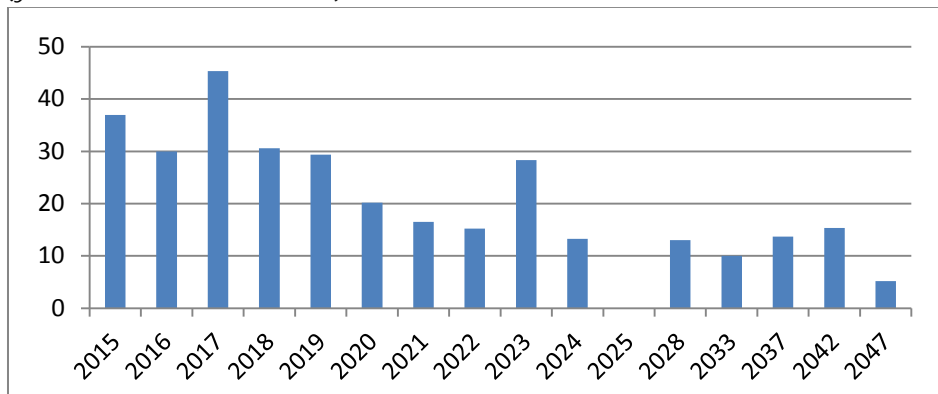
A portfolio's risk profile shows in which year and for which part of the portfolio, debt and swaps (if any) the interest rate is to be reset. The risk profile of a portfolio consisting of only bonds is the same as the repayment profile. In practice the DSTA does not issue a 7-year bond every day. Although doing so would result in an efficient risk profile - i.e. that of the benchmark - a strategy of this nature is for various reasons less than optimal from the perspective of the funding policy discussed in chapter 6. The DSTA issues debt securities with various maturities ranging from three months to more than thirty years. The timing of the financing within a year also differs from the benchmark: issuance takes place not daily but at regular times in the year that are announced well in advance. The key principles of the funding policy in this context are consistency, transparency and liquidity of the issued debt securities. The result of the funding choices made in the past yields a specific repayment profile that differs greatly from the benchmark. See figure 2.

⁶ For supporting information see the 2007 evaluation: parliamentary document 31273-1-b1 "Risk management of the national debt, evaluation of the policy 2003-2007 & policy 2008-2011".

⁷ In practice, in the benchmark a 7-year bond is issued 250 days a year.

⁸ The budget balance is assumed to be zero.

Figure 2: Repayment profile of the actual debt portfolio differs from the benchmark (year-end 2014, in € billion)



The funding policy stipulates the maturities and issue dates of the debt securities, without there being any need to take account of the interest rate risk profile of the benchmark. In principle, by entering into interest rate swaps⁹ any desired interest rate risk profile can be reached. First of all, what are known as receiver swaps are concluded with every debt issue. Using these receiver swaps the fixed interest rate of the issued bond is swapped with a variable interest rate. After that, what are known as payer swaps with a maturity of 7 years are concluded almost daily. Using these payer swaps the variable interest rate of the receiver swaps is effectively converted into a 7-year fixed interest rate. The repayment profile of the debt portfolio given in figure 2 can be directed with interest rate swaps towards the risk profile of the 7-year centralised portfolio prescribed by the benchmark. The use of interest rate swaps thus makes it possible to separate the interest rate risk policy and the funding policy, and the two policy areas can be optimised independently of each other.

Since 2012 it has been possible to deviate from the benchmark portfolio. The purpose of this is to contribute to budgetary certainty in the longer term. This was prompted by the market conditions in 2011 and the budget forecasts featuring more than average uncertainties.

Deviations from the benchmark are subject to the following conditions:

- deviations must not result in a greater budgetary risk;
- deviations must fit within the budget;
- there must be a significant chance of long-term financial gain.

The first condition amounts in practice to extensions only: fixing the interest rate for a longer period. The second condition means that the higher costs related to extension are limited by the projected interest costs in the Budget.

What is known as the break-even yield is used as the standard to judge whether the third condition is being met. Put simply, for bonds with a maturity of over 10 years it is judged whether the average interest rate needed in the remaining maturity after the first 7 years, to earn back the extra costs in the first 7 years, is less than 3%.¹⁰ Consequently, deviations from the benchmark will only be applied to an interest rate level that is historically low, based on the perception that possible interest rate changes are asymmetrical: a fall in the interest rate is maximised to levels just under 0% and a rise in the interest rate is not maximised. Whether the higher interest rate in

⁹ A swap is a financial product in which a party exchanges a certain cash flow or risk for that of another party. These two components are also referred to as the 'legs' of the transaction. Swaps are derivatives, which means they are derived products (in this case derived from bonds). The interest rate swap is generally used to manage or hedge interest rate risks or to take an interest rate position.

¹⁰ This standard is explained in more detail in the 2012 annual report, www.rijksbegroting.nl.

the first 7 years will actually be earned back in later years cannot be determined until the relevant bonds have been repaid.

3 Debt financing results

The period from 2012 to 2014 was characterised by a combination of rising debts and falling interest rates. Both short- and long-term interest rates reached historically very low levels. See figure 3. Indeed, in 2015 the Dutch State issued government bonds with a negative yield for the first time in history. The annual interest payments, including income from swaps, have fallen by 12% from € 9.6 billion to € 8.4 billion, or 1.3% of GDP. See figure 4.

Figure 3: Falling Dutch capital market interest rates (in %)

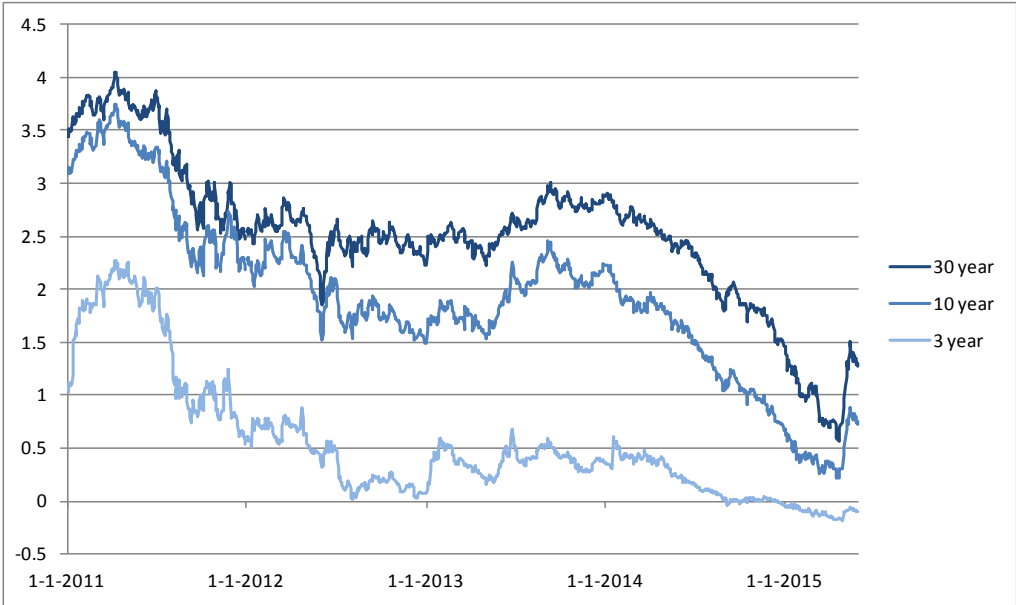
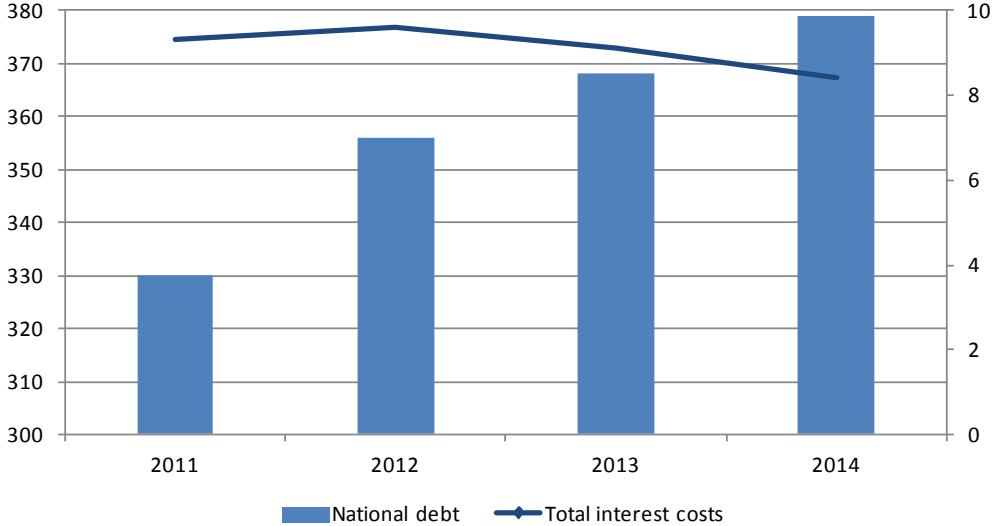


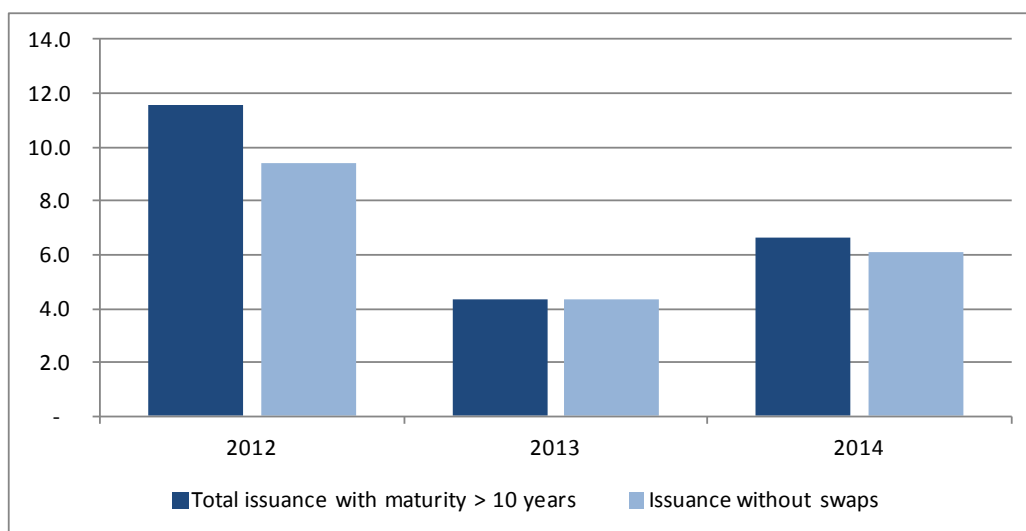
Figure 4: Increasing debt (left axis), falling interest costs (right axis) (in € billion)



The results of the debt issuance in combination with interest rate swaps are accounted for in the annual report of chapter IX of the Budget (Finance and National debt). This chapter discusses the main results for the period from 2012 to 2014, first addressing the risks and then the costs.¹¹ Reference is made to the annual reports for a detailed explanation.¹²

In the period from 2012-2014 the option to deviate from the benchmark for the issue of bonds longer than ten years was used eleven times; five times in 2012, three in 2013 and three in 2014. A total sum of € 19.8 billion in bonds with a remaining maturity of more than 10 years was issued without swapping the issues back to the risk profile of the 7-year benchmark. See figure 5. This is 88% of the € 22.5 billion in bonds with a maturity longer than 10 years issued during this period. It was only in 2012 and 2014 that long-term bonds were swapped back from the 2033 segment (€ 2.2 billion) and the 2037 segment (€ 0.5 billion), totalling 12% of the long-term bonds in the period from 2012 to 2014. In these cases the break-even yield was higher than 3%.

Figure 5: Majority of long-term issuance without accompanying swaps (in € billion)



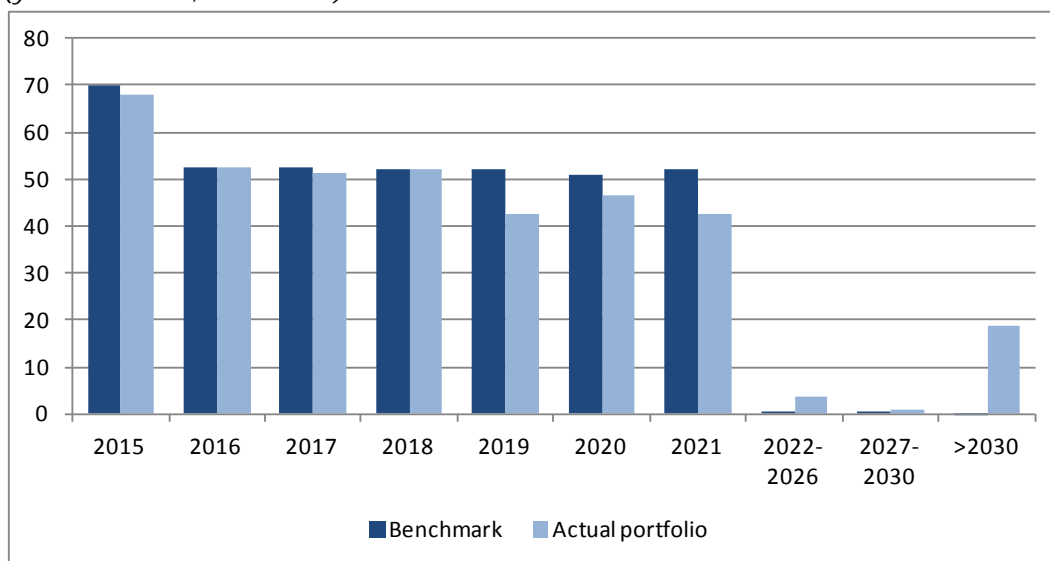
3.1 Risk profile compared to the benchmark

The extent to which the risk of debt financing and swaps is the same as the risk of the benchmark is made visible by using a risk profile. This shows which part of the portfolio, debt and swaps, are sensitive to a change in the interest rate and in which year. The risk profiles of the benchmark and the actual portfolio at year-end 2014 largely correspond, but also show some clear differences. See figure 6.

¹¹ The evaluation is based on the years for which (complete) figures are available, although the current risk framework formally runs until 1 January 2016.

¹² Annual reports are published at www.rijksbegroting.nl. (only in Dutch).

Figure 6: Benchmark and actual portfolio risk profiles largely the same (year-end 2014, in € billion)



Most of the differences in the risk profiles are related to the deviations from the benchmark since 2012.¹³ As a result of this, in the years from 2012 to 2014 the interest rate of a number of long-term capital market bonds was not swapped back to the 7-year interest rate. This moves the interest rate risk to the years in which these bonds are repaid. These are the years 2028 (€ 0.9 billion), 2033 (€ 7.8 billion), 2037 (€ 1.2 billion), 2042 (€ 4.7 billion) and 2047 (€ 5.2 billion). These deviations are expressed in the risk profile of the actual portfolio on 1 January 2015 in the years in which the long-term bonds are repaid and in the years 2019, 2020 and 2021; these are the three years in which there is less exposure to the interest rate risk because it has been moved to the years in which the long-term bonds are repaid. The amounts in these years are € 9.4 billion, € 4.3 billion and € 6.1 billion.

Comparing the risk profiles of the benchmark to the actual portfolio is an ideal risk standard if there are no deviations, as was the case in the period from 2008 to 2011. This risk standard is less suitable for the assessment of deviations from the benchmark. The risk impact of deviations is however apparent in terms of the weighted average remaining maturity of the portfolio, for example. Opting to deviate from the benchmark with long-term bonds has made it possible with a relatively small nominal amount - € 20 billion on a debt of over € 350 billion - to achieve a relatively long extension of the average term of the portfolio. The average maturity of the portfolio has increased by approximately 1 year, from about 3.5 to 4.5 years.

3.2 Realised costs compared to the benchmark

As shown in the previous paragraph, the risk profiles of the benchmark and the combined debt and swap portfolio are not identical. This also leads to differences in interest costs. Even if the risk profiles are the same, the costs of the benchmark, the notional 7-year bond, and of the actual portfolio, debt issuance and interest rate swaps, would not necessarily be the same. This can be attributed to various causes. The most important of these is the fact that Dutch debt and interest rate swaps are not based on the same yield curve. The Dutch debt is issued at the Dutch sovereign yield curve. This yield curve is also used to determine the 7-year interest rate in the benchmark.

¹³ See pages 165 - 166 of the 2013 annual report for a more detailed explanation of the differences.

Interest rate swaps have their own yield curve. Although the two yield curves are very similar and usually move in the same direction, the level and extent of the movement differ in practice.¹⁴

The results achieved are accounted for in the Annual Report on Finance and National Debt. The results are positive if the costs of the actual portfolio are lower than those of the benchmark and negative if they are higher than in the benchmark. The overall result consists of three elements: the 'normal' debt portfolio, the deviations from the benchmark and the ABN AMRO portfolio¹⁵ that comprises approximately 1% of the total national debt. The ABN AMRO portfolio is the portfolio that was created when the State took over ABN AMRO and which comprises loans to ABN AMRO and their financing. A separate form of debt management was set up in the past for the part of the debt that relates to ABN AMRO.¹⁶ The results for the period 2012-2014 are driven mainly by the 'normal' debt portfolio and the deviations from the benchmark. The rest of this chapter concentrates on these two elements.

The cumulative result over the period from 2012 and 2014 of the actual portfolio compared to the benchmark was € 5 million. See figure 7. This implies that the total actual interest costs over this period were virtually exactly the same as the costs under the 7-year benchmark. Underlying this small but positive figure are major differences between the different elements and movements throughout the years.

The debt portfolio without deviations from the benchmark shows a much stronger positive result over the stated period, € 481 million. The differences in the individual years can be largely attributed to the differences between the sovereign curve and the swap curve touched on above. The difference between the sovereign curve and the swap curve, the 'state-swap spread', increased in 2012 and 2013. This implies that the swap curve fell more strongly or increased less than the sovereign curve. The increases in the spread largely explain the positive results compared to the benchmark in 2012 and 2013.¹⁷ The spread decreased in 2014, which explains that year's negative results: with strongly decreasing curves the sovereign curve went down more sharply. The effects of these movements are discussed in more detail in chapter 5.

The deviations from the benchmark showed an increasing negative result for all three years. Cumulatively, a sum of € 425 million in interest income was lost as a result of the deviations in the period from 2012 to 2014. The negative values can be directly attributed to the fact that the long-term interest rate at the time of issue (e.g. the 30-year interest) was higher than the 7-year interest rate. This means that a higher rate of interest will be payable at least over the first 7 years of a bond's maturity. This is an inherent aspect of the decision to depart from the benchmark: by paying a slightly higher interest rate now, the risk reduction is 'bought', whereas it is plausible that interest costs will be saved over the entire maturity of the bonds in question. The increase in size can be explained mainly by the fact that level of the cumulative deviations has risen in time.

¹⁴ See chapter 5 for a more detailed explanation of this point and the other differences between the theoretical benchmark and the practical approximation of this through interest rate swaps.

¹⁵ A distinction can also be made in the debt portfolio between the initial portfolio (all transactions from before 2008) and the main portfolio (all transactions since 1-1-2008). The results are affected mainly by the main portfolio, which is why no distinction is made between the two portfolios here.

¹⁶ This is what is known as an *Asset & Liability Management (ALM)* approach, in which assets and the loans on them are managed as a whole.

¹⁷ This is not so much about the development of the average treasury swap spread, but sooner the movement on certain aspects.

Figure 7: Realised costs compared to the benchmark slightly positive (year-end 2014, in € million)

	2012	2013	2014	2012-2014
Actual portfolio (excl. deviations)	588	82	-189	481
Deviations	-80	-143	-202	-425
ABN AMRO	-20	-13	-18	-51
Total	488	-74	-409	5

3.3 Total costs compared to the benchmark

Although only the realised costs are relevant to the annual budget, the cost calculation based on the total cost method provides the most complete picture of the results compared to the benchmark. Total costs comprise both the realised and the unrealised results. The points at which the debt is repaid and refinancing takes place will be different in the actual portfolio and the benchmark; this is taken into account in the calculation of the total costs. Changes to the market value are calculated and assigned to the total costs by converting all of the commitments into cash. The result compared to the benchmark is determined by the difference in the total costs between the actual portfolio and the benchmark.

The cumulative result compared to the benchmark was negative in the years from 2012 to 2014. This can be largely attributed to deviations from the benchmark. See figure 8. This result is a direct consequence of the falling interest rates in recent years, which has led to the effective yield from bonds for which no swaps have been entered into being currently lower than that for which they were issued. Without any deviations from the benchmark, the resulting swaps would have had a positive market value owing to falling interest rates.¹⁸ If the interest rate levels remain unchanged the deviations over the remaining maturity of the long-term bonds, the resulting loss in interest income from swaps will be around € 200 million a year. It is however very well possible that in the longer term the deviations will result not only in reduced exposure to risks, but also to lower costs. For the bonds for which there have been a deviations from the benchmark up to now, lower costs are paid over the entire maturity if the average 7-year interest rate in the remaining maturity after the first 7 years is at least 2.7%. However, whether this will actually transpire will not be known until the point at which these bonds are repaid.

Other than that, the negative total result is explained mainly by the changes that took place in the sovereign curve and the swap curve. Here too, the relatively small but positive results in 2012 and 2013 are nullified by the strongly negative results in 2014. The changes to the yield curves and interest rate differences (spreads) have a large effect on the total costs than the realised costs because the anticipated costs for the whole of the remaining maturity are discounted in the total costs. Detailed information on this subject is given in the annual reports on Finance and National debt.

¹⁸ In practice this concerns two swaps which in combination convert (for example) a 30-year interest rate into a 7-year interest rate. Under a given change in the interest rate the two swaps show the opposite development in their market value. This is dominated by the effect of the long-term (receiver) swap: this swap increases in value if the interest rate falls.

Figure 8: Deviations from the benchmark largely explain total costs (2012-2014, in € billion)

	2012	2013	2014	2012-2014
Actual portfolio (excl. deviations)	0.4	0.3	-2.0	-1.3
Deviations	-0.4	0.8	-4.1	-3.7
ABN AMRO	0.1	0.1	0.1	0.3
Total	0.1	1.2	-6.1	-4.7

Note: as a result of rounding off to billions, the sum of parts may deviate from the total

3.4 Conclusion

The benchmark has been effectively replicated in relation to the risk profile, the extent to which the budget is exposed to interest rate risks in individual years. Differences between the benchmark and the actual portfolio are usually the result of intentional deviations caused by not swapping back long-term bonds. As a result of this the average maturity of the debt portfolio has risen by approximately 1 year to around 4.5 years at the end of 2014. Extending the portfolio necessarily increases budgetary certainty in the longer term.

The policy has also been effectively pursued in cost terms. The cumulative realised result of the actual portfolio from 2012 to 2014 was € 5 million. This implies that there has been a minimal positive deviation from the benchmark. The final result would have been € 425 million higher if there had been no intentional deviation from the benchmark during this period. The purpose of deviating from the benchmark was to pay a slightly higher interest rate and thus contribute to budgetary certainty in the longer term.

The benchmark has been less effectively replicated in terms of overall costs, taking both the realised and the unrealised result into account. The unrealised result shows the implications for the future costs if the current interest rate levels remain the same. The total result of the actual portfolio was minus € 4.7 billion.

About three quarters of this can be explained by the effect of the deviations from the benchmark. This result was driven mainly by the falling interest rates in recent years. If the interest rate levels remain the same as at year-end 2014, the higher costs resulting from the deviations from the benchmark will be approximately € 200 million a year. This does not alter the fact that there is a significant chance that the costs will be lower over the entire maturity of the bonds in question than what would have been the case without any deviations. This will be the case if the average 7-year interest rate over the remaining maturity after the first 7 years is at least 2.7%. The deviations from the benchmark will of course also mean that the exposure to the interest rate risk will be reduced in the future, which is good for budgetary certainty. The method used to deviate from the benchmark is in keeping with the objective of keeping the interest costs as low as possible under an acceptable risk.

Without any deviations from the benchmark, the result would have been minus € 1.3 billion. This result can be attributed mainly to differences between the movements in the sovereign curve, which determines the results of the benchmark, and the swap curve, which determines the results of the method chosen to replicate the benchmark.

4 Interest rate risk policy

This chapter answers the question about the extent to which the interest rate risk policy has been effective and efficient. More specifically, this concerns the extent to which the interest rate risk policy has been formulated in such a way that it contributes to effectiveness and efficiency. The question of whether the interest rate risk policy has been efficiently implemented is addressed in chapter 5. The question given above is answered on the basis of the first five aspects of the IMF and World Bank guidelines as outlined in chapter 2. The aspects are: trade-off between costs and risks; risk reduction; the execution of stress tests; transparency; and accountability. These aspects are discussed in the paragraphs below. The paragraph about risk reduction addresses the execution of stress tests. Finally, the Dutch interest risk policy is compared to that of other countries.

The interest rate risk policy is always adopted for a period of four years. The current policy covers the period from 2012 to 2015. In the previous four years, the national debt had increased from € 212 billion to € 330 billion, and the interest rates at that time had already fallen to historically low levels. Moreover, there was more than average uncertainty about the development of the budget balance. Based on the policy evaluation carried out in 2011 and in view of the circumstances it was decided to continue the policy pursued in the years 2008 to 2011 - with the 7-year centred portfolio as the benchmark - and also to introduce the ability to deviate from this benchmark under certain conditions, as explained in paragraph 2.2. The 2011 policy evaluation yields increased budgetary certainty and lower interest costs over the entire maturity as the principal arguments for deviations.

Four years have passed in the meantime and the developments outlined above have continued to some extent. The interest rates have fallen even lower. There have even been negative interest rates. The national debt has increased further to € 379 billion at year-end 2014.

4.1 Trade-off between costs and risks

Efficiency of the benchmark

In this context efficiency means that there is no portfolio with a lower cost level for a given risk level or, conversely, that there is no portfolio with a lower risk for a given cost level. The DSTA operates a 7-year centralised portfolio as the benchmark. A centralised portfolio is one in which a bond with the same maturity and in the same amount is continuously issued. The fact that a centralised portfolio is efficient had already been established in the 2007 evaluation.

This evaluation takes as the risk standard the amount that faces exposure to interest rate risk in a given year. This refers to the risk that the interest rate at which new bonds are to be issued is higher than the assumed interest rate.

Effectiveness of the benchmark

In the context of weighing up costs against risks 'effective' means that this consideration was explicitly taken into account when formulating the interest rate risk policy. The decision to maintain the 7-year centralised benchmark was based among other things on an analysis of the interest costs and the interest rate level of various centralised portfolios at the time of the evaluation and recalibration in 2011.¹⁹

This analysis explored what the extra costs of extending the portfolio from 7 to 8 or 9 years would be. Extending the portfolio was the obvious choice in view of the then historically low interest rate

¹⁹ See parliamentary document 31273-1-b1 "Risk management of the national debt, evaluation of the policy 2008-2011 & policy 2012-2015".

level (the 10-year interest rate was around 2.2%) and the sharp rise in debt (€ 330 billion at year-end 2011). However, in 2011 the ex-ante additional costs of extending the portfolio to an 8-year benchmark, for example, were relatively high in relation to the anticipated risk reduction to be achieved. The additional costs would make it more difficult to meet the budgetary targets at that time. Reducing the maturity of the portfolio was not an option due to the additional risks that this would involve.

The decision to accept a certain risk level - the risk appetite - was based partly on analyses and partly on a political balancing of costs and risks. As indicated in the IMF and World Bank guidelines, this concerns an acceptable risk. The Minister of Finance bases the choice of a risk level in part on the extent to which the budgetary consequences of higher interest costs with a higher interest rate or a higher national debt are acceptable.

The 2011 analysis focuses exclusively on the steepness of the yield curve. Only the *increase* in the interest costs between a shorter and longer maturity is incorporated and set off against the decrease in the interest rate risk. The flatter the yield curve, the less the anticipated costs will increase if the portfolio is extended. Where there is a very flat yield curve the increase in the anticipated costs is virtually zero if the portfolio is extended, whereas the risk continues to fall in keeping with any further extension. As a result of this the insurance premium tends towards zero. With a very flat yield curve this approach suggests that a very long extension is optimal, irrespective of the yield curve level. But the flatness of the curve may also indicate that market participants expect the interest rate to fall in the future. In that case the extension will not be optimal.

As well as the steepness of the yield curve, its level is also important in view of the perception that potential interest rate changes are asymmetrical: a fall in the interest rate is maximised to levels just under 0% and a rise in the interest rate is not maximised. The potential fall in the interest rate reduces when the interest rate is lower. For that reason it makes more sense to extend when the interest rate is low.

At the end of 2014 the yield curve was flatter than at the end of 2011 and was at a substantially lower level.

Efficiency of deviations from the benchmark

Deviations from the benchmark make the debt portfolio less centralised and therefore reduce its efficiency in the *short* term. This reduction in efficiency is limited by the set conditions and is intended to promote efficiency in the *long* term. As explained in section 2.2, a significant chance of financial gain is expressed in a break-even yield that must not exceed 3%.

It should also be noted that the efficiency aspect has been under pressure in recent years owing to developments relevant to the swap policy. This is explained in more detail in chapter 5.

Effectiveness of deviations from the benchmark

With a historically low interest rate, deviations from the benchmark create budgetary certainty in the longer term. It is indicated that the 7-year point of the benchmark is not dependent on the interest rate level. This disadvantage is offset by the deviations.

The ability to deviate from the benchmark also has a downside in that it has an adverse effect on the coherence of the interest rate risk policy. On the one hand, the policy prescribes the 7-year benchmark. On the other hand, as a consequence of the deviations the average maturity of the portfolio is extended and therefore no longer steered on the basis of the 7-year point. This is illustrated by the difference between the 3.5 year average maturity of the benchmark portfolio and the 4.5 average term at the end of 2014 for the actual portfolio. The result of this is a hybrid model in which the individual elements - the benchmark and the deviations from it - have different aims. For this reason it is not possible to assess the effectiveness of the model as a whole.

It should be noted regarding the trade-off between costs and risks that a similar assessment is made for the deviations from the benchmark. This is however done in a different way from the trade-off between costs and risks for the benchmark, which makes it difficult to compare. Unlike the four-yearly assessment made for the interest risk framework, the decision on whether to deviate from the benchmark is made much more frequently, i.e. each time a long-term bond is issued.

4.2 Risk reduction

The benchmark effectively minimises the interest rate risk. As mentioned in paragraph 4.1, a centralised portfolio minimises interest rate risk for a given level of costs.

Stress tests can be carried out to establish the effect of extreme, unforeseen situations and thus ascertain whether the risk framework is able to withstand them. This means that the risk framework has to be set up in such a way that the short and medium term rise in the interest costs can be accommodated in the event of a sudden interest rate shock and/or a deterioration in the budget balance. This is referred to as the guardrail function of the interest rate risk policy. Secondly, this means that the risk framework has to contribute to providing access to complete funding under difficult circumstances.

The 2011 evaluation included a more detailed analysis aimed at establishing the effects on the interest costs of a sharp rise in the interest rate and a rising budget deficit. It was concluded that the interest rate risk framework would offer only limited protection against shocks in the budget balance and external, structural interest rate shocks. It was however demonstrated that the 7-year centralised portfolio would offer sufficient protection against temporary smaller shocks in the interest rate. Since the 2011 evaluation there have been no major rises in the interest rate and nor has there been any development in the budget deficit that was not covered by the 2011 analyses. For that reason there has been no reason to carry out any additional stress tests in the meantime.

The introduction of the possibility of deviations from the optimum risk profile in the risk framework makes it possible to contribute to budgetary certainty for a period longer than the 7-year horizon of the benchmark. Room for deviations also creates the flexibility in the framework needed to respond to current market conditions.

Fluctuations in the interest costs are managed by the interest risk policy. The room for deviations must not in itself lead to undesirable setbacks in the interest costs. The conditions formulated for that purpose have effectively contributed to this. Exclusively allowing extensions has reduced uncertainty about future interest charges. This reduced uncertainty is not directly expressed in the risk measure.

4.3 Transparency

The interest risk policy should contribute to transparency, ex-ante and ex-post, on the policies pursued and their results. The importance of transparency is subscribed to in the guidelines of the IMF and the World Bank. A government that is open about its policy and presents itself as a reliable counterparty in financial transactions is able to make the policy more effective.

The DSTA acts in line with the points highlighted by the IMF and the World Bank regarding the transparency aspect. The benchmark contributes ex-ante to a transparent risk policy. The purposes of debt management are defined and publicised via the public site www.dsta.nl, budget documents and the annual Outlook. How the various instruments are used and the composition of the portfolio are documented and further explained.

The principle of the 7-year centralised portfolio is easy to explain and can easily be understood by a person without any detailed knowledge of debt financing and financial products.

This also applies largely to deviations from the benchmark. The deviations themselves are easy to explain. The argument for doing this, fixing the interest rate for a longer period because the interest rate is historically low, is also easily explained. Furthermore, the conditions are clearly explained, and why this choice has been made is understandable. The policy change is also comprehensively explained in budgets, the Outlook and on the website.

Although the preconditions for deviations have been determined beforehand, it has not been determined in advance when and to which bonds the deviation will be applied. The question of whether the conditions for deviation have been met is reviewed for each bond issue.

Having a benchmark also contributes ex-post to more transparency. The reports that show how the debt manager has performed compared to the benchmark reveal the extent to which the debt manager has succeeded in replicating the risk profile of the benchmark in terms of realised costs and the risk profile. Detailed internal reports are written and the results are published, also externally, in the annual report. The part of the result caused by the intentionally chosen deviations is also stated.

The following should be noted in this regard. Although the 7-year centralised portfolio of the benchmark is a simple model in itself, the method used to reach the same risk profile is much more complex in practice. The results of the benchmark and the actual portfolio can be set off against each other in a diagram that shows at a glance whether the debt manager has performed better or worse than the benchmark. However, explaining the causes of the difference is more complicated. The difference in the result is the sum of several effects which are hard to understand without any knowledge of the financial products and how the financial markets work.

4.4 Accountability

To the extent that bonds were issued under the benchmark, the benchmark worked effectively as a steering variable. Having a benchmark and the choice for a benchmark portfolio gives the debt manager a clear task and a framework for making the choices that need to be made in the day-to-day practice of debt financing. For each bond issued with a fixed interest rate a precise procedure is followed in which it is immediately swapped back to a variable interest rate. This bond issue is then incorporated in the total debt for which a swap schedule is set up to swap it to the 7-year interest rate.

The benchmark has worked less well as a steering variable for issues in which it was possible to deviate from the benchmark and where the issue was not swapped back. The deviation conditions are however clearly formulated, which clarifies the cases in which it is permitted to deviate from the benchmark. Deviations necessarily lead to an extension of the average maturity of the debt portfolio. However, no reference point or range for extension has been determined. For that reason there is no ex-ante clarity about the (future) average maturity of the debt or, accordingly, the envisaged protection against interest rate shocks.

The benchmark is in itself a sound and objective measure that functions as a reference point against which the risk profile and the result of the actual portfolio can be set off. The risk profile is presented in the form of a bar diagram showing the amount that is exposed to interest rate risk and in which year. This clarifies the extent to which the actual portfolio replicates the risk profile of the benchmark, which yields a clear image. The result of the actual portfolio in terms of costs is also compared with the result in terms of costs of the benchmark. In this way, the performance of the debt manager is made measurable.

Another factor with implications for accountability is that the extent to which the benchmark can be replicated depends on market developments. This is beyond the control of the DSTA. Chapter 5 shows that the result has become more dependent on the difference between the sovereign curve and the swap curve (the sovereign/swap spread), which cannot be steered by the debt manager.

4.5 Interest rate risk policy in other countries

During the preparations for the evaluation the DSTA held talks with ten countries²⁰ to establish how other countries organise their risk framework and how this compares to the policy of the Netherlands. Talks were held with a varied group of countries, which differ on aspects such as their size, amount of the debt and whether they have an independent monetary policy.

Consultations with other countries show that all of the countries formulate their debt management objectives in line with the internationally accepted key principles for debt management formulated by the IMF and the World Bank: funding at the lowest possible interest costs under an acceptable risk.

However, the substance of this differs between each country, and no dominant structure can be identified. Nearly all of the countries use one or more benchmarks or targets to manage their risk. However, there are also countries that do not have a specific benchmark or target. The benchmarks/targets that are operated can be divided into two types: a target for the interest rate risk, e.g. average maturity or duration, or a target for the refinancing risk, e.g. a percentage of the debt over which the interest rate must be rest in a certain year or series of years. Some countries operate a combination of targets. Most of the countries that operate a benchmark or one or more targets use a range or a target value, which creates the flexibility needed to deal with situations such as changing market and budget conditions.

Many countries primarily use issuance policy to meet the set benchmark or target. The maturities for which bonds are issued are based in part on the set benchmark or target. Of the ten countries that talks were held with, three are currently also using swaps to replicate the benchmark or target. Other countries have also used swaps in the past to meet their objective. Countries have stopped doing this for various reasons, the main reason being the wish to extend the average maturity of the portfolio, whereas swaps are used mainly to reduce the maturity. It is however permitted to use swaps in most countries. In recent years virtually all of the countries have extended the maturity of the debt portfolio by a few months to several years.

4.6 Conclusion

The benchmark itself is efficient. The deviations reduce the efficiency. This reduction is intentionally sought and is limited by the conditions set for the deviations. Both the benchmark and the deviations are effective in the sense that they both feature individual, explicit trade-offs between costs and risks. These trade-offs are of various natures, as a result of which the policy has become less coherent. Additionally, the benchmark has been set for four years without being adapted to the changing conditions throughout the years, whereas deviations are set each time debt is issued. Allowing deviations makes it possible to respond to some extent to changing circumstances, especially the historically low interest rate.

Both the steepness of the yield curve and the level of the interest rate are relevant to the decision to change the maturity of the portfolio. At the end of 2014 the yield curve was flatter than at the end of 2011 and was at a substantially lower level.

²⁰ Talks were held with Australia, Belgium, Canada, Denmark, Germany, France, Finland, Austria, the United Kingdom and Sweden.

The benchmark effectively reduces the interest rate risk. Deviations contribute to budgetary certainty for a longer period than the 7-year horizon of the benchmark.

The DSTA is transparent about the benchmark and the deviations from it. It should be noted that the reporting on the results is difficult to understand for a reader who is unfamiliar with the subject matter.

The benchmark contributes to accountability. The DSTA is accountable for ensuring that the deviations meet the conditions. The combination of the benchmark and the deviations reduces the accountability of the policy as a whole.

The setup of the interest rate risk policy effectively fulfils most of the points related to the aspects relevant to the interest rate risk policy from the IMF and World Bank guidelines: trade-off between costs and risks, risk reduction, the execution of stress tests, transparency and accountability.

5 Implementation of the benchmark

This part of the policy evaluation considers the extent to which the DSTA has pursued a successful strategy to replicate the risk profile and, accordingly, the costs of the chosen benchmark. The benchmark presupposes an issuance strategy that is not feasible or is only feasible at high cost in practice. For that reason swaps are used to replace the risk profile of the benchmark as precisely and efficiently as possible.

When the benchmark was introduced it was clear that it would not be possible to precisely replicate it for a number of reasons. However, in the period preceding the introduction of the benchmark the relatively stable climate on the financial markets led to the potential risks involved in the replication being estimated as small. This led to the assumption that the differences between the interest rate risk of the actual portfolio and the benchmark would be relatively small. It was also thought that the cost differences between the two portfolios would be relatively minor.

Between the time when the benchmark was introduced and the policy evaluation carried out in 2011 the situation on the financial markets had already changed radically, mainly owing to the financial crisis. The 2011 policy evaluation identified the fact that some side effects of the swap strategy had become more relevant since the introduction of the benchmark. In view of the developments that have taken place on the financial markets in recent years, more attention should now be paid to these effects. These aspects are discussed in the paragraphs below.

5.1 Credit risk, concentration risk and settlement risk

By using swaps the State is exposed to a credit risk on the counterparties with which the swaps are entered into. The credit risk in this context refers to the risk of a counterparty failing to meet its obligations to the State. In relation to swaps, if a counterparty with which the State has entered into a swap goes bankrupt, this counterparty is no longer able to make the obliged interest payments. If this swap had a positive market value, the bankruptcy of the counterparty could result in the State suffering a financial loss.²¹

²¹ A swap initially has a market value of zero. At that point the discounted value of the anticipated interest flows under the fixed and variable leg of the maturity of the swap is precisely the same. The swap acquires a market value if the interest rate changes in relation to the anticipated development in the interest rate when the swap was entered into. This means that the anticipated interest flows are no longer the same: a party will receive

Credit risk management has gained in importance in recent years. As mentioned above, the national debt and, accordingly, the swap portfolio have grown as a result of this. The potential market value and the volatility of the portfolio's market value have also increased.²² Also, there has been a decline in the credit rating of virtually all potential counterparties in recent years. For that reason, there has been exposure to a credit risk over larger amounts with less creditworthy counterparties.

The DSTA manages the credit risk in various ways. The basic rule is that only the most commonly used interest swaps, or 'plain vanilla swaps', are entered into, the risk profile of which is relatively easy to determine.²³ Furthermore, swaps are only entered into with a select group of creditworthy counterparties that must have a minimum rating.

Counterparties with which swaps have been entered into are obliged to furnish the State with collateral in the form of cash or government securities with the highest rating (AAA) if the swaps have a positive market value from the State's perspective. The amount of collateral required is determined on the basis of a daily valuation of the swaps.²⁴ As well as the collateral based on the current market value, most counterparties are also obliged to furnish additional collateral. This 'independent amount' is calculated up to a certain maximum in relation to the amount of the swap portfolio and is 'independent' of the market value. The State itself does not furnish counterparties with any collateral. As an extra safety valve the State has the unilateral right to immediately terminate swaps with a counterparty if that counterparty's rating falls below a certain level.

Collateral does not eliminate the entire risk. The bankruptcy of a swap counterparty results in the State acquiring an 'open position': the elimination of the swaps entered into with the bankrupt party leads to an undesirable interest rate risk in relation to the benchmark. Swaps have to be entered into again with other counterparties in order to close the open position. If a counterparty fails, the collateral should in principle be enough to close the position by entering into new swaps without this necessarily leading to additional costs being incurred. But because the market interest rate and - accordingly - the market value of the swap can change between the point at which the State received collateral and the swap can be entered into again, there is a risk that the collateral provided will not provide sufficient protection.

It is important to note in this context that the market for swaps with a longer maturity in particular has become considerably less liquid in recent years. In less liquid markets it is difficult or even impossible to close a large open position within a short time period and at an acceptable cost, i.e. enter into new swaps to replace the eliminated ones. The longer a position remains open, the greater the potentially adverse interest rate fluctuations and potential financial loss of the State become.

When it comes to closing open positions concentration risk is a relevant part of the credit risk. Concentration risk is the risk that a large proportion of the overall credit risk is taken on one or a limited number of parties. The bankruptcy of an important counterparty could lead to a potentially large open position in relation to the benchmark, and a large deviation from the desired risk profile.

The DSTA operates a limits system to rule out the concentration risk. The limits system lays down which part of the overall credit risk can be taken on a single counterparty, whereby a greater risk can be taken on parties with a better rating. Since there has been a fall in the number of banks that meet the rating requirements, fewer potential counterparties remain.

more interest than it pays; the counterparty will pay more interest than it receives. If the State expects to receive more interest than it pays, the swap has a positive market value for the State.

²² If the swap portfolio has a positive market value the State has a claim on its counterparties. If this claim is not entirely covered by collateral, the State is exposed to a credit risk on the counterparties.

²³ In addition to this a much smaller volume of mainly short-term currency swaps is used to hedge the exchange rate risk on money market debt in foreign currency.

²⁴ The market value collateral is subject to certain thresholds (minimum lower limit that the market value of a portfolio has to reach before collateral is furnished) and minimum transfer amounts.

Finally, there is settlement risk. This risk arises in swaps if the counterparty defaults on a fixed (or variable) interest payment in a situation where the State has already met its obligation to pay interest. This risk is mitigated mainly by means of 'netting'. This means that when the counterparty is due to make a fixed (or variable) interest payment and the State is to make a variable (or fixed) interest payment, the balance of the two payments determines the ultimate amount of the (net) payment.

5.2 The emergence of Central Clearing Parties (CCPs)

An important development is that global regulation exists or is under preparation to oblige financial institutions to centrally clear most swap transactions. This means that a central clearing party (CCP) places itself between two parties that have entered into a swap transaction. From that point onwards the CCP functions as the counterparty for both original parties, which no longer have a mutual trading relationship. Bilateral credit risks are thus eliminated: if bank A goes bankrupt, bank B, with which bank A initially entered into a swap, does not suffer a loss. This counterparty risk is now concentrated in the CCP. The CCP itself is strictly regulated and operates a multitude of risk-mitigating measures. Regulators have therefore ruled that centrally cleared swaps will be subject to less stringent capital and liquidity requirements.

The DSTA is excluded from the obligation to clear swaps centrally. One reason to have swap transactions cleared via a CCP nonetheless is a situation where it is judged that it is cheaper to enter into swaps that are cleared, even though the Dutch State has a higher credit rating than the CCP. Some countries have already decided to do this or are planning to switch to central clearing in the future.

One of the downsides of central clearing is that all parties that clear via a CCP are obliged to provide collateral. The DSTA currently has a unilateral collateral agreement with its counterparties, which implies that the counterparties provide the DSTA with collateral, but that the DSTA does not itself have an obligation to provide collateral. There would be various disadvantages if the DSTA was obliged to provide collateral itself. One of the most important of these is that the providing cash collateral would result in a larger EMU debt. Funding policy and cash management would also be complicated. On the other hand, a mutual collateral agreement would result in counterparties being more willing to enter into (longer) swaps with the DSTA and in a fall in the costs currently involved in this.

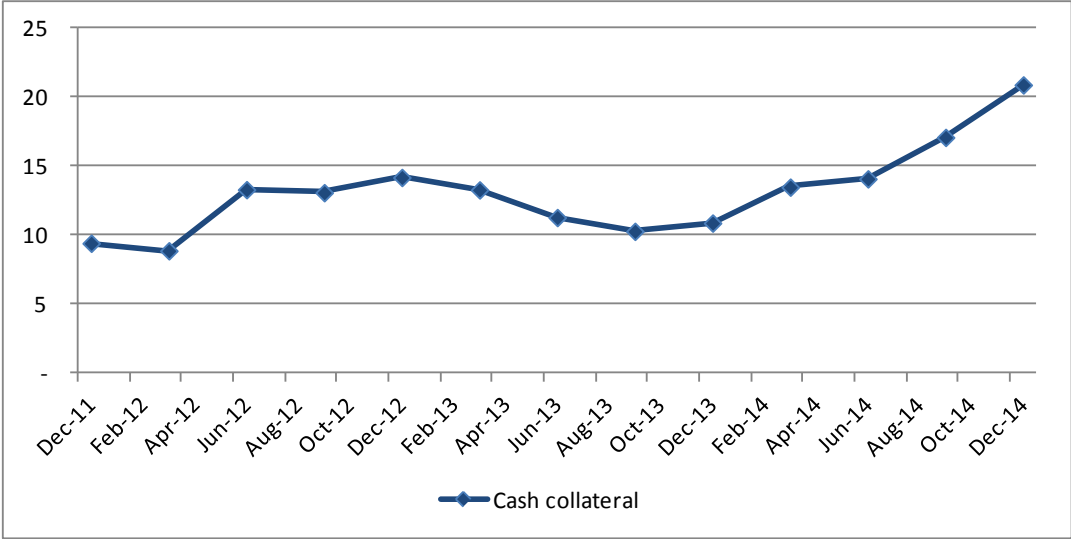
Despite the decision not to have swaps centrally cleared for the time being, it is important for the DSTA to closely monitor developments in central clearing and their implications for its own swap transactions.

5.3 Collateral resulting from the current, exceptionally low interest rate

A change in the interest rate leads to a change in the market value of a swap²⁵. Falls in the interest rate have led to a constantly rising market value in the DSTA's overall swap portfolio. As a result of this the market value of the swap portfolio had amply passed the € 20 billion mark by the end of 2014. The cash collateral was also well over € 20 billion. See figure 9.

²⁵ The 6-month Euribor interest rate is important here: this is the interest rate paid and received over the variable leg of all swaps.

Figure 9: Sharp rise in cash collateral (2012-2014, in € billion)



The collateral received causes the DSTA to face various complications in execution of its funding policy.

The collateral received is a form of short term financing. It thus forms an alternative to regular money market financing: each euro received as collateral means a euro less that the DSTA has to attract on the money market. The DSTA is obliged to pay interest over the collateral it receives. Since this is higher than the interest rate that would be paid for regular money market financing, collateral is an expensive form of financing. The costs involved in this can be calculated at approximately € 6 million for 2014.

Also, the day-to-day changes in the collateral position are hard to predict. On days when interest rates strongly fluctuate, peak changes of more than € 1 billion are not unusual. This hinders the DSTA's cash management. Cash management is carried out to ensure that the State's expenditure and income are the same on any given day. On some days expenditure exceeds income and short-term funding has to be attracted. On other days the reverse situation arises and surplus amounts have to be deposited. The State's regular expenditure and - to a lesser extent - income are largely predictable. The cash management can be geared to this. The unpredictable position of the collateral causes interference in the cash management process. This results in an unexpectedly large deficit or surplus on some days, which has to be funded or deposited. This usually has to be done under less favourable interest conditions than if the development had been foreseen. Deposits also lead to credit risk.

One of the most significant advantages of using swaps is that it facilitates a separation of the interest rate risk policy and the funding policy. However, the very high level of the collateral places the issue of money market instruments at risk. This is discussed in more detail in chapter 6.

The DSTA has reduced the complications outlined above by intentionally deviating from the benchmark by not swapping back long-term debt issues in all cases. It is precisely the long-term receiver swaps that are vulnerable to changes in the interest rate and lead to changes in the level of the collateral. If there had been no deviation from the benchmark, the level of the collateral would have been many billions higher.

5.4 Operational risks

The DSTA generally only enters into the simplest interest rate swaps under a standardised legal contract, known as the International Securities and Derivatives Association (ISDA) master agreement. Despite that, legal disagreements on the interpretation of this contract can arise, based for example on unforeseen circumstances such as negative interest rates in relation to payment on collateral. This can result in the State being exposed to risks.

Swaps also place an operational burden on the DSTA, and this increases the operational risk. This operational risk has manifested itself in the past, resulting in a shortcoming as established by the Netherlands Court of Audit. This shortcoming prompted the DSTA in 2013 to draw up a plan for a project 'DSTA in control', in order to improve internal control. The House of Representatives was informed of this in a letter dated 21 February 2014.²⁶ This project is currently underway.²⁷

5.5 Difference between the sovereign yield curve and the swap yield curve

To explain the relevance of the difference between the sovereign yield curve and the swap yield curve, it is important to illustrate how the State sets out to replicate the interest rate risk profile in practice. See figure 10.

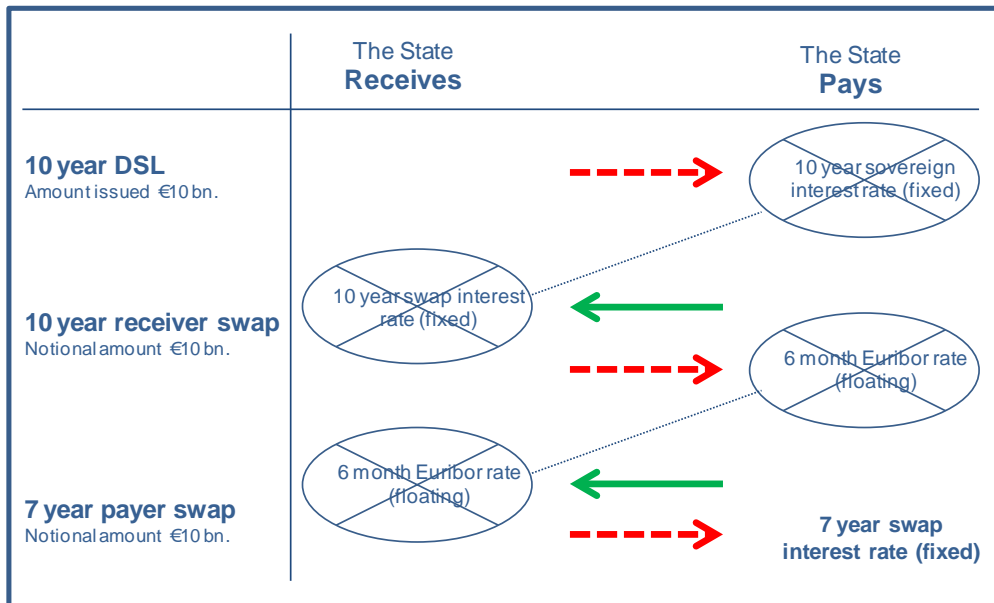
If a € 10 billion bond is issued, the 10-year sovereign rate is paid over this. 10-year receiver swaps are then entered into for the same amount. The size of a swap is called the 'notional amount'. The state receives the 10-year swap rate over a 10-year receiver swap and then pays the lower 6-month Euribor rate. Finally, payer swaps are entered into for € 10 billion. The State receives the 6-month Euribor rate on a payer swap, and pays the 7-year swap rate. The move from the 10-year rate to the 7-year rate does not take place in one step because products such as these are barely traded on the market.

The idea underlying the swap strategy is that the 10-year interest rates paid by the State when issuing a 10-year government bond and received when entering into a 10-year receiver swap cancel each other out. The same takes place with the 6-month Euribor rate that the state receives and pays. What ultimately remains is the paying leg of the 7-year payer swap. Result: on balance the State pays the 7-year interest rate.

²⁶ See parliamentary document 33750-IX-15, Adoption of the budget statements of the Ministry of Finance (IX) and the budget statement of National Debt (IXA) for the year 2014.

²⁷ The findings of the Netherlands Court of Audit are given in the report 'Results of accountability study 2014 Ministry of Finance (IX)' as published on 20 May 2015; www.rekenkamer.nl/Publicaties/Onderzoeksrapporten.

Figure 10: Swap strategy converts 10-year sovereign rate into 7-year swap rate

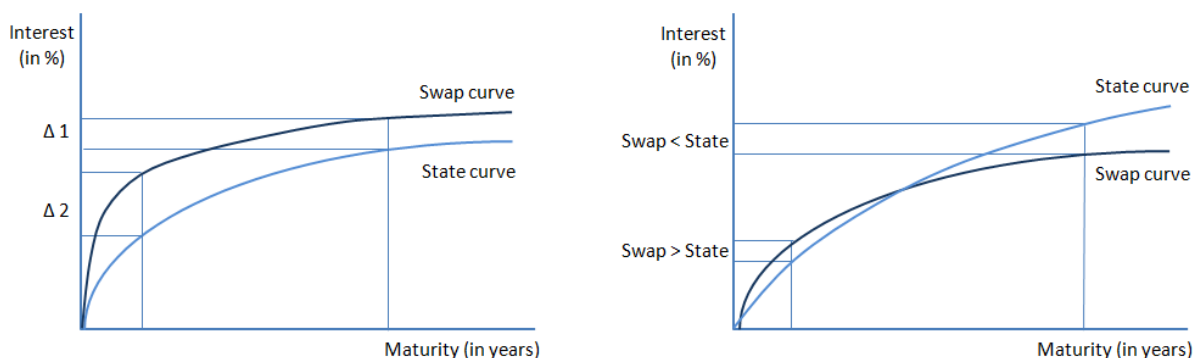


The way in which the 10-year interest rates cancel each other out in figure 10 is not entirely straightforward. The 10-year sovereign rate is paid over the 10-year DSL, whereas the 10-year swap rate is paid over the 10-year receiver swap. Although the sovereign yield curve and the swap yield curve are historically reasonably close to each other, they are not the same. If the sovereign rate is higher than the swap rate at the 10-year point, this will lead to a negative result compared to the benchmark. But if the 10-year swap rate is higher than the sovereign rate at the 10-year point, this will lead to a positive result compared to the benchmark. See figure 11

Also, the State ultimately pays the 7-year interest rate. At first sight, this appears to be in line with the benchmark, over which the 7-year interest rate is also paid. But the benchmark pays the 7-year sovereign rate, whereas in practice the 7-year swap rate is paid. In this case a positive result is achieved compared to the benchmark if the swap rate is lower than the sovereign rate, and a negative result if the swap rate is higher than the sovereign rate.

The two effects described in the previous two paragraphs are opposites: in the first case a higher swap than the sovereign rate leads to a positive result in terms of interest costs in relation to the benchmark; in the second case it leads to a negative result. These opposite effects can lead to the overall deviation being smaller. If the sovereign and swap curve are precisely parallel to each other, the deviations will largely cancel each other out. It is more likely that there will be a difference in the slope of the sovereign and swap curve, which means that the difference between the sovereign and swap rate is not identical for various maturities. This will result in a deviation from the benchmark.

Figure 11: Potential State/swap spreads for various maturities



Since the introduction of the benchmark in 2008 the sovereign curve has at various times been higher and lower than the swap curve and the two curves have also crossed each other. At the beginning of 2015 the sovereign curve was completely below the swap curve, but the difference in shorter maturities was greater than at the longer end.

If the sovereign rate for the maturities under which the debt is issued is higher on average²⁸ than the swap rate, this leads to a negative result in relation to the benchmark. Conversely, a positive result can be achieved with a positive sovereign/swap spread for the 7-year maturity. The net result may be positive or negative. In 2012 and 2013 the net result was positive.

However, in 2014 the net result was negative. All things being equal, this implies a negative result compared to the benchmark. A negative result means that the interest costs of the actual debt and swap portfolio are higher than the costs of the benchmark portfolio. The results of the debt manager and therefore largely determined in practice by changes in interest rates that are beyond his control.

5.6 Implications of the transition to ESA2010

In September 2014 ESA95 was replaced by ESA 2010²⁹ as the statistical method used to determine the national accounts, including the calculation of the EMU balance. This prompted the European Commission to bring the definition of the EMU balance used up until then - including the effects of interest rate swaps - in line with the handling of swaps in the ESA. In ESA2010 the interest flows related to swaps are treated as financial transactions. For the calculation of the EMU balance this means that the interest paid and received on debt instruments always excludes the effects of swaps. In other words, the original interest rate series on the debt instruments are incorporated in the EMU balance on a transaction basis. All positive and negative results related to swap transactions are not, but are incorporated in the government debt as financial transactions.

Because swaps no longer have any effect on the interest rate risk for the balance since September 2014, the interest risk profile relevant to the EMU balance is identical to the actual bond portfolio. It is therefore no longer possible to use swaps to extend the interest maturity of the portfolio in order to reduce the interest rate risk to the EMU balance. As a result of this, the current risk framework - in which swaps are instrumental to the management of the interest rate risk - in fact does nothing to manage the interest rate risk for the EMU balance.

²⁸ For the calculation of the average interest rate the weighting of each maturity in the average depends on the share of that maturity in the total debt issuance.

²⁹ ESA stands for European System of National and Regional Accounts. ESA2010 contains a harmonised method that EU Member States use to draw up their national accountability figures. The purpose of this is to ensure that the figures of all EU Member States are consistent, comparable, reliable and up-to-date.

5.7 Conclusion

The benchmark theoretically provides an optimal trade-off between costs and risks. The DSTA replicates the benchmark as closely as possible by making use of swaps. This has made the policy largely effective and efficient.

For the different reasons explained in this chapter, various side-effects occur between the theoretical optimum and actual practice. These side effects are too important to ignore. Credit risk, concentration risk and settlement risk have increased. The emergence of Central Clearing Parties may lead to a radical change to the execution of swap transactions. There are a number of disadvantages to the high level of cash collateral resulting from the use of swaps. Swaps increase operational risk. The difference between the sovereign yield curve and the swap yield curve leads to profits or losses that cannot be influenced. Due to a change in European regulation it is no longer possible to use swaps for managing the interest rate risk to the EMU balance.

6 Funding policy

The key principles that the DSTA operates when formulating the funding and issuance policy are consistency, transparency and liquidity.³⁰ The purpose of the Dutch funding policy is to minimise the risks involved in, and the costs of, debt issuance. These key principles and purposes are in line with the international guidelines for debt management drawn up by the IMF and the World Bank.³¹ This chapter evaluates the extent to which the DSTA's principles and purposes are in line with the international guidelines.

The following international guidelines are the most important:

- predictable issuance;
- transparency;
- robust secondary market;
- diversification of the debt portfolio;
- risk reduction;
- cash management.

The paragraphs below address these aspects consecutively. The paragraph on risk reduction also covers the subject of cash management. The Dutch funding policy is then compared to that of other countries.

6.1 Predictable issuance

The international debt management guidelines state that the primary market for sovereign bonds is characterised by a predictable issuance pattern. Acting predictably prevents investors from facing surprises. Acting predictably therefore potentially contributes to raising interest and demand among investors, which in turn contributes to lower financing costs. Predictability is also an important secondary objective for the Dutch debt financing, which is expressed in the 'consistency'

³⁰ In this document, but also in external communication, the terms marketability and liquidity are used interchangeably.

³¹ Revised Guidelines For Public Debt Management, IMF & World Bank, April 2014.

principle. The DSTA strives for consistency in the capital market where debt instruments with maturities longer than 1 year are issued and creates flexibility in the money market where debt instruments with maturities shorter than 1 year are placed in order to allow for changes in the funding need. Using a predictable arsenal of funding instruments in the capital market each year makes it possible for investors to anticipate them in their portfolio decisions.

To the DSTA, acting consistently also means acting in line with what has been announced. In the past four years the aim was not to deviate, or to deviate as little as possible, from the announced issuance on the capital market. This applies both to the size and the composition in maturities. The differences that have occurred are explained by additional debt issuance following the auction³² and the market conditions during the auctions. See figure 12. Minor differences such as these are difficult to prevent and only barely detract from the consistency of the capital market operations.

Figure 12: Announced and realised capital market issuance very close (in € billion)

Year	Announced	Realised	Deviation
2012	aprox. 60	60.4	0.4
2013	aprox. 50	51.8	1.8
2014	aprox. 50	50.9	0.9

Efforts are also made - secondarily - to keep the capital market issuance as stable as possible throughout the years. This does not, however, mean that the DSTA is obliged to maintain its choice of a certain capital market size for a minimum number of years. After all, the annual funding plan is the time at which to decide on the optimum division between funding on the money market and the capital market. The DSTA has achieved a large degree of consistency regarding the issue volume for each Dutch State Loan (DSL), the official name of Dutch sovereign bonds. It can therefore be concluded that the secondary objective of predictability has been effectively met.

It is not possible to calculate the cost savings achieved by being predictable. It can, however, be safely assumed that predictability contributes to lower risk perception. Lower risk perception leads in turn to a lower risk premium in the interest rate. Predictability generally creates efficiency, but there is a trade-off between predictability and flexibility. The Netherlands offers a strong measure of predictability and, accordingly, a limited amount of flexibility on the capital market. This creates a certain tension when it comes to the ability to respond to unforeseen circumstances on financial markets or changes in the budget. The flexibility on the money market reduces this tension.

The fact that the Netherlands has been able to act so consistently can be attributed in part to the uncoupling from the funding policy and the interest rate risk policy as described above. After all, bringing all issuances to 7 years via swaps creates freedom of choice regarding the maturity of bonds.

6.2 Transparency

The international guidelines for debt issuance assert that transparency contributes to more certainty among investors and thus contributes indirectly to minimising costs. Transparency contributes to the credibility and predictability of a debt manager, which must contribute in the

³² The 'non-competitive option' offers Primary Dealers (PDs) in Dutch debt securities the option to increase their own primary purchase by 15% at the average price achieved at the auction for a period of 3 days following the auction. The option is given only to PDs with a minimum share of 3% in the auction. The PD must also have offered sufficient competitive prices in the second market in the month prior to the auction.

long term to a stronger interest among investors. The DSTA also operates transparency as a key principle and this is achieved in particular by communicating adequately and promptly with counterparties and investors. There is a lot of communication with Primary Dealers (PDs)³³ and Single Market Specialists (SMSs)³⁴ on placing bonds on the market and maintaining the market for DSLs. A report is published annually in the form of the *Outlook* containing the funding plan for the new year. Periodic publications are used to inform investors about the execution of the funding plan and new developments. Quarterly reports are published throughout the year that focus on the issuance plans for the next quarter. Auctions and their results are announced in press releases.

Market players indicate that they appreciate the amount of transparency and that, to a certain extent, it sets the Netherlands apart from other countries. It can therefore be concluded that the sub-objective of being transparent has effectively been met. Investors confirm that they regard the methods used by the DSTA as being transparent. Aspects of this include the detailed information on the website, the various publications and the predictability of the policies.

6.3 Robust secondary market

A robust market for DSLs is created by aspects such as high liquidity of debt instruments that can serve a broad investor base. Liquidity (or marketability) makes it possible for an investor to buy and sell debt instruments without any excessive price fluctuations occurring, which makes investors more inclined to invest in these instruments. A high degree of liquidity thus contributes indirectly to lower financing costs.³⁵ It is difficult to quantify the extent to which the Dutch funding policy has contributed to lower funding costs via increased liquidity. It is however safe to assume that the contribution of the debt policy to the marketability aspect is economically significant.³⁶

One way of promoting liquidity in old bonds is the 'off-the-run facility' that has been operational since 2009. This facility makes it possible to reopen bonds that are no longer deemed to be benchmark bonds for that maturity. Liquidity is an important criterion for the selection of the bond to be auctioned in the off-the-run-auction. If a certain bond appears less liquid, the off-the-run-auction makes it possible to generate more supply. Finally, a repurchase facility and a quotation obligation for Primary Dealers³⁷ for DSLs on the secondary market also contribute to improving marketability.

³³ Since 1999 the State has been using a Primary Dealers system for the distribution and promotion of DSLs. The system consists of a group of banks. When compiling the group of Primary Dealers a lot of attention is paid to gaining a good balance between banks targeting the local, regional and global markets. This balance is desirable when it comes to achieving a broad base of end-investors in Dutch government bonds.

³⁴ A number of selected banks which, in addition to the Primary Dealers, take part in the DTC market system, a market system initiated by the Dutch State in 2001. Part of the system involves the quotation of DTCs on MTS Netherlands. Primary Dealers and a number of selected banks take part in the system, and they are permitted to call themselves Single Market Specialists. As well as the obligation to quote, these parties are given exclusive access to the electronic auctions of DTCs. The parties can also make use of a repurchase facility for DTCs.

³⁵ This assumption is supported by a document of Schwarz (2014) in which it is demonstrated that liquidity has contributed to the widening of various interest rate spreads during and after the financial crisis. Jankowitsch, Mosenbacher and Pichler (2003) have also shown that in relatively small bond markets (including the Dutch one) more liquidity contributes more to lower interest rate differences than in large bond markets. For an estimate of the liquidity premium for Dutch national debt instruments we can take the difference between the last two 10-year benchmark bonds of the Dutch state and those of the Bank Nederlandse Gemeenten (comparable creditworthiness). The interest rate difference between these bonds has averaged 10 basis points since they were both issued. Viewed historically this difference is relatively small.

³⁶ Hibbert et al (2009) have carried out a 'Literature review of theoretical and empirical evidence' on the 'Liquidity Premium'.

³⁷ Primary dealers are obliged to issue quotes on the secondary market. That way there is always 'a market' for Dutch government bonds.

6.4 Diversification of the debt portfolio

The international guideline that requires the debt portfolio to be diversified as much as possible is another important objective for the DSTA. After all, a broad range of debt instruments gives various types of investors the opportunity to invest in Dutch debt securities. The debt manager thus creates a broad investor base, which may lower the costs and reduce the risks of - initially - a single investors' group. However, the more different debt instruments are issued, the smaller the outstanding volume of each of the instruments becomes. This is because the funding requirement in a given year limits the available issuance options. This therefore leads to a trade-off between portfolio diversification and liquidity. Nevertheless, the DSTA issues a new 10-year bond every year in order to have a liquid bond outstanding on as many maturities as possible on the yield curve. Also, 3, 5, 20 and 30 year bonds are issued as and when required. Combining standard maturities each year with issues that take place once every few years creates a yield curve that provides investment options for many different maturities.

Placing the focus on just a limited number of debt instruments implies that certain types of debt instruments cannot be offered to investors. An example of this is the issuance of bonds in US dollars. The current conditions for the issuance of a dollar bond are that a cost advantage can be achieved in relation to a comparable issuance in euros in terms of maturity and that the funding requirement is sufficient. When drawing up the funding plan for a given year it cannot be said with any certainty whether such a cost advantage will present itself. For this reason, the DSTA has decided not to make room for such an issuance in advance and to decide during the course of the year whether issuing a dollar bond is the right thing to do. Up until now a very long-term bond, such as a 50-year bond, has not been issued owing to the lack of a sufficient funding requirement. Another example of a limitation in the number of debt instruments is that the DSTA does not issue any special products such as indexed-linked bonds.³⁸ It would go beyond the scope of this evaluation to assess all possible products.

6.5 Risk reduction

Significant risks concerning the Dutch debt issuance are the refinancing risk, liquidity risk, credit risk and currency risk.³⁹ These risks are discussed in the paragraphs below.

Refinancing risk

Refinancing risks may arise if a relatively large call is made on existing funding instruments in a given year. It is therefore important to aim for a repayment profile that is fairly smooth and - more importantly - does not create any peaks that cannot be financed. However, it is difficult to ascertain what a high peak would be because this has never been tested in the Netherlands. A measure for the refinancing risk is the refinancing (money market and capital market repayments) in a given year divided by the GDP. For countries in the eurozone in 2011 to 2014 this averaged at approximately 10%.⁴⁰ Figure 13 shows that between 2012 and 2015 this ratio was also about 10% for the Netherlands.

³⁸ In 2005 (parliamentary document 30300-IXA no. 7, 21 December 2005) and 2008 (parliamentary document 31700-IXA, no. 4, 2 October 2008) studies have been conducted into the question of whether the Dutch state would be well-advised to issue inflation indexed government bonds. It has been decided on the basis of these studies that no business case can be made for the State to issue such bonds. On the request of the Senate and following consultation with a number of major pension funds the minister has however decided that as soon as long-term interest rates have normalised, the question of whether it could be an option to issue a long-term indexed bond (e.g. with a maturity of 30 years) will be looked into; see parliamentary document 33000-Y, Letter of the Minister of Finance to the Speaker of the Senate, 28 June 2012.

³⁹ As mentioned above, the interest rate risk has been uncoupled from the issuance policy by means of the benchmark. The minimisation of this objective is therefore not evaluated in this chapter.

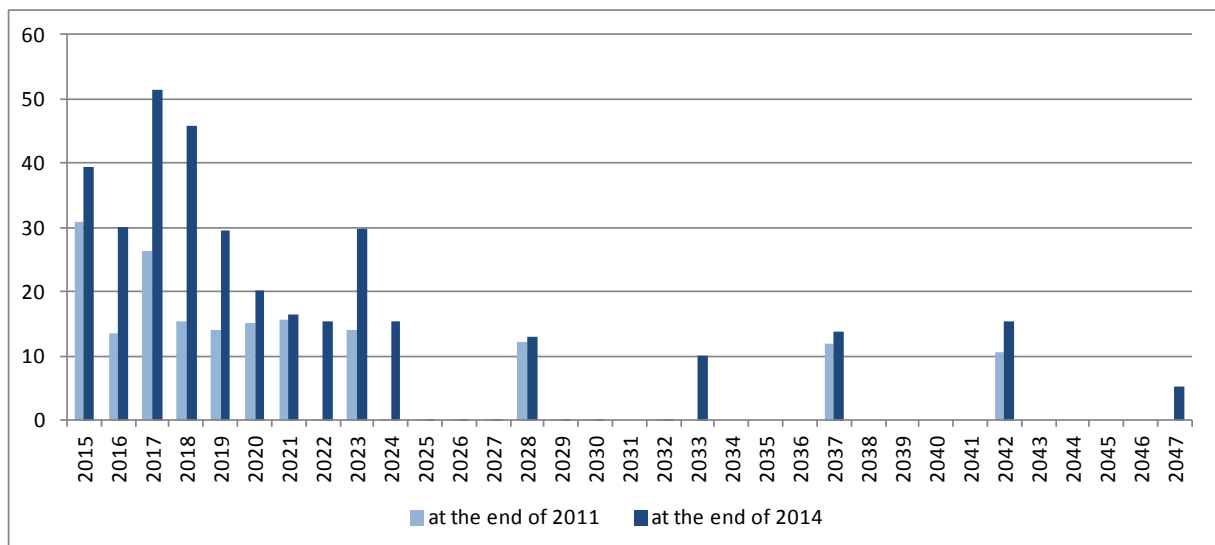
⁴⁰ S&P European Sovereign Issuance Survey, February 2014

Figure 13: Refinancing risk Netherlands around 10% GDP (2012-2015)

Year	Refinance Risk
2012	10.0%
2013	7.8%
2014	9.0%
2015	9.6%

Figure 14 shows the repayment profile for the period after 2015 at two points in the past: the beginning of 2011 and the beginning of 2014. Regularly issuing bonds with a relatively short maturity of 3 or 5 years leads to peaks in the near future. Looking further into the future it is notable that a new repayment peak has also been created in 2023. The reason for this is that a 10-year DSL was issued in 2013, whereas in 2023 two old (30-year) DSLs with a nominal amount of approximately € 14 billion will mature. This choice, then, was based mainly on maintaining consistency. In this case, consistency in the issuance policy leads to a (manageable) repayment peak.

Figure 14: Repayment profile at year-end 2011 and 2014 (in € billion)



Liquidity risk

The effect of the liquidity risk on the Dutch State arises in a situation where it is difficult to gain sufficient funding under attractive conditions in the short term. The odds of this actually happening are small in view of the high credit status of the Netherlands. The creditworthiness of the Netherlands falls beyond the scope of this policy review. The main method the DSTA uses to mitigate this risk is to maintain a liquid money market that always provides access to short term financing.

History shows how important a presence in the money market is. In 2008 various Dutch financial institutes got into acute difficulty and required governmental support. The DSTA had to attract tens of billions of euros in a short timespan very quickly in order to finance this. The money markets usually offer more flexibility to deal with fluctuations in the funding requirement without any significantly negative price effects occurring. Since the creditworthiness of the Netherlands was high and because the market for Dutch money market paper was sufficiently liquid and it remained possible to trade in Dutch money market instruments even in times of serious financial stress, it proved possible to attract the necessary resources swiftly and under acceptable conditions.

The DSTA has ascertained that the desirable level of the outstanding money market lies at around € 30 billion, not including collateral. This objective is based on an estimate of the variability of windfalls and setbacks in the budget balance, but does not take account of the variability of the collateral inflows related to the swap portfolio. See also chapter 5. However, these inflows have sharply increased in recent years, which has put the issuance of money market paper (and, accordingly, the liquidity of money market paper) under pressure. This is undesirable with a view to managing the liquidity risk. In this situation more flexibility in the issuance policy could have made it possible to secure the liquidity of the money market instruments more effectively. However, making use of this flexibility, e.g. reducing the call on the capital market on an interim basis, would have been at the expense of acting consistently on the capital market and of liquidity in the capital market instruments.

Another potential way of mitigating liquidity risks is to maintain a 'liquidity buffer'. This buffer could be called on in the event of an unexpected liquidity requirement when there is limited or no access to the financial market, caused for example by a technical fault. A liquidity buffer could also be used for cash management purposes, in order to manage liquidity shortages and surpluses. Up until now the Netherlands has not maintained a liquidity buffer because as a very creditworthy country in the eurozone it always expects to have sufficient access to the money and capital markets if an unexpectedly higher funding requirement has to be financed. This in itself is a valid choice in view of the highly liquid market for Dutch money market paper and the proven fact that there has always been sufficient funding available under acceptable conditions, even in times of serious financial stress. However undiminished access to the money market is a prerequisite for this strategy.

Credit risk

Credit risk is the risk that a counterparty is unable to meet its contractual obligations. The DSTA is exposed to credit risk when it temporarily deposits surpluses with market participants.⁴¹ To minimise this risk, strict requirements are set for the creditworthiness of these parties. Counterparties must meet minimum rating requirements. Credit risk is also limited by depositing without collateral as little as possible and not doing this for longer periods. This means that preferably hedged deposits ('buy-sell-back' transactions) are used in which collateral is provided to the DSTA in the form of government bonds. If the counterparty is unable to meet its obligations for any reason, the DSTA can convert this collateral into cash. The financial crisis has led to a tightening of the rules. It is only possible to place deposits with counterparties without collateral for a maximum of one day, for example. The DSTA also conducts more business with government debt managers of other countries than previously.

Currency risk

As well as issues in euros the DSTA also issues limited debt in foreign currencies. As well as Commercial Paper issued in euros, US dollars, British pounds, Norwegian kroner and Swiss francs, since 2012 the DSTA has also been able to issue bonds in US dollars. All issues in foreign currency are swapped into euros so that the DSTA remains protected against the currency risk and the financing costs in euros are fixed when entering into the transaction.⁴² However, hedging this risk excludes the ability to profit from favourable exchange rate developments.

⁴¹ The DSTA is permitted to keep a maximum of € 200 million a day in the account at DNB.

⁴² The Netherlands is however exposed to a limited currency risk on the debt instruments taken over from the former Netherlands Antilles. The new relations within the Royal Kingdom of the Netherlands came into effect on 10 October 2010. The debt rescheduling by the Netherlands formed an integral part of the new political relations. In the context of completing the debt rescheduling the State of the Netherlands took over all existing loans from the Netherlands Antilles and the Curacao island region on 10 October 2010. These loans are denominated in US dollars.

6.6 Financing policy in other countries

As mentioned above, consistency, transparency and liquidity are the key principles of the issuance policy. It has emerged from consultations with other countries that these countries do not necessarily operate the same principles, or they place a different emphasis on these principles. But the objectives are ultimately the same: financing the national debt at the lowest possible cost under an acceptable risk.

Unlike in the Netherlands, the funding policy in some countries is driven more by market demand than by consistency. Consultations are held with the Primary Dealers to establish which are the best bonds to auction at each auction or in each quarter, for example. These countries take more account of market demand in their issuance decisions than the Netherlands, and appear to place less emphasis on consistency, transparency and liquidity.

The Netherlands also proves to be relatively transparent on its issuance policy. The Netherlands publishes which DSL will be issued per quarter and on which date, and the amounts to be issued, for example. Some other countries choose only to announce at the beginning of the year the auction dates, the total amount to be auctioned on the capital market in that year and, if applicable, the amount in each maturity segment. The precise details are given at a later date; some countries announce which bonds will be offered a week in advance or new bonds are announced on one day and auctioned just a few days later. This is based also on the fact that the issuance policy is more demand-driven in some countries. Another point on which there are differences in the issuance strategy is that some countries only use the issuance policy to manage the interest rate risk, whereas others, such as the Netherlands, use swaps in addition to the issuance policy to manage the interest rate risk.

6.7 Conclusion

The DSTA is acting in line with the internationally accepted guidelines for debt financing. The issuance policy is highly rated in the market, not least due to the relatively high degree of consistency and transparency in combination with the high liquidity in Dutch debt securities. Although the effect of the current policies on the funding costs is difficult to quantify it can safely be assumed that the funding policy and its implementation have been effective and efficient and have contributed to minimising costs and risks. The liquidity risk is effectively regulated via the money market. The refinancing risk is transparent and effectively manageable. There are clear credit risk guidelines.

However, the current implementation of the key principles operated by the DSTA limits the flexibility of the issuance strategy. It is possible that the current degree of flexibility will be insufficient if the uncoupling of interest rate risk and the issuance strategy increases in the future. However, this does not imply that the key principles should be relaxed, but that the right balance must be found with the need for flexibility.

APPENDIX: Assessment of external experts

The Minister of Finance
Ir. J.R.V.A. Dijsselbloem
PO Box 20201
NL-2500 EE The Hague

Date: 27-5-2015

Concerning:

External assessment of policy review of the risk management of the national debt.

The policy review of the risk management of the national debt was carried out in May 2015 and related to the whole of Article 11 of the national budget on the financing of the national debt. The undersigned were asked as external experts to assess the evaluation and its conclusions.

The policy review has been carried out in a structured manner, involving representatives of the various divisions of the Ministry of Finance. The process provided sufficient opportunities for feedback and the discussions were at an appropriate level, with active participation on the part of all those concerned. The outcomes of these discussions were subsequently correctly incorporated in the report.

The general objective of Article 11 of the national budget reads 'Debt financing at the lowest possible interest cost under an acceptable budgetary risk'. The objective of the risk management policy has been operationalised in the existing policy framework as a centralised 7-year benchmark portfolio. This benchmark is achieved by converting the issuance of debt securities independently of the maturity into a 7-year bond (by using interest rate swaps). Deviations from this benchmark have also been made possible within the existing policy framework, as a result of which it is now possible - under certain conditions - to refrain from restoring issues with longer maturities to this benchmark. This has indeed taken place in practice.

The policy review takes the mandate of the DSTA as set out above as its starting point; all relevant dimensions of the pursuance of the policy have been included in the evaluation on this basis. In view of the policy review remit, policy decisions outside of this mandate (such as those regarding the issue of debt securities that can be justified on broader welfare-economic grounds, such as the issue of indexed bonds) are not included in this analysis, but should be addressed elsewhere.

We concur with the conclusions of the report, noting the following aspects:

- The review pays a lot of attention to how the policy regarding the 7-year benchmark has been pursued, but less attention has been paid to the evaluation of the 7-year benchmark itself. It would be advisable during the preparation of the policy framework for the oncoming period to take the time to explicitly address the implications of the change in market conditions for the 7-year benchmark itself.
- The evaluation of the policy pursued in recent years is hindered by the fact that the policy framework allows deviations from the benchmark under certain conditions. Although it is noted that the deviations from the benchmark have met these conditions, there is no systematic guideline for the extent to which and circumstances in which it is possible to deviate from the benchmark. This makes it impossible to fully evaluate intentional deviations and thus decreases accountability on how the policy is pursued. The dilemma between flexibility and accountability should also be explicitly addressed in the new policy framework and may call for a more complex and dynamic benchmark.
- The report includes a cost/benefit analysis regarding permitted deviations from the risk policy (as outlined above), and it can be concluded that this has led to substantial extra (interest) costs being incurred. It should also be borne in mind that the full costs/benefits of this deviation will only become apparent over a longer time period (> 20 years): in a - not inconceivable - scenario in which interest rates go up in the next few years it is possible that the negative result will suddenly turn into a positive one.
- A lot of attention has been paid to the policy of taking the national debt to the 7-year benchmark with the aid of interest rate swaps. Although this is theoretically an efficient way of managing the interest rate risk, its practical implementation has led to two complications:
 - the current policy framework does not provide for a systematic and explicit assessment of other risks (in addition to the interest rate risk) related to pursuing the swap policy (e.g. credit risk, concentration risk, settlement risk). Here too, the addition of an explicit assessment of such risks increases the accountability (and complexity) of the policy framework but restricts the flexibility of how the policy is pursued.
 - Although the swap policy has the theoretical objective of uncoupling the risk policy from the funding policy (in other words: making the interest rate risk profile independent of the issuance strategy), it appears that this cannot be done (fully) in practice. The sharp fall in interest rates in recent years has resulted in the level of the cash collateral deposited by swap counterparties becoming so high that the money market capacity has (substantially) reduced, which confirms that the financing policy has indeed been crossed to some extent by the risk policy.

We recommend including both points in the formulation of the future policy to be pursued for the swap strategy.

Yours faithfully,

CPB Netherlands Bureau for Economic Policy Analysis

Drs. J.F.P. Hers
Head of Public Finance Sector

De Nederlandsche Bank N.V.

Drs. J. Veerman CFA
Senior Risk Manager