Danmarks Nationalbank

Danish Government Borrowing and Debt

2004

DANISH GOVERNMENT BORROWING AND DEBT 2004
Print: Schultz Grafisk A/S
ISSN: 1399-2023
1398-3881 (online)

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Explanation of Symbols
- \- Magnitude nil
- 0 Less than one half of unit employed
- • Category not applicable

In tables figures may not add because of rounding.

This publication is based on information available up to 4 February 2005.

This publication is a translation of "Statens låntagning og gæld 2004".

Contents

Foreword

Danish Government Borrowing and Debt is an annual publication describing the development during the preceding year and reporting on other matters of relevance to debt management. The aim of the publication is to give a deeper understanding of the Danish government debt policy. *Key Elements of the Government Debt Policy* provides an overview of the debt policy in 2004 and the strategy for 2005.

Chapter 1 gives a general presentation of the key principles for the government debt policy. Chapters 2-7 report on 2004 and on the strategy for 2005. Strategy and borrowing are covered by Chapter 2, while Chapter 3 describes the development in government securities trading. Chapter 4 accounts for the management of the assets of the Social Pension Fund, the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation. The latter two funds were established in 2005. Chapter 5 reviews the overall principles for the management of government loan guarantees and re-lending. Chapter 6 describes how various types of risk related to the central-government debt are managed. Finally, Chapter 7 reports on the development in central-government debt and interest costs.

The last two chapters cover topics of current interest. Chapter 8 describes the issuance methods applied by various countries and gives a detailed account of Danish tap issuance. Chapter 9 reports on government loan guarantees and re-lending with particular emphasis on their (budgetary) treatment both generally and in a Danish context.

The Appendix presents announcements relating to government borrowing and debt. *Danish Government Debt Management Strategy 2005* outlines the overall strategy for 2005, including on-the-run and buy-back issues. This announcement was released in December 2004. *Central government's borrowing requirement, 2005*, gives an account of the borrowing requirement for 2005 as of value date 31 January 2005. In addition, there is a comprehensive Appendix of Tables with detailed statistics on central-government borrowing and debt. Finally, a glossary presents explanations of a number of key financial terms and concepts used in the area of government debt management.

Key Elements of the Government Debt Policy

As a result of low interest rates and declining central-government debt, the interest costs on the debt decreased in 2004. The key elements of the central-government debt policy are:

Development in debt and borrowing requirement

- In 2004, the central-government debt declined by DKK 22.1 billion to DKK 493.6 billion, or just over DKK 90,000 per capita.
- The domestic borrowing requirement was DKK 64.6 billion in 2004 and sales of domestic government securities totalled DKK 92.6 billion.
- The domestic borrowing requirement for 2005 is estimated at DKK 42.3 billion (value date 4 February 2005). The low borrowing requirement is attributable to an expected government budget surplus, combined with the transfer of last year's excess sale of government securities totalling DKK 28.0 billion. The domestic borrowing requirement will increase in step with buy-back of securities maturing in subsequent years.

Borrowing strategy

- In view of the low borrowing requirement, combined with the intention to continue issuance in the 2-, 5-, and 10-year maturity segments, it is part of the strategy to increasingly reuse existing securities.
- Issuance in on-the-run securities will continue during the first part of 2005. In mid-2005, the 2-year on-the-run issue is planned to be replaced by 4 per cent bullet loans 2008.
- As in previous years, buy-back of government securities will take place before maturity.

Continued focus on the structure of the government bond market

- Danish government bonds are issued and traded on the interdealer trading platform MTSDk, on which primary dealers quote current tradable prices. Experience from 2004 shows that current tradable prices are quoted within narrow bid and ask spreads throughout most of the trading day. Moreover, the range of participants in the government bond market has widened following the introduction of the primary dealer system.

- Mid-2005 will see the launch of a new, more efficient Treasury bill auction system. Concurrently, electronic market-making in Treasury bills will be introduced on MTSDk. These measures enhance transparency and widen the range of participants in the Treasury bill market.

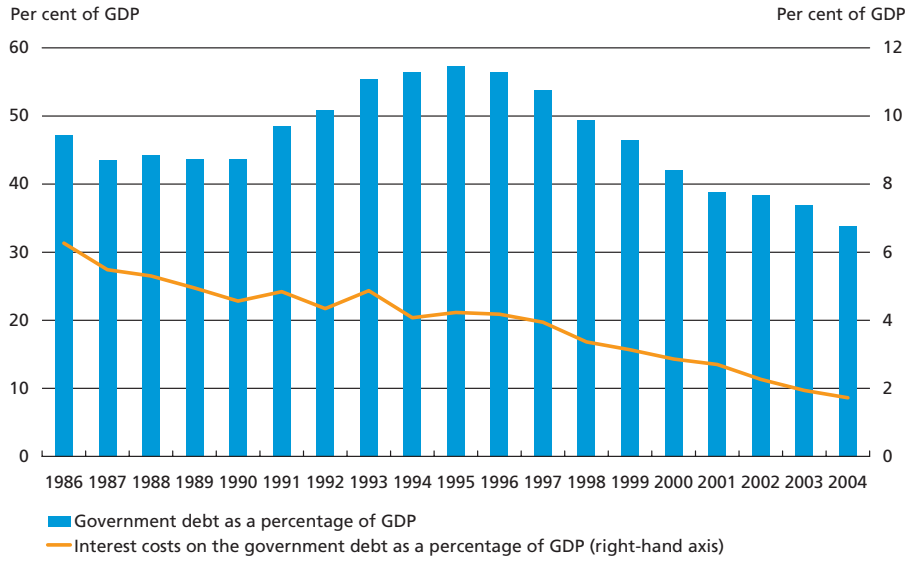
CONTINUED REDUCTION IN BORROWING COSTS AND DEBT IN 2004

The central-government debt decreased in 2004 as a result of the surplus on the government budget, and accounted for 33.8 per cent of GDP at the close of 2004. In 2004, the government debt decreased by DKK 22.1 billion to DKK 493.6 billion, cf. Chart 1.

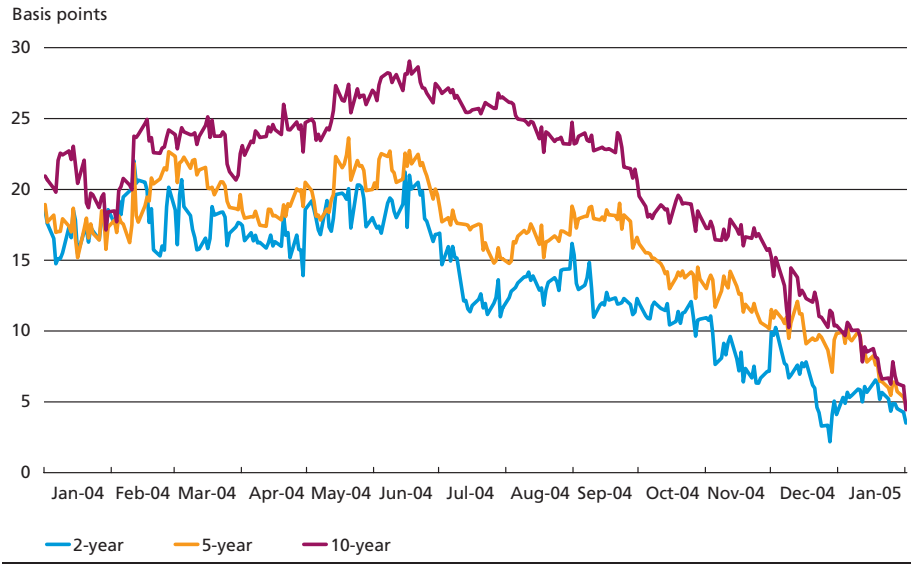
The generally low interest-rate level in 2004 made it possible to refinance redemptions falling due in 2004 at low interest costs. The average central-government borrowing rate was around 3 per cent in 2004.

The 2-, 5- and 10-year yield spreads to Germany have narrowed since summer 2004, cf. Chart 2. The narrowing was most pronounced in the 10-year maturity segment in which the spread narrowed by more than 20 basis points. One underlying factor is higher demand for Danish securities of long duration. The pension and insurance sectors' ownership of the 10-year benchmark increased during the second half of 2004.

GOVERNMENT DEBT AND INTEREST COSTS, 1986-2004 — Chart 1



YIELD SPREAD TO GERMANY BY MATURITY, 2004-05 Chart 2



Note: The yield spread is adjusted for maturity differences.
Source: Bloomberg.

STRATEGY BASED ON LIQUIDITY AND TRANSPARENCY

The government-debt strategy is determined in accordance with the objective to cover the financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk. The strategy is implemented via targets – strategic benchmarks – for *liquidity and interest-rate exposure*. The targets for 2005, described in Box 1, are based on the following framework and key principles:

Borrowing requirement

The domestic borrowing requirement for 2005 is estimated at DKK 42.3 billion (value date 4 February 2005). The low borrowing requirement is attributable to an expected government budget surplus, combined with the transfer of last year's excess sale of government securities totalling DKK 28.0 billion. The domestic borrowing requirement will increase in step with buy-back of securities maturing in subsequent years.

Borrowing strategy with focus on liquidity

The domestic borrowing requirement is financed via issuance of fixed-rate bullet loans in the 2-, 5- and 10-year maturity segments. In order to support trading and liquidity on electronic trading platforms, an outstanding amount of minimum DKK 35 billion is guaranteed in the 2-year and 5-year on-the-run issues, and of DKK 60 billion in the 10-year on-

STRATEGIC BENCHMARKS FOR 2005 Box 1

Interest-rate exposure:

- Macauley duration of 3 years ± 0.5 years.
- The day-to-day management of duration is based on a duration measure calculated with a fixed discount rate and a balance of the central government's account of DKK 30 billion. The target band for this duration is 3 years ± 0.25 years.

Liquidity:

- In the 2-year maturity segment, a minimum of DKK 20 billion is issued.
- The final outstanding amount in 4 per cent bullet loans 2010 is built up to a minimum of DKK 35 billion.
- The final outstanding amount in 4 per cent bullet loans 2015 is built up to a minimum of DKK 60 billion.
- A net financing contribution of zero from the Treasury bill programme.
- Foreign borrowing is via a 5-year euro loan for EUR 1.5-2 billion.

the-run issue. In line with the practice of previous years, the central government will buy back government securities before maturity.

After a number of years with a surplus on the government budget and decreasing debt, it is planned to increasingly reuse existing securities in order to ensure adequate liquidity in the key maturity segments. This strategy is relevant because some of the existing securities have market-conform coupon rates. In mid-2005, the 2-year on-the-run issue, 3 per cent bullet loans 2006, is planned to be replaced by 4 per cent bullet loans 2008.

The outstanding amounts in both 2-year securities already exceed the required minimum of DKK 35 billion. A minimum of DKK 20 billion in total will be issued in the two securities in 2005. Issuance in the 5-year and 10-year on-the-run issues, respectively 4 per cent bullet loans 2010 and 4 per cent bullet loans 2015, will continue in 2005.

The contribution to net financing from the Treasury bill programme is expected to be zero.

Since 2002, the strategy for foreign borrowing has been to issue one large euro loan in the 5-year segment every year. Liquidity is supported by a broad investor base and market-making on MTSDk.

Interest-rate risk

Interest-rate risk is managed via a target band for the duration of the debt that has been set at an unchanged 3 years ± 0.5 years for 2005. The choice of duration is based on analyses of the trade-off between costs and risk, as well as on the interest-rate fixing, i.e. the amount for which a rate of interest is to be fixed within one year.

FOCUS ON THE STRUCTURE OF THE GOVERNMENT BOND MARKET

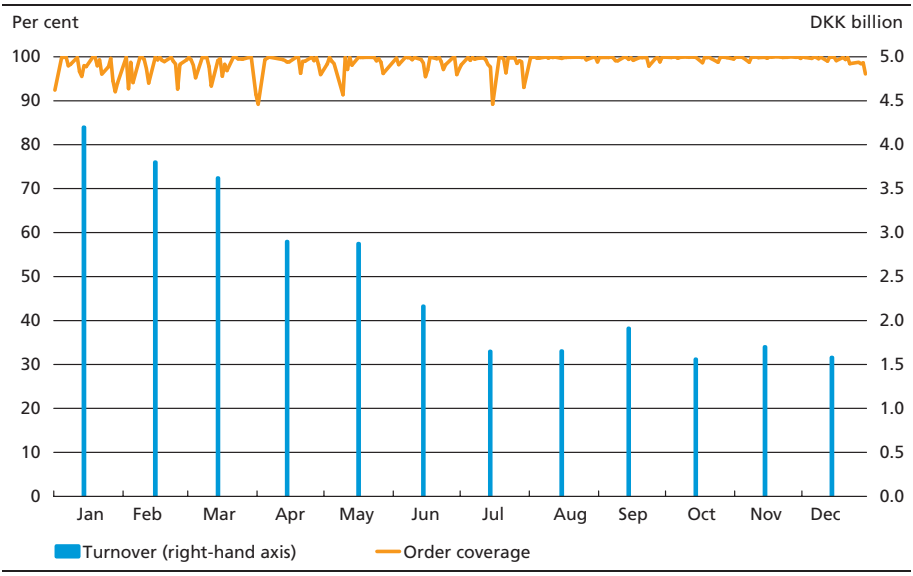
Danish government bonds are issued and traded on the interdealer trading platform MTSDk on which primary dealers quote current two-way prices within predefined maximum spreads and minimum amounts. On 1 January 2005, Dresdner Bank became a primary dealer and the system now comprises 14 Danish and international banks.

Electronic trading and market-making in the wholesale market contribute to enhancing transparency and liquidity in Danish government bond trading. Tradable prices are quoted within narrow bid and ask spreads for most of the trading day, cf. Chart 3. In 2004, the average daily turnover on MTSDk was DKK 2.5 billion.

Danish government bonds are also traded on a number of international electronic trading platforms for investors, e.g. ICAP/BrokerTec, TradeWeb, BondVision and BloombergBondTrader. On these platforms, investors can trade government bonds on an ongoing basis. Moreover, investors have access to information throughout the trading day on the prices at which government bonds are traded in the market. The access to improved pre-trade information has enhanced market transparency.

The Copenhagen Stock Exchange also has a price-quoting scheme for government securities.

AVERAGE DAILY TURNOVER AND ORDER COVERAGE ON MTSDk in 2004 — Chart 3



Note: Issuance and buy-backs on MTSDk are not included in the turnover figures. The order coverage includes Danish government bonds with a remaining maturity of more than 13 months, calculated as a simple daily average of the relevant bonds between 9.00 a.m. and 4.30 p.m.

Source: MTS Denmark.

As from January 2005, settlement of Danish government securities on MTSDk has taken place via a facility that supports automated settlement (straight-through-processing, STP) in both Euroclear and VP Securities Services. Previously, STP settlement was only possible at VP Securities Services. In the course of 2005, STP settlement of MTSDK trades will become possible via Clearstream. This ensures greater freedom of choice of clearing house for primary dealers.

NEW SET-UP FOR ISSUANCE AND TRADING IN TREASURY BILLS IN 2005

Mid-2005 will see the launch of a new, more efficient Treasury bill auction system. Concurrently, electronic market-making in Treasury bills will be introduced on MTSDk. These initiatives will enhance transparency and widen the range of participants in the Treasury bill market.

The new auction system is based on MTS technology and has been designed to comply with international standards in this field. The system will be more efficient than the current system and will enable shorter response times for publication of auction results. In future, the auction result will be published no more than 15 minutes after the deadline for submission of bids.

Main Principles

CHAPTER 1

Main Principles of Government Borrowing

SUMMARY 1.1

Government Debt Management at Danmarks Nationalbank manages the central-government debt on behalf of the Ministry of Finance. The central-government debt comprises the domestic and foreign central-government debt; the assets of three government funds; and the balance of the central government's account with Danmarks Nationalbank. Government Debt Management also manages loan guarantees and re-lending to a number of companies.

The overall objective of the government debt policy is to cover the central government's financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk.

An agreement between the central government and Danmarks Nationalbank sets out the framework for the distribution of the central government's domestic and foreign borrowing, thus supporting the separation of fiscal and monetary policy.

The strategy for central-government borrowing is agreed at quarterly meetings between the Ministry of Finance and Government Debt Management. The overall responsibility for government debt is held by the Minister of Finance. Government Debt Management prepares strategy proposals and implements the strategy.

The issuance strategy is based on building up liquid benchmark series in central maturity segments. The interest-rate risk is managed via a strategic benchmark for the duration of government debt, while the currency exposure of foreign debt raised to maintain a foreign-exchange reserve is limited to euro.

Government Debt Management's issuance and buy-back of Danish government bonds take place on the electronic trading platform, MTS Denmark (MTSDk). A number of banks – primary dealers – quote current bid and ask prices for trading by Government Debt Management and the banks.

PORTFOLIOS 1.2

The government debt comprises the domestic and foreign debt, as well as assets of three government funds and the balance of the central government's account with Danmarks Nationalbank, cf. Table 1.2.1.

The domestic debt is the largest government debt portfolio. Current borrowing in Danish kroner finances any central-government net financing requirement (budget deficit), as well as redemptions on previously issued government securities.

By far the greater share of the foreign debt is exposed in euro and raised in order to maintain a foreign-exchange reserve. Each year, a euro loan is raised in order to refinance redemptions on the foreign debt. A small proportion of the foreign debt is in US dollars and reflects disbursement of re-lending in dollars to Danish Ship Finance.

Government Debt Management manages the assets of three government funds: the Social Pension Fund and – as from 2005 – the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund). The capital of the funds is included as assets in the government debt portfolio. Except for a small portfolio of mortgage-credit and index-linked bonds in the Social Pension Fund, the assets of the funds are placed in Danish government bonds. Each year, the Danish Finance Act stipulates the amounts to be transferred from the funds to their respective objectives.

The central government holds liquid funds in an account with Danmarks Nationalbank. This account, which accrues interest at the discount rate, is used to settle large central-government payments. The central government's account with Danmarks Nationalbank is an integral part of the

CENTRAL-GOVERNMENT DEBT Table 1.2.1

DKK billion	End-2003	End-2004
Domestic debt	611	605
Foreign debt	84	84
The Social Pension Fund	-139	-137
The High-Technology Foundation[1]	•	•
The Financing Fund[1]	•	•
Central government's account with Danmarks Nationalbank	-40	-58
Total central-government debt	516	494
Central-government debt as a percentage of GDP	37	34

[1] Transfers to the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund) started in 2005.

management of the overall government debt portfolio. Sale and buy-backs of government bonds are planned, taking account of the size of the balance which may vary considerably during the year.

Government Debt Management also manages re-lending facilities under which mainly government-owned companies can raise loans, and issues loan guarantees to a number of companies on behalf of the central government. Re-lending and loan guarantees primarily support the financing of government infrastructure projects.

DIVISION OF RESPONSIBILITIES AND ORGANISATION 1.3

The Minister of Finance holds the overall, and political, responsibility for central-government borrowing and debt, including relations to the Folketing (Parliament). The actual management of the government debt, and related tasks, is carried out by Danmarks Nationalbank on behalf of the Ministry of Finance. Box 1.1 describes the legislative basis and the basis of agreement.

The government debt management strategy is discussed at quarterly meetings with the Ministry of Finance on the basis of written proposals from Government Debt Management. The Ministry of Finance subsequently authorises Government Debt Management to implement the agreed strategy. At the meeting in December, the overall strategy for the following year is determined. At the subsequent quarterly meetings, any adjustments and further specifications of the overall strategy for the year are adopted. Follow-up takes place in monthly status reports to the Ministry of Finance and in reports at the quarterly meetings.

At Danmarks Nationalbank, the government debt is managed by the Government Debt Management Office within Financial Markets, Market Operations, Accounting, Government Debt Accounting and Audit. Government Debt Management is thus divided into front, middle and back offices with separate functions. A clear division of functions and clear procedures reduce operational risks and facilitate internal control. A well-defined division of responsibilities ensures that various categories of professional expertise are utilised in the best possible way, and that tasks related to the management of government debt are undertaken independently of other activities at Danmarks Nationalbank. Box 1.2 summarises the structure of Government Debt Management.

The Government Debt Management Office within Financial Markets is responsible for middle-office functions and formulates the general principles concerning government debt policy, prepares proposals for borrowing strategies and undertakes risk management, etc. The Govern-

LEGISLATIVE BASIS AND BASIS OF AGREEMENT Box 1.1

Under the Danish Constitution, loans can be raised by the central government according to law. The statutory basis for central-government borrowing is set out in *Act on the authority to raise loans on behalf of the central government* of 1993[1]. The Act authorises the Minister of Finance to raise loans on behalf of the central government for a maximum amount of DKK 950 billion. This amount is thus the upper limit for the total domestic and foreign debt. In connection with ongoing debt management, the Minister of Finance is moreover authorised to enter into swap agreements and other financial transactions. The central government's costs of borrowing, e.g. interest costs and capital losses on issuance (the difference between the market and nominal values of the loans), must be appropriated under the annual finance acts.

Danmarks Nationalbank's management of the central-government debt on behalf of the Ministry of Finance is established in *Agreement on the division of work in the area of government debt between Danmarks Nationalbank and the Ministry of Finance*[2] of 1999. The agreement establishes the overall allocation of tasks, competence and responsibility between Danmarks Nationalbank and the Ministry of Finance. The overall principle is that final responsibility for the central-government debt rests with the Ministry of Finance, while Danmarks Nationalbank on behalf of the Ministry of Finance undertakes the ongoing management and administration.

The framework for the management of the funds of the Social Pension Fund is laid down in *Regulations governing the management of the Social Pension Fund*[3] of 1999. Act on the High-Technology Foundation was adopted in December 2004[4]. Pursuant to this act, Danmarks Nationalbank manages the capital of the Foundation subject to agreement with the Minister of Finance. The Financing Fund for increased distributions from the Danish National Research Foundation is established pursuant to the Finance Act. The Ministry of Finance and Danmarks Nationalbank have entered into separate agreements on the framework for the management of the capital of the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation.

On behalf of the government, Government Debt Management issues guarantees for the borrowing of a number of companies. The companies' access to guarantees and re-lending is defined in an act or legal document. Government Debt Management's tasks in this respect are established in separate agreements.

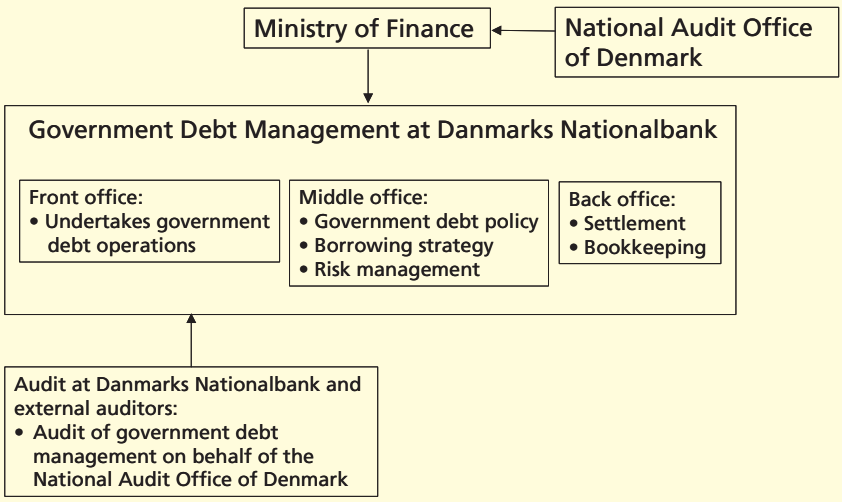
[1] Act No. 1079 of 22/12/1993 as subsequently amended.
[2] The Agreement is available at www.nationalbanken.dk.
[3] The Regulations are available at www.nationalbanken.dk.
[4] Act No. 1459 of 22/12/2004

ment Debt Management Office sets out guidelines for Market Operations with regard to sale, buy-backs, swap transactions, etc.

Market Operations is responsible for the front-office functions and thus for the operational parts of the government debt policy, including issuance of government securities, buy-backs, swap transactions, etc.

Back-office functions, such as settlement and bookkeeping, are undertaken by Accounting and Government Debt Accounting.

STRUCTURE OF GOVERNMENT DEBT MANAGEMENT Box 1.2



Government Debt Management is audited by the internal audit at Danmarks Nationalbank and by Danmarks Nationalbank's external auditors on behalf of the National Audit Office of Denmark. The National Audit Office of Denmark is empowered to audit the central government's accounts and to investigate whether government funds are managed as determined by the Folketing (Parliament). The National Audit Office of Denmark publishes the results of its investigations on an ongoing basis, e.g. at www.rigsrevisionen.dk.

NORM FOR DOMESTIC AND FOREIGN BORROWING 1.4

The central-government borrowing norm sets out the framework for the distribution of the central government's domestic and foreign borrowing. The norm is set out in an agreement between the government and Danmarks Nationalbank. Domestic and foreign borrowing norms have been determined, and together they support the separation of fiscal and monetary policy.

The domestic norm states that domestic krone-denominated borrowing covers the central government's gross domestic financing requirement, i.e. the central government's current deficit and redemptions on the domestic debt. This means that the central government's payments in principle have no impact on domestic liquidity.

The norm for foreign borrowing implies that the foreign borrowing requirement corresponds to the redemptions on the foreign debt, raised in order to maintain the foreign-exchange reserve.

According to the EU Treaty, the central government's account with Danmarks Nationalbank may not show a deficit. Central-government borrowing is planned to ensure an appropriate balance on the central government's account which can absorb fluctuations in central-government receipts and payments. Uncertainty concerning the balance of the central government's account is e.g. related to predicting the receipts from various taxes.

In the light of e.g. market conditions, the central government may continue to issue government securities even though the borrowing requirement for the year has been financed. In that case, these issuances will cover part of the borrowing requirement for the following year.

The purpose of the central government's foreign borrowing is to maintain an adequate foreign-exchange reserve. In situations where the foreign-exchange reserve either decreases or increases more than is found appropriate, redemptions on the central government's foreign debt may not match foreign borrowing. If the foreign-exchange reserve decreases more than is found appropriate, the central government may raise loans in foreign exchange. If the foreign-exchange reserve increases more than is considered necessary, foreign borrowing can be reduced relative to the level determined by the foreign norm, provided that the balance of the central government's account allows this.

OBJECTIVES AND STRATEGY 1.5

The overall objective of the government debt policy is to meet the central-government financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk. Furthermore, the aim is to support a well-functioning domestic financial market and to facilitate the central government's access to the financial markets in the longer term.

To support openness and credibility regarding government debt policy, it is emphasised that the overall borrowing strategies must be consistent over time, and known to market participants. Furthermore, only standardised, well-known instruments are used.

Borrowing is based on building up liquid benchmark series in central maturity segments. A liquidity premium is thus achieved which reduces the central government's borrowing costs. Furthermore, it is sought to achieve a broad investor base in order to reduce the risk that lacking demand from one type of investor translates into higher borrowing costs.

The issuance strategy, which is aimed at building up liquid series, is separated from interest-rate risk management via interest-rate swap transactions and buy-backs. Each year, a strategic benchmark is determined for the duration of the central-government debt, that reflects the weighing of interest costs against risk.

Government Debt Management assesses the strategies on an ongoing basis in order to ensure the best possible compliance with the objectives and that Danish government debt management complies with *best practice* as formulated by the World Bank in partnership with the IMF.[1]

RISK MANAGEMENT 1.6

Calculation and management of risks on the central-government debt are important elements in Government Debt Management's work and key aspects in relation to meeting its objective. Risk management comprises various types of risk.

Interest-rate risk is managed on the basis of a strategic benchmark for the duration of the portfolio that serves as a reference in the ongoing portfolio management. Duration is a summary measure of the trade-off between interest costs and interest-rate risk. The duration target is established on the basis of quantification of costs and risk, calculated in Government Debt Management's Cost-at-Risk model. Duration is managed by using interest-rate swaps that restructure the central government's interest payments between fixed and floating interest rates. An increased amount of interest-rate swaps from fixed to floating interest rates shorten the duration and normally provide lower average interest costs. On the other hand, the central government's annual exposure to fluctuations in interest rates is increased, given that a new interest rate has to be fixed on a higher amount.

Exchange-rate risk is managed by limiting the currency exposure to euro on foreign government debt raised to maintain the foreign-exchange reserve. In view of Denmark's fixed exchange-rate policy vis-à-vis the euro, this ensures a low exchange-rate risk. Moreover, the foreign-exchange reserve is predominantly exposed in euro. A small part of the central government's foreign debt is in dollars, reflecting the disbursement of re-lending in dollars to Danish Ship Finance. The central government is not exposed to fluctuations in the dollar rate due to the dollar re-lending.

Credit risk is limited by the central government only transacting swaps with counterparties with high credit ratings who have signed a unilateral collateral agreement.

[1] *Guidelines for Public Debt Management* is available at http://treasury.worldbank.org.

It is sought to minimise *operational risks* by separating the various government debt management functions, and via well-defined procedures. Furthermore, operational risks are limited in that Government Debt Management uses only standardised, well-known instruments.

Legal risk is minimised by using standardised contracts.

DANISH GOVERNMENT SECURITIES MARKETS 1.7

Government Debt Management's issuance and buy-back of Danish government bonds take place on the electronic trading platform, MTSDk. On MTSDk, a number of banks – primary dealers – conduct market-making by agreement with Government Debt Management. This entails that the banks quote current tradable bid and ask prices within predefined maximum spreads and for minimum amounts.

Danish government securities are primarily issued on tap. Tap issuance implies that the central government sells securities throughout the year at the best market prices quoted by the primary dealers.

Treasury bills are issued at monthly auctions. 2005 will see the launch of a new auction facility for Treasury bills on MTSDk, as well as the introduction of market-making in Treasury bills.

As from January 2005, settlement of Danish government securities on MTSDk has taken place via a facility that supports automated settlement (straight-through-processing, STP) in both Euroclear and VP Securities Services. Previously, STP settlement was possible only at VP Securities Services. STP settlement of MTSDK trades will also become possible via Clearstream in the course of 2005.

Central-government euro loans are issued through syndication whereby a group of banks (the syndicate) is selected to arrange the loan. The banks market the loan and collect bids from their respective customers. Government Debt Management allocates the requested volume on the basis of the total volume of bids.

MTSDk is an interdealer platform for interbank trading in Danish government securities. Investors can trade in Danish government securities on a number of other electronic trading platforms, e.g. ICAP/BrokerTec, TradeWeb, BondVision and Bloomberg BondTrader.

On the Copenhagen Stock Exchange trading system, members of the Copenhagen Stock Exchange bond market as well as small and private investors – via the members – may trade in Danish government securities. Government Debt Management has entered into a price-quoting scheme with six banks that quote current tradable bid and ask prices on the Copenhagen Stock Exchange.

INFORMATION ON THE CENTRAL-GOVERNMENT DEBT 1.8

An important element in the government debt policy is to give market participants and the public access to information on the central-government borrowing strategies, borrowing requirement, etc., as well as information of a more general nature on the framework for government debt management. A wide range of information is published on a regular basis.

Government Debt Management publishes information via e.g. the Copenhagen Stock Exchange and DN News[1]. Current announcements and general information are also available at Danmarks Nationalbank's website on www.nationalbanken.dk under Government debt. It is possible to subscribe to a news service with automatic e-mail notification of new information on central-government borrowing and debt. Information on MTSDk and trading on this platform is available at the website www.mtsdenmark.com.

In December and June of each year, the central government releases an announcement on the government debt policy with a description of the government borrowing strategy for the forthcoming year or half-year, respectively.

Prior to the opening of new series of government bonds or Treasury notes, an announcement is released with details of the new loans, including coupon, maturity date and opening date. Likewise, auctions of Treasury bills are announced, and subsequently the results of the auctions are released.

On the second banking day of each month, information is published on the central government's domestic and foreign borrowing and redemptions during the latest month.

In addition, daily statements of the central government's financing requirement, sales and buy-backs of government securities are published, as well as monthly statements of the central government's transactions of currency swaps.

The Social Pension Fund's end-of-month portfolio of government securities is released on the first banking day of the following month.

Finally, the annual publication *Danish Government Borrowing and Debt* describes the development during the preceding year, reports on new initiatives within government debt management and provides detailed statements of debt and transactions.

An overview of the information regularly published on central-government borrowing and debt is presented in the Appendices.

[1] Danmarks Nationalbank's system for distributing information to connected news agencies.

Report Section

CHAPTER 2

Strategy and Borrowing

SUMMARY 2.1

Sale of domestic government securities totalled DKK 92.6 billion in 2004. All on-the-run issues were replaced during the year. The sale of government securities comprised 40 per cent in the 2-year maturity segment, 20 per cent in the 5-year maturity segment, and 40 per cent in the 10-year maturity segment. Higher government revenue than expected at the end of the year led to an excess sale of government securities at DKK 28.0 billion. A 5-year euro loan for EUR 2.1 billion was issued in 2004.

In 2005, the domestic government borrowing requirement is estimated at DKK 42.3 billion (as of value date 4 February 2005). The low borrowing requirement reflects the excess sale of government securities in 2004, as well as an expected surplus on the government budget balance in 2005.

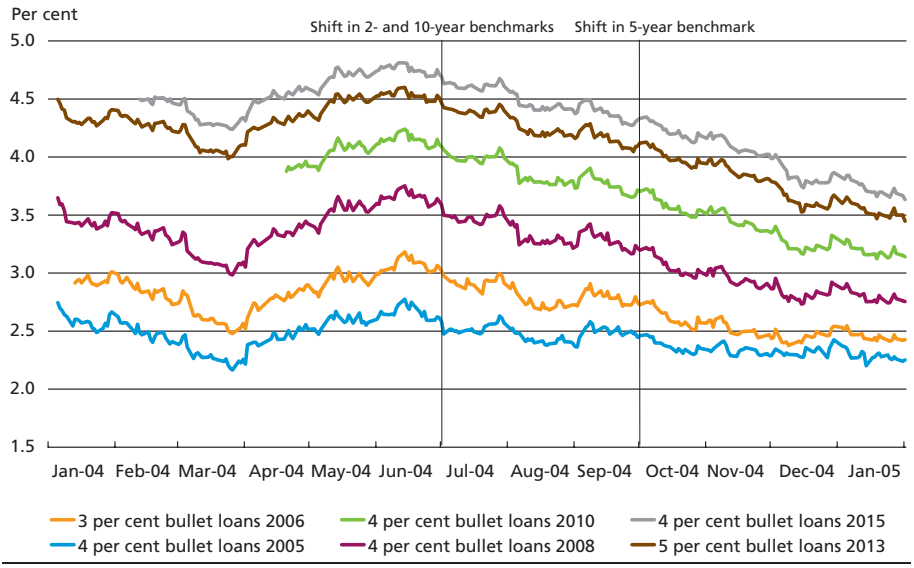
Borrowing in 2005 will continue in the existing on-the-run issues in the 2-, 5- and 10-year maturity segments. To support liquidity and trading in Danish government bonds, the outstanding amount in the 2- and 5-year on-the-run issues will be built up to at least DKK 35 billion, and the outstanding amount in the 10-year maturity segment to at least DKK 60 billion. Issuance in the current 2-year on-the-run issue is expected to be replaced by issuance in 4 per cent bullet loans 2008 in mid-2005. The outstanding amount in both 2-year securities already exceeds the required minimum of DKK 35 billion. In 2005, a minimum of DKK 20 billion will be issued in the 2-year maturity segment. A 5-year euro loan for EUR 1.5-2 billion will be issued.

The interest-rate risk is managed by means of a band for the duration of the government debt that is set at 3 years ± 0.5 years for 2005.

DEVELOPMENT IN INTEREST RATES 2.2

The development in Danish interest rates has closely matched the development in euro interest rates. The falling interest rates in 2003 continued at the beginning of 2004, but the trend reversed in the spring, reflecting expectations of a cyclical reversal, cf. Chart 2.2.1. In the second half of the year, doubts as to the strength of the international economic

YIELD TO MATURITY ON GOVERNMENT SECURITIES IN 2004-05 Chart 2.2.1

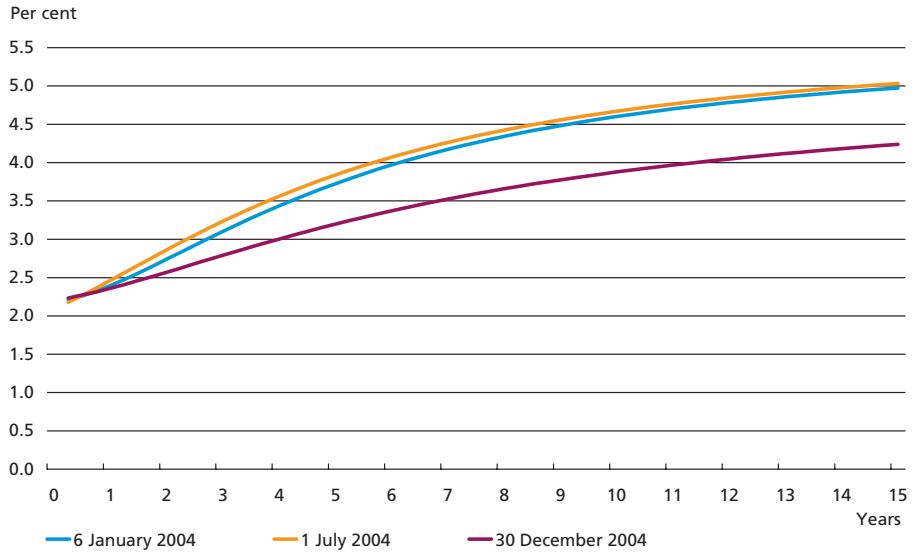


Source: Danmarks Nationalbank.

upswing led to falling European interest rates, and at the end of 2004 interest rates in Denmark were lower than at the beginning of the year.

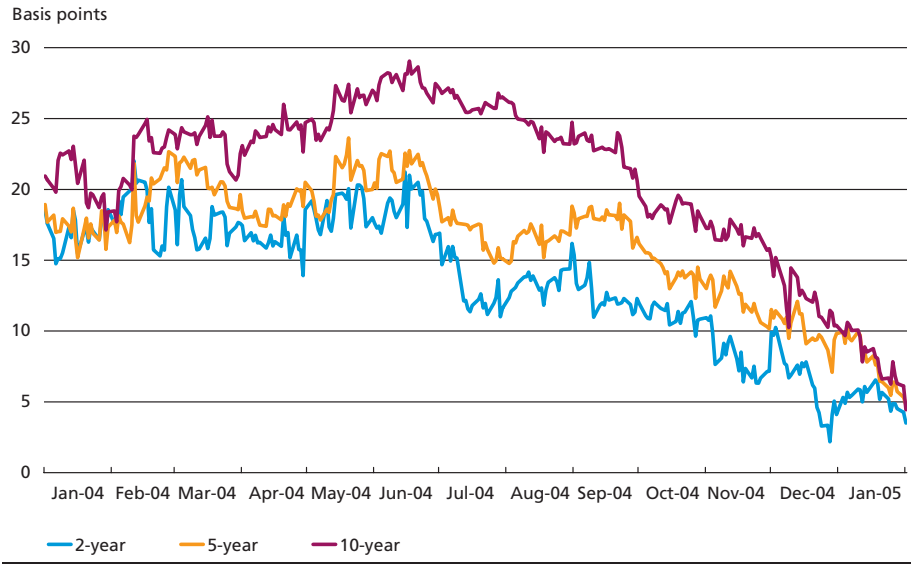
The decline in interest rates and the subsequent increase in the first half of 2004 were evenly distributed along the yield curve. Consequently, the yield curve in early July was at the same level as the yield

DANISH GOVERNMENT ZERO-COUPON YIELD CURVES Chart 2.2.2



Source: Danmarks Nationalbank.

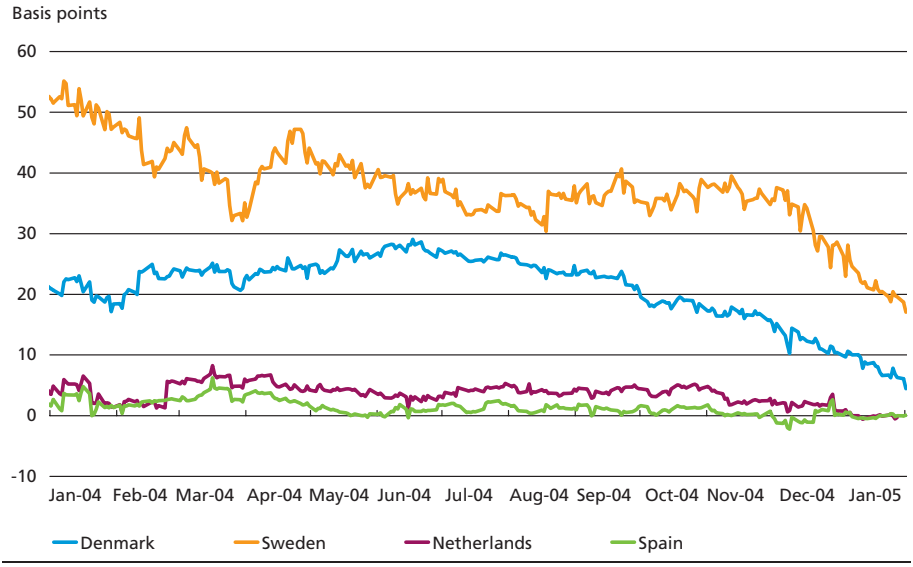
DANISH YIELD SPREADS TO GERMANY BY MATURITIES, 2004-05 Chart 2.2.3



Note: The yield spreads are adjusted for differences in maturity in the individual segments.
Source: Bloomberg.

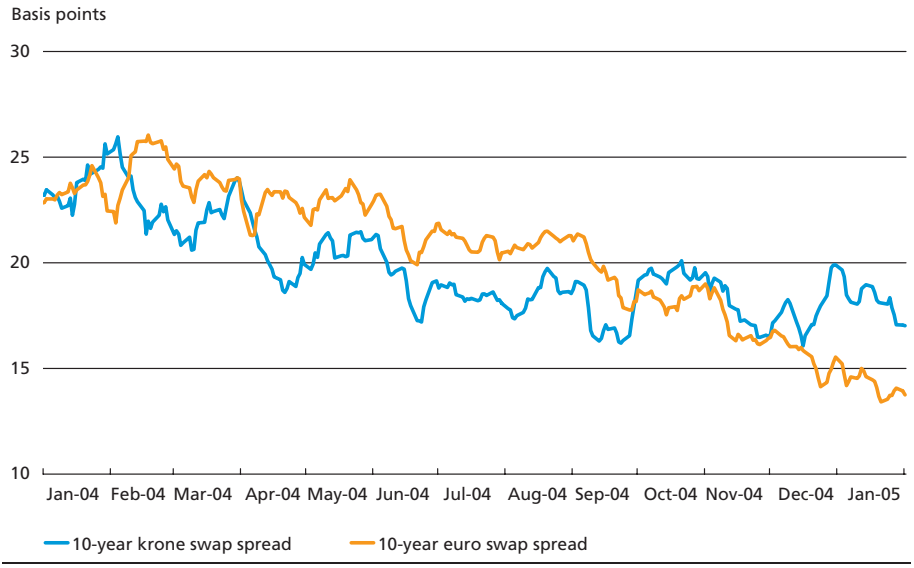
curve at the beginning of 2004, cf. Chart 2.2.2. In the second half of the year, interest rates declined primarily in the long maturity segments, while interest rates in the very short segment remained almost unchanged. As a result, the yield curve flattened.

10-YEAR YIELD SPREADS TO GERMANY, 2004-05 Chart 2.2.4



Note: The yield spreads are adjusted for differences in maturity.
Source: Bloomberg.

10-YEAR KRONE AND EURO SWAP SPREADS, 2004-05 Chart 2.2.5



Note: 5-day moving averages.
Source: Bloomberg.

The 2- and 5-year yield spreads to Germany remained almost unchanged in the first half of 2004, cf. Chart 2.2.3. In the same period, the 10-year yield spread widened by around 10 basis points. Subsequently, the yield spread to Germany narrowed in all three maturity segments since the decline in interest rates was more pronounced in Denmark than in Germany. The 10-year yield spread narrowed the most, declining by more than 20 basis points. For other euro area member states, the 10-year yield spread was between 0 and 10 basis points throughout 2004, cf. Chart 2.2.4.

The 10-year swap spread, i.e. the difference between the swap interest rate and the yield to maturity of a government bond with an equivalent maturity, narrowed in the first half of 2004 in Denmark as well as the euro area, cf. Chart 2.2.5. The euro swap spread narrowed further in the second half of the year and was lower than the krone swap spread at the beginning of 2005.

STRATEGY AND BORROWING REQUIREMENT IN 2004 2.3

Sale of domestic government securities in 2004 totalled DKK 92.6 billion, cf. Table 2.3.1. The domestic borrowing requirement was DKK 64.6 billion.[1] The excess sale of government securities was thus DKK 28.0 billion, due to higher than expected government revenue at the end of the year. The excess sale reduces the borrowing requirement in 2005.

[1] The calculation of the government borrowing requirement is described in Box 2.2.

CENTRAL-GOVERNMENT BORROWING REQUIREMENT IN 2004 — Table 2.3.1

DKK billion	Domestic	Foreign	Total
Net financing requirement[1]	-26.7	0.5	-26.2
Redemptions on debt[2]	102.5	16.1	118.5
Payments by the central government in currency swaps	0.5	-	0.5
SPF's net bond purchases	-1.3	•	-1.3
Gross financing requirement	75.0	16.6	91.5
Planned reduction of the central government's account[3]	10.4	0.5	10.9
Payments to the central government in currency swaps	-	0.5	0.5
Borrowing requirement	64.6	15.6	80.2
Sale of government securities[4]	92.6	15.6	108.2

Note: The calculation of the domestic and foreign borrowing requirements is in accordance with the breakdown in Box 2.2.

[1] Based on Danmarks Nationalbank's figures at year-end. The figures may deviate from those in the central-government accounts. The net foreign financing requirement solely comprises re-lending in dollars to Danish Ship Finance.

[2] Including buy-backs in securities maturing in subsequent years.

[3] It was planned to reduce the balance of the central government's account from DKK 40.9 billion at end-2003 to DKK 30.0 billion at end-2004. At end-2004, the actual balance of the central government's account was DKK 58.0 billion due to higher revenue than expected at the end of the year.

[4] Government bonds and net sales of Treasury bills. The foreign sale comprises a euro loan.

STRATEGIC BENCHMARKS FOR 2004 — Box 2.1

Interest-rate exposure:

- Macauley duration of 3 years ± 0.5 years.
- The day-to-day management of duration is based on a duration measure calculated on the basis of a fixed discount rate and a balance on the central government's account of DKK 30 billion. The target band for this duration is 3 years ± 0.25 years.

Liquidity:

- 40 per cent of the borrowing requirement is financed in the 10-year segment. The final outstanding amount in securities in the 10-year segment is built up to a minimum of DKK 60 billion.
- 20 per cent of the borrowing requirement is financed in the 5-year segment. The final outstanding amount in securities in the 5-year segment is built up to a minimum of DKK 35 billion.
- 40 per cent of the borrowing requirement is financed in the 2-year segment. The final outstanding amount in securities in the 2-year segment is built up to a minimum of DKK 35 billion.
- A net financing contribution of zero from the Treasury bill programme.
- Financing of the foreign borrowing requirement via a 5-year euro loan.

Every year, targets – strategic benchmarks – are set for interest-rate exposure and liquidity on the basis of market conditions, the borrowing requirement and an analysis of the trade-off between costs and risk. The strategic benchmarks for 2004 are listed in Box 2.1. The development in market conditions and the borrowing requirement in 2004 did not lead to any deviation from the strategic benchmarks, cf. Section 2.4 on borrowing.

CALCULATION OF THE GOVERNMENT BORROWING REQUIREMENT Box 2.2

Sales of government securities are planned on the basis of the estimates of central-government finances that are published in the budget reviews of the Ministry of Finance. The domestic borrowing requirement is covered by sale of government bonds and net sales of Treasury bills. The foreign borrowing requirement is covered by raising euro loans.

The domestic borrowing requirement is calculated as:

- The central government's current, investment and lending (CIL) balance
+ Domestic re-lending (net of redemptions)
+ Movements in holdings and accruals
= *Net domestic financing requirement*
+ Redemptions on domestic debt, including buy-backs
+ Krone payments by the central government in currency swaps
+ Net bond purchases by the Social Pension Fund
+ Net bond purchases by the High-Technology Foundation[1]
+ Net bond purchases by the Financing Fund[1]
= *Gross domestic financing requirement*
- Reduction in the balance of the central government's account to cover the gross domestic financing requirement
- Krone payments to the central government in currency swaps
= *Domestic borrowing requirement.*

The foreign borrowing requirement is calculated as:

+ Foreign re-lending (net of redemptions)
= *Net foreign financing requirement*
+ Redemptions on foreign debt, including buy-backs
+ Foreign-exchange payments by the central government in currency swaps
= *Gross foreign financing requirement*
- Reduction in the balance of the central government's account to cover the gross foreign financing requirement
- Foreign-exchange payments to the central government in currency swaps
= *Foreign borrowing requirement.*

[1] The High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund) were established in 2005, cf. Chapter 4.

CONTINUED Box 2.2

The central government's currency swaps between Danish kroner and foreign currency do not change the total borrowing requirement for the year, but solely the distribution between the domestic and the foreign borrowing requirement. When a currency swap is transacted, e.g. the government makes payments in euro and receives payment in kroner, the euro payments by the government increase the foreign borrowing requirement, while the krone payments to the government equivalently reduce the domestic borrowing requirement. In subsequent exchanges of payments where the government makes payments in kroner and receives euro, the domestic borrowing requirement will increase and the foreign borrowing requirement will be correspondingly reduced.

The foreign borrowing requirement is denominated only in euro. In connection with re-lending to Danish Ship Finance (DSF) in US dollars, the government transacts currency swaps between kroner and dollars. The dollar payments in the currency swaps equal the dollar payments in connection with the re-lending. For a detailed account of re-lending to DSF, reference is made to *Danish Government Borrowing and Debt 2003*, Chapter 10

BORROWING IN 2004 2.4

Domestic borrowing

In the first half of 2004, all on-the-run issues were replaced, cf. Table 2.4.1. Of the total issuance in 2004, 40 per cent was in the 2-year maturity segment, 20 per cent in the 5-year maturity segment, and 40 per cent in the 10-year maturity segment, cf. Table 2.4.2. The predominant part of the issues took place in the first half of the year, cf. Chart 2.4.1. A rapid build-up of new series is desirable since liquidity in the individual securities typically improves as the outstanding amount increases. In addition, the obligation of the primary dealers to quote prices for Danish government securities takes effect when the outstanding amount reaches DKK 5 billion. The new on-the-run issues achieved benchmark status around six months after they were opened.

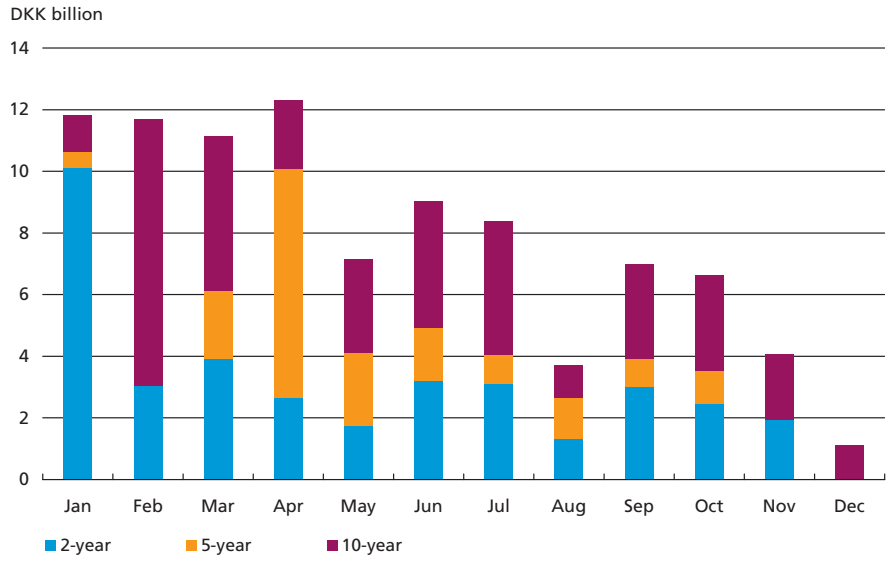
ON-THE-RUN ISSUES IN 2004 Table 2.4.1

	Previous on-the-run issue	New on-the-run issue	Opening of new on-the-run issue	Shift in benchmark
2-year segment	4 per cent bullet loans 2005	3 per cent bullet loans 2006	13 January	1 July
5-year segment	4 per cent bullet loans 2008	4 per cent bullet loans 2010	20 April	1 October
10-year segment	5 per cent bullet loans 2013	4 per cent bullet loans 2015	12 February	1 July

DOMESTIC GOVERNMENT BORROWING IN 2004 Table 2.4.2

DKK million	Issuance			Nominal outstanding amount end-2004
	Nominal value	Market value	Capital loss	
4 per cent bullet loans 2015	37,580	36,061	1,519	37,580
5 per cent bullet loans 2013	1,380	1,447	-67	79,325
4 per cent bullet loans 2010	15,760	15,839	-79	15,760
4 per cent bullet loans 2008	2,740	2,833	-93	44,094
3 per cent bullet loans 2006	36,540	36,674	-134	36,540
Government bonds, total	94,000	92,853	1,147	
Treasury bills 2005 IV	11,159	10,904	255	11,159
Treasury bills 2005 III	17,600	17,239	361	17,600
Treasury bills 2005 II	16,988	16,688	300	16,988
Treasury bills 2005 I	22,855	22,481	374	22,855
Treasury bills 2004 IV	10,726	10,584	142	
Treasury bills 2004 III	5,733	5,675	58	
Treasury bills 2004 II	2,538	2,521	17	
Treasury bills, total	87,599	86,094	1,505	
Redemptions	86,344	86,344		
Treasury bills, net	1,255	-250	1,505	
Sales of government securities, total	95,255	92,603	2,652	

ISSUANCE OF GOVERNMENT SECURITIES IN 2004 BY MATURITY SEGMENTS Chart 2.4.1



The insurance and pension sector increased its ownership share of the 10-year benchmark bond throughout the second half of 2004 in order to achieve longer duration. This contributed to reducing the 10-year yield spread to Germany. At the same time, the foreign ownership share of the 10-year segment was reduced.

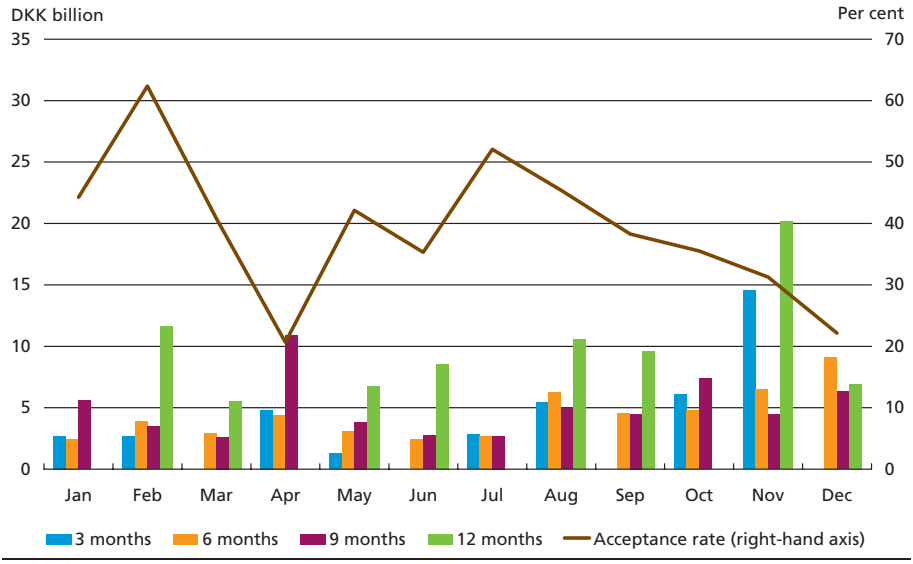
In 2004, Treasury bills for DKK 86.1 billion at market value were sold, cf. Table 2.4.2. Treasury bills for DKK 86.3 billion were redeemed. The contribution to net financing from the Treasury bill programme was thus close to zero. Bid volumes and acceptance rates for 2004 are shown in Chart 2.4.2. For the year as a whole, bid volumes and acceptance rates were at the 2003 level. On average, the three largest market participants in the Treasury bill auctions bought 80 per cent of the allotted volume. This was in line with the level in 2003.

Foreign borrowing

In 2004, the central government issued a euro loan of EUR 2.1 billion (DKK 15.6 billion) at market value, maturing in October 2009, cf. Box 2.3. The issue was conducted as a syndicated euro loan where a group of banks intermediated the loan to investors.

The loan was launched in a relatively calm market during a week with no competing issues in the 5-year maturity segment. Since the order

BID VOLUMES AND ACCEPTANCE RATES AT TREASURY BILL AUCTIONS IN 2004 — Chart 2.4.2



Note: 3 months includes securities with remaining maturities of 3 and 4 months; 6 months includes securities with remaining maturities of 5, 6 and 7 months; 9 months includes securities with remaining maturities of 8, 9 and 10 months; and 12 months includes securities with remaining maturities of 11 and 12 months.
Source: Danmarks Nationalbank.

5-YEAR EURO LOAN IN 2004 Box 2.3

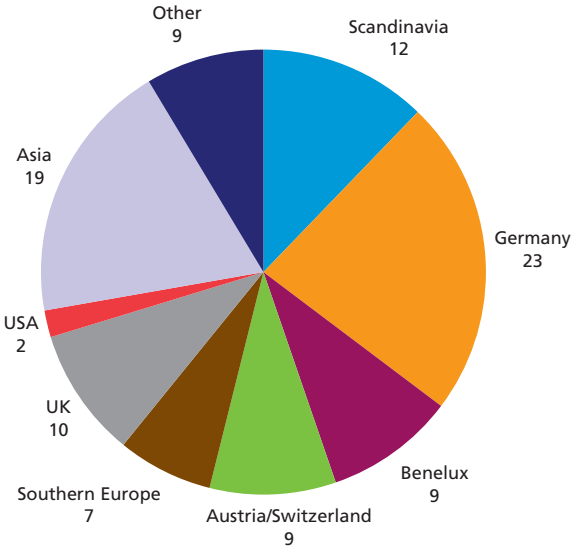
Characteristics of Kingdom of Denmark, euro loan 3.125 per cent 2009:

- Date of issue: 23 March 2004
- Maturity date: 15 October 2009
- Size: EUR 2.1 billion (DKK 15.6 billion)
- Bids received: EUR 3.7 billion
- Rating: AAA/Aaa
- Fee: 0.10 per cent
- Legal venue and jurisdiction: Danish
- Listing: Copenhagen Stock Exchange
- Registration: VP Securities Services
- Lead managers: ABN Amro, Barclays and Nordea
- Senior co-lead manager: Danske Bank
- Co-lead managers: CSFB, Deutsche Bank, Dresdner Bank, JP Morgan and Morgan Stanley.

book was built up over a 24-hour period, investors in all time zones were able to place orders. The order book was built up fairly steadily over this period, and bids totalling EUR 3.7 billion were received.

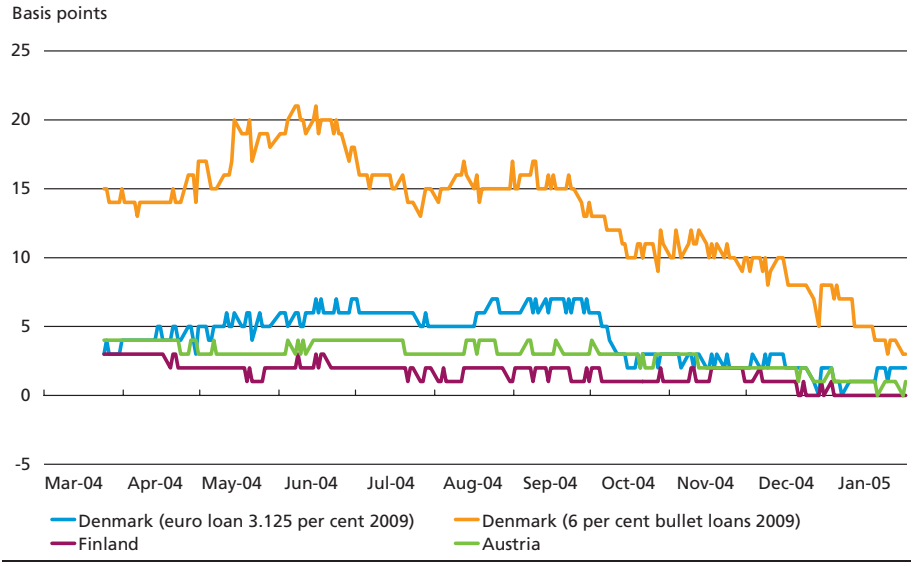
The bids were placed by a diversified group of investors, primarily investment managers, banks, central banks, and insurance companies and pension funds. Orders were received from around 125 different investors, and a wide geographical distribution with considerable placements in e.g. Asia was achieved, cf. Chart 2.4.3.

ALLOCATION OF EURO LOAN, GEOGRAPHICAL DISTRIBUTION, PER CENT Chart 2.4.3



Source: Danmarks Nationalbank.

YIELD SPREADS TO THE EURO BENCHMARK CURVE, 2004-05 Chart 2.4.4



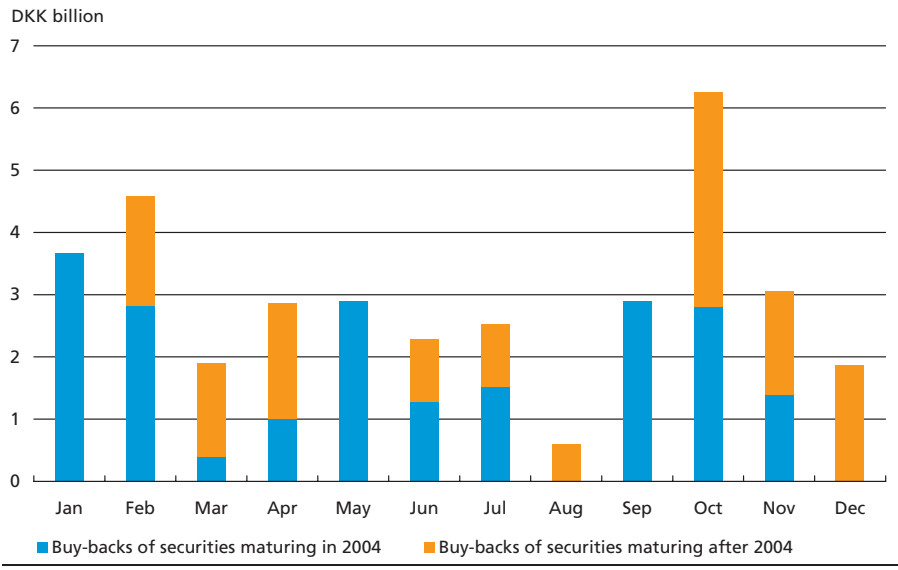
Note: Yield spreads are adjusted for differences in maturity.
Source: Bloomberg.

The loan was priced as initially announced, corresponding to the German 5-year benchmark bond plus 15 basis points. The level was equivalent to a yield around 3 basis points above the euro benchmark curve corresponding to the bid for other highly-rated European issues, cf. Chart 2.4.4. The spread widened during the summer of 2004, but at the end of the year the euro loan was once again traded at around 3 basis points from the euro benchmark curve.

Buy-backs

The central government buys back government securities before maturity. Buy-backs of securities maturing within the year do not affect the borrowing requirement for the year, but are used to smooth the balance of the government's account over the year. Buy-backs of government securities maturing in subsequent years are used for interest-rate risk management, to smooth the government's redemption profile and to maintain liquid on-the-run issues, cf. Chapter 6. The government only buys back securities if this is deemed advantageous on the basis of an overall evaluation of government debt policy. As a general rule, bonds that are bought back are cancelled immediately thereafter. In 2004, buy-backs of securities maturing after 2004 mainly took place in the second half of the year, cf. Chart 2.4.5.

CENTRAL-GOVERNMENT BUY-BACKS IN 2004 Chart 2.4.5



Most buy-backs in securities maturing after 2004 were in 8 per cent bullet loans 2006, cf. Table 2.4.3. Buy-backs in this series bring forward part of the domestic borrowing requirement from 2006 when relatively large redemptions are due on the government debt. In 2004, the volume of buy-backs in securities maturing in subsequent years was lower than in the preceding years, cf. Table 2.4.4. In addition to the central government's buy-backs, the Social Pension Fund (SPF) bought government securities for its own portfolio, cf. Chapter 4.

BUY-BACKS OF DOMESTIC GOVERNMENT SECURITIES IN 2004 Table 2.4.3

DKK million	Buy-backs		Nominal outstanding amount end-2004
	Nominal value	Market value	
4 per cent bullet loans 2004	12,778	12,884	
7 per cent bullet loans 2004	7,900	8,073	
Buy-backs maturing in 2004, total	20,678	20,957	
5 per cent bullet loans 2005	3,760	3,849	53,571
8 per cent bullet loans 2006	10,440	11,368	46,896
6 per cent bullet loans 2009	500	553	66,146
3.5 per cent 1886 perpetual	4	3	41
Buy-backs maturing after 2004, total	14,704	15,774	
Buy-backs, total	35,382	36,731	

GOVERNMENT BUY-BACKS, 2000-04, MARKET VALUE — Table 2.4.4

DKK billion	2000	2001	2002	2003	2004
Maturing within the year	31.5	19.5	11.4	14.7	21.0
Maturing in subsequent years	17.8	20.1	27.5	26.4	15.8
Buy-backs, total	49.3	39.7	38.9	41.1	36.7

Interest-rate swaps

Interest-rate swaps are used to manage the interest-rate risk on the government debt. In this way, the issuing policy, which is primarily aimed at building up liquid series, can be separated from the management of the interest-rate risk. The volume of swaps is determined in accordance with the target band for duration and issuance. The interest-rate risk is increased in connection with e.g. interest-rate swaps where interest is paid at a floating rate while interest at a fixed rate is received. For instance, issuance in longer maturity segments will require greater use of this type of interest-rate swap in order to keep the duration of the government debt unchanged.

The central government can transact interest-rate swaps in the krone and euro markets. In 2004, the central government transacted interest-rate swaps solely in kroner for DKK 16.1 billion, cf. Table 2.4.5. The transactions involved 15 different swap counterparties. Viewed in isolation, interest-rate swaps transacted in 2004 contributed to a reduction in duration by 0.2 years.

Securities lending

The central government's securities lending facility contributes to supporting liquidity in Danish government securities. The facility ensures that primary dealers can borrow Danish government securities in the event of a shortfall in the market. This supports the primary dealers in fulfilling their obligation to quote current tradable bid and ask prices in Danish government securities.

CENTRAL-GOVERNMENT TRANSACTIONS IN INTEREST-RATE SWAPS, 2004 — Table 2.4.5

DKK billion	5-year	7-year	10-year	Total
1st quarter	0	0	0.5	0.5
2nd quarter	1.7	0	1.4	3.1
3rd quarter	3.2	0	3.2	6.4
4th quarter	0	2.7	3.4	6.1
Interest-rate swaps, total	4.9	2.7	8.5	16.1

Note: The table states the size of the notional principals for the interest-rate swaps transacted.

LENDING UNDER THE CENTRAL GOVERNMENT'S SECURITIES LENDING FACILITY IN 2004 Table 2.4.6

DKK billion	
Treasury bill 2005 II	0.1
3 per cent bullet loans 2006	17.6
4 per cent bullet loans 2008	1.8
4 per cent bullet loans 2010	4.2
5 per cent bullet loans 2013	0.4
4 per cent bullet loans 2015	12.9
Lending, total	36.9

The primary dealers have access to the securities lending facilities of the government and SPF. The securities concerned can be borrowed for 1-5 working days. The government's lending facility comprises on-the-run and benchmark securities. Securities lending in other government securities is possible via SPF's securities lending facility, cf. Chapter 4. For Treasury bills, the lending facility is available to all counterparties in Treasury bill auctions.

In 2004, the volume of lending under the government's securities lending facility was DKK 36.9 billion, cf. Table 2.4.6. This was considerably higher than in 2003, which is e.g. attributable to a shortfall in the private market for securities lending between Christmas and New Year. This one week saw almost 50 per cent of the year's re-lending. The terms and conditions for the central government's securities lending facility are presented in the Appendices to this publication.

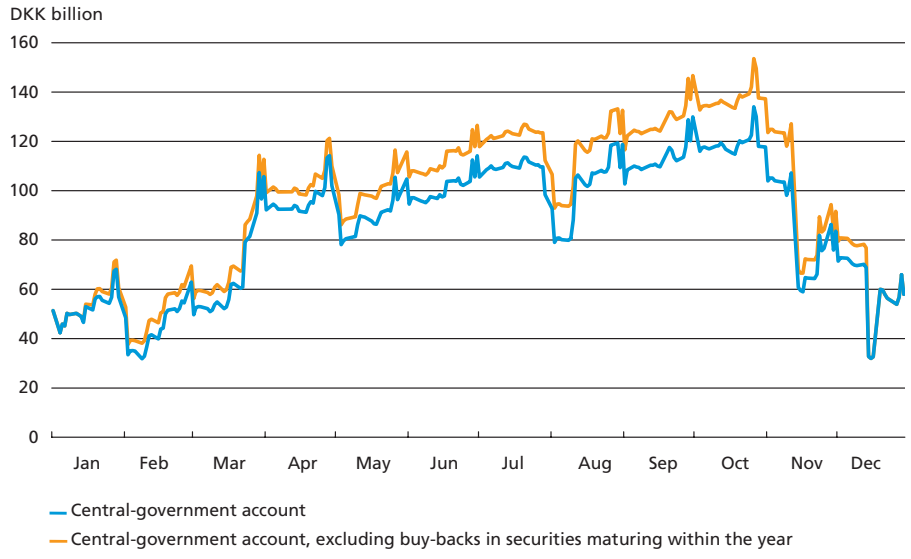
THE CENTRAL GOVERNMENT'S ACCOUNT 2.5

The central government holds an account with Danmarks Nationalbank. The government's liquid holdings are placed in this account, and it is used for settlement of large government payments. Deposits to the central government's account with Danmarks Nationalbank accrue interest at the discount rate.

There are usually time lags between the central government's current receipts and disbursements, and its borrowing to cover the central-government borrowing requirement. This means that the balance of the central government's account varies over the year, cf. Chart 2.5.1. Buy-backs in securities maturing within the year contribute to smoothening the balance of the central government's account.

According to the EU Treaty, the central government's account with Danmarks Nationalbank may not show a deficit. Government borrowing and buy-backs are planned to ensure that the balance of the central

BALANCE OF THE CENTRAL-GOVERNMENT ACCOUNT IN 2004 Chart 2.5.1



government's account is always adequate. If there are indications of a temporarily low deposit, the government can raise very short-term loans in the international money markets by issuing Commercial Paper (CP). CP are short-term securities that can be issued quickly via banks with which a CP programme has been established.

The central government has two CP programmes aimed at the euro market and the US market, respectively. The euro-market programme can be used for issues in several currencies, while the US programme can be used for issues in dollars only. The maximum outstanding amount in each programme is USD 6 billion. CP issues in other currencies than euro are combined with forward foreign-exchange contracts so that the final exposure is in euro. Since the central government exchanges foreign exchange for kroner at Danmarks Nationalbank, CP can also be used to increase the foreign-exchange reserve within a short time.

STRATEGY AND BORROWING REQUIREMENT IN 2005 2.6

The gross domestic financing requirement in 2005 is estimated at DKK 74.2 billion, cf. Table 2.6.1. The excess sale of government securities in 2004 is carried forward to 2005, reducing the borrowing requirement by DKK 28.0 billion. The financing contribution from currency swaps is expected to amount to DKK 6.5 billion. In 2005, up to and including the settlement date 4 February 2005, buy-backs at market value in securities maturing in subsequent years totalled DKK 2.6 billion. The domestic

DOMESTIC GOVERNMENT BORROWING REQUIREMENT IN 2005 — Table 2.6.1

DKK billion	
Net domestic financing requirement, cf. *Budget Review 3*, 2004	-20.9
Redemptions on the domestic debt[1]	89.1
Krone payments by the central government in currency swaps[2]	2.3
SPF's net bond purchases	-0.3
The High-Technology Foundation's net bond purchases	3.0
The Financing Fund's net bond purchases	1.0
Gross domestic financing requirement	74.2
Krone payments to the central government in currency swaps[3]	6.5
Amount brought forward for excess sale in 2004	28.0
Buy-backs in 2005 of government securities maturing in subsequent years, market value[4]	2.6
Domestic borrowing requirement	42.3

[1] Including further buy-backs in 2005 securities in 2004 after *Budget Review 3.*
[2] Net re-lending in dollars to Danish Ship Finance.
[3] Of which DKK 0.1 billion resulting from redemptions in dollars from re-lending to Danish Ship Finance.
[4] Value date 4 Febuary 2005.

borrowing requirement in 2005, which is covered by issuing domestic government securities, is thus DKK 42.3 billion. As further buy-backs are made in securities maturing in subsequent years, the domestic borrowing requirement will increase equivalently.

The budget surpluses of recent years have reduced the central government's need to sell domestic securities. Consequently, Government Debt Management will increasingly reuse previous on-the-run issues to ensure that there are still liquid government securities in the 2-, 5- and 10-year maturity segments. Reuse of government securities is to be applied to the extent that the securities have market-conforming coupon rates.

In 2005, issuance still takes place in the current on-the-run issues. Issuance in the existing 2-year on-the-run issue will cease towards the end of the first half of 2005. It is expected to be replaced by 4 per cent bullet loans 2008. To support liquidity and trading on electronic trading platforms, the intention is to build up the 2- and 5-year on-the-run issues to a final outstanding amount of at least DKK 35 billion, and the 10-year on-the-run issue to a final outstanding amount of DKK 60 billion. Outstanding amounts in the 2-year on-the-run issue and in 4 per cent bullet loans 2008 already exceed DKK 35 billion. It is planned to issue at least DKK 20 billion in the 2-year maturity segment in 2005, cf. Box 2.4. The contribution to net financing from the Treasury bill programme is expected to be zero in 2005.

Since 2002, the strategy for foreign borrowing has been to issue a large euro loan in the 5-year maturity segment every year. With foreign

STRATEGIC BENCHMARKS FOR 2005 Box 2.4

Interest-rate exposure:

- Macauley duration of 3 years ± 0.5 years.
- The day-to-day management of duration is based on a duration measure calculated on the basis of a fixed discount rate and a balance on the central government's account of DKK 30 billion. The target band for this duration is 3 years ± 0.25 years.

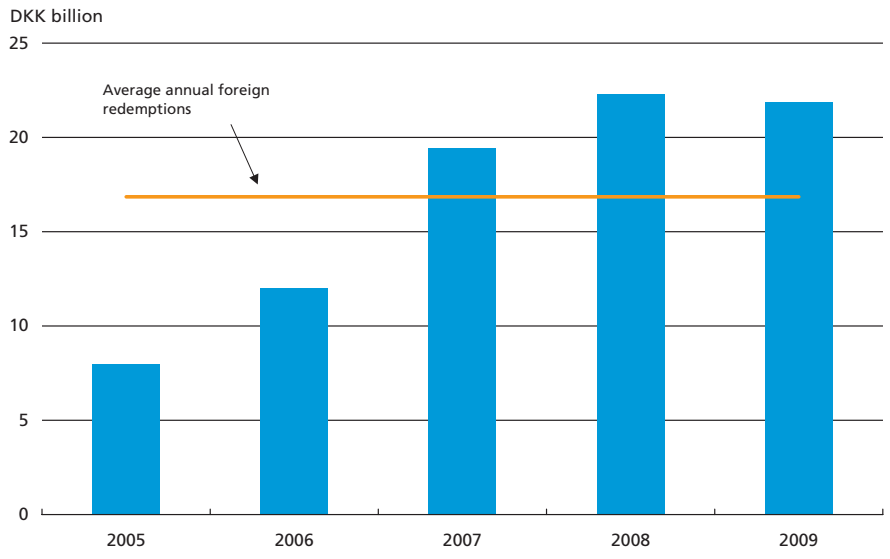
Liquidity:

- In the 2-year maturity segment, a minimum of DKK 20 billion is issued.
- The final outstanding amount in 4 per cent bullet loans 2010 is built up to a minimum of DKK 35 billion.
- The final outstanding amount in 4 per cent bullet loans 2015 is built up to a minimum of DKK 60 billion.
- A net financing contribution of zero from the Treasury bill programme.
- Foreign borrowing is via a 5-year euro loan for EUR 1.5-2 billion.

debt at DKK 84 billion, this borrowing strategy will entail average annual redemptions in the range of DKK 17 billion.

The redemption profile of the foreign debt is not smooth in the coming years, cf. Chart 2.6.1. Currency swaps will be used as an instrument to smooth the foreign redemption profile. In 2005, currency swaps from euro to kroner will be transacted for up to DKK 6.4 billion, depending on the final size of the euro loan issued, cf. Table 2.6.2. Currency swaps from euro to kroner increase the foreign borrowing requirement in the year that the swap is transacted, cf. Box 2.2. The foreign redemptions

REDEMPTION PROFILE FOR FOREIGN GOVERNMENT DEBT, END-2004 Chart 2.6.1



FOREIGN GOVERNMENT BORROWING REQUIREMENT IN 2005	Table 2.6.2
DKK billion	
Net foreign financing requirement, cf. *Budget Review 3*, 2004[1]	2.3
Redemptions on foreign debt[2]	8.5
Foreign-exchange payments by the government in currency swaps[3]	6.5
Gross foreign financing requirement	17.2
Foreign-exchange payments to the government in currency swaps[4]	2.3
Foreign borrowing requirement	14.9

[1] Net re-lending in dollars to Danish Ship Finance.
[2] Including buy-backs in securities maturity in the following year.
[3] Of which DKK 0.1 billion resulting from redemptions in dollars from re-lending to Danish Ship Finance.
[4] Relates to re-lending in dollars to Danish Ship Finance.

are reduced in the year that the swap expires. Foreign borrowing in 2005 is undertaken via a 5-year syndicated euro loan of EUR 1.5-2 billion. It is expected to be issued in the first half of 2005.

In 2005, the interest-rate risk on the debt portfolio is still managed by means of a duration band. In day-to-day management, a target band of 3 years $\pm$ 0.25 years is applied to a duration measure, based on a fixed rate of interest and a balance of DKK 30 billion on the central government's account, cf. Chapter 6.

In 2005, the central government can undertake buy-backs in all government securities that are neither on-the-run issues nor have benchmark status, except for 4 per cent bullet loans 2008 and 7 per cent bullet loans 2024. SPF has relatively large holdings of government securities maturing in 2006 and 2007, and part of the government buy-backs are planned to be from SPF. Government buy-backs in the market are expected to be at the level of previous years. Issues eligible for buy-back as of January 2005 are stated in the announcement of December 2004 concerning government debt management strategy in 2005. The announcement is included in the Appendices to this publication.

CHAPTER 3

Market Structure for Trading in Danish Government Securities

SUMMARY 3.1

Danish government bonds are traded on a number of electronic trading platforms on which banks quote tradable bid and ask prices. Electronic platforms, combined with price-quoting schemes, contribute to transparency, liquidity and efficient price formation. The market structure of the Danish government bond market is a key element in Government Debt Management's use of tap sale whereby bonds are issued directly in the secondary market at current market prices.[1]

Government Debt Management has a primary dealer system with 14 banks. Under this system, which has been in operation since November 2003, Danish government bonds are issued to primary dealers that are committed to quoting current tradable bid and ask prices within predefined maximum spreads and for minimum amounts.[2]

By agreement with the primary dealers, the issuance of government bonds and the primary dealers' current price-quoting take place on the electronic interdealer trading platform, MTS Denmark (MTSDk). Various initiatives underpin the trading in Danish government bonds on MTSDk. The current price-quoting for example entails that it is possible to trade at current market prices throughout most of MTSDk's opening hours. Moreover, automated settlement (straight-through-processing) of MTSDk trades via Euroclear and VP Securities Services (and later also Clearstream) ensures a low level of operational risks and trading costs related to settlement.

Mid-2005 will see the launch of a new state-of-the-art auction system for the issuance of Treasury bills. Concurrently, electronic market-making in Treasury bills will be introduced on MTSDk. These initiatives will contribute to ensuring transparency and to widening the range of participants in the Treasury bill market.

1 Chapter 8 describes issuance of Danish government bonds.

2 For a detailed description of the introduction of the primary dealer system for Danish government bonds, see Chapter 9 of *Danish Government Borrowing and Debt*, 2003. For a description of the market implications of the introduction of the primary dealer system, see Danmarks Nationalbank, *Monetary Review,* 2nd Quarter 2004, Liquidity and Transparency in the Danish Government Bond Market.

THE PRIMARY DEALER SYSTEM FOR DANISH GOVERNMENT BONDS 3.2

On 1 January 2005, Dresdner Bank became a primary dealer and the system now comprises 14 Danish and international primary dealers. Primary dealer status is awarded on the expectation that the banks in question will enter into a long-term partnership on trading and distributing Danish government bonds to a broad range of investors.

RIGHTS AND OBLIGATIONS OF PRIMARY DEALERS Box 3.1

Government Debt Management has an agreement with 14 primary dealers: ABN Amro, Barclays, Danske Bank, Deutsche Bank, Dresdner Bank, Fionia Bank, HSH Nordbank, JP Morgan, Morgan Stanley, Nordea, Nykredit, Skandinaviska Enskilda Banken, Svenska Handelsbanken and Sydbank. The primary dealer agreement is available on Danmarks Nationalbank's website at www.nationalbanken.dk, Government debt, Domestic Borrowing, Issuance of and trading in government securities.

The primary dealer system entails a number of rights and obligations that overall correspond to similar schemes in other EU member states. The primary dealers' most significant rights are:

- to carry the title of "Primary dealer in Danish government bonds"
- to be counterparty to Government Debt Management's issuance and buy-back transactions
- to use the securities lending facilities of the central government and the Social Pension Fund.

The primary dealers' most significant obligations are:

- to quote prices for at least five hours a day in central-government bullet loans denominated in Danish kroner with a remaining maturity of more than 13 months within predefined maximum spreads and minimum amounts, cf. the Table below
- to be active counterparty to Government Debt Management's activities
- to work at promoting Danish government bonds
- to support an efficient market for Danish government bonds.

MARKET-MAKING OBLIGATIONS IN VARIOUS MATURITY SEGMENTS

	Benchmark and on-the-run issues			Other government bonds[2]		
	2-year	5-year	10-year	2-year	5-year	10-year
Maximum spread, ticks[1]	3	5	7	5	8	10
Minimum amount, DKK million	80	40	40	60	20	20

Note: All primary dealers are under an obligation to conduct market-making in the central government's benchmark and on-the-run issues. Market-making in the remaining government bonds alternates between the primary dealers, so that there are always at least five market makers in the securities included in the primary dealer system. In practice, most primary dealers conduct market-making in all government bonds included in the primary dealer system.

[1] Hundredth points.

[2] For market-making in 7 per cent bullet loans 2024, the maximum spread is 20 ticks and the minimum amount is DKK 10 million.

PRE- AND POST-TRADE INFORMATION[1] Box 3.2

Pre-trade information is market information that is accessible up to the time that a trade takes place. This is typically information on prices and order volumes available for purchase or sale in the market. Pre-trade information gives market participants the opportunity to observe the market's development on an ongoing basis and execute actual transactions at known prices and volumes.

Post-trade information is market information that is available after the point in time a trade was concluded. This may be information on individual trades, or aggregated information on each dealer's or a market's total activity in a given period. Information on individual trades may include price, volume, time of conclusion of the trade and buyer's and seller's identity.

[1] For a description of capital market transparency, see Danmarks Nationalbank, *Monetary Review*, 4th Quarter 2004, Transparency in Capital Markets.

The main obligation of primary dealers is to quote current bid and ask prices for the central government's bullet loans with a remaining maturity of more than 13 months within predefined maximum spreads and for minimum amounts (market-making). The most important right is to buy government bonds on issuance and to act as counterparty in Government Debt Management's buy-back transactions. Box 3.1 describes the rights and obligations of primary dealers.

The market-making of the primary dealers provides pre-trade information on the current market prices of Danish government bonds in the interdealer market. Previously, price levels were to a greater extent assessed on the basis of post-trade information. Box 3.2 describes pre- and post-trade information.

The pre-trade information in the interdealer market is available in real-time, against a fee, to other players via international vendors.[1] Transparency in the wholesale market contributes to supporting trade in Danish government bonds on other trading platforms and via the telephone market.

MTS Denmark

MTS Denmark (MTSDk) is an interdealer trading platform on which primary dealers conduct market-making and trade in Danish government bonds. Other banks may also be attached to the platform in order to trade in government bonds. Moreover, MTSDk is the market segment in which Government Debt Management, by agreement with the primary dealers, issues and buys back government bonds. Box 3.3 describes MTSDk's participants and corporate structure.

[1] Pre-trade information is available free of charge with a 15-minute time lag at the MTSDk website, www.mtsdenmark.com.

MTSDk Box 3.3

Participants

MTSDk is an interdealer platform on which mainly primary dealers trade in Danish government bonds. MTSDk is also the market segment in which Government Debt Management performs issuance and buy-back transactions and purchase of government bonds on behalf of three government funds (The Social Pension Fund, The High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation).

A number of schemes have been launched to encourage other banks to become members of MTSDk with a view to supporting liquidity in Danish government bonds. A bank may be attached to the platform as market taker. A *market taker* can trade on the basis of prices quoted by primary dealers but cannot quote prices. Merrill Lynch Bank is market taker on MTSDk.

Pure domestic players are market takers that may be attached to MTSDk free of charge. In order for a bank to be attached to MTSDk as a pure domestic player, the bank must be a market maker in not more than one of the other European MTS segments for trading in government bonds. There are currently no pure domestic players on MTSDk.

A single-market specialist scheme has also been set up on MTSDk. A *single-market specialist* may be attached to special sub-segments on MTSDk as market maker. In 2004, a sub-segment was established on MTSDk in which the central government's two euro loans maturing in 2008 and 2009 are traded. Most of the primary dealers and one single-market specialist in euro loans act as market makers in the securities. In 2005, a single-market specialist scheme is to be established in Treasury bills with a view to supplementing the activity of the primary dealers, cf. the section on the Treasury bill programme.

Corporate structure

MTSDk is a market segment of MTSAM, a company registered in Belgium. The market structure of MTSDk is managed separately from MTSAM by a primary dealer committee with participation of Government Debt Management, the primary dealers, MTSAM and MTS S.p.A. The latter is the company owning the rights to the electronic trading platform used, Telematico. Most EU government debt management offices use the Telematico platform in connection with established electronic market-maker schemes.

Trading on MTSDk is supported by the market-making obligation of the primary dealers, so that for most of the trading day it is possible to trade in Danish government bonds at current market prices.

Furthermore, MTSDk trades are settled via an automatic settlement facility that ensures a low level of operational risks and trading costs related to settlement. The MTSDk settlement facility is based on central clearing instruction and straight-through-processing (STP). This means that the trading system automatically sends messages to the relevant clearing house(s) when a trade is concluded. Previously, automatic set-

tlement was effected solely via VP Securities Services, but since early 2005 MTSDk participants have had a choice between Euroclear and VP Securities Services as clearing house. Later in 2005, this choice will be extended to include Clearstream.

With the new opportunities for choice of clearing house, banks using Euroclear or Clearstream as custody institution may join MTSDK without having to adjust their in-house settlement procedures. Previously, these banks had to register with VP Securities Services as participants – either directly or via one of the banks already registered as a participant – and on an ongoing basis transfer securities from their accounts with Euroclear/Clearstream to accounts with VP in order to ensure settlement of trades on MTSDk.

The Treasury bill programme

The structure of the Treasury bill market differs in several respects from the market for government bonds. For example, Treasury bills are issued solely at monthly auctions.

In 2005, Government Debt Management will launch a number of initiatives in the primary and secondary markets for Treasury bills with a view to strengthening transparency, liquidity and price formation in the Treasury bill market as well as widening the range of participants.

In the primary market, a new state-of-the-art auction facility will be introduced as an integral part of the electronic trading platform on MTSDk. The new auction facility will significantly increase the potential number of participants in Treasury bill auctions compared to today where the auctions are dominated by a small number of banks. At Treasury bill auctions in 2004, the three largest market players purchased 80 per cent of the volume issued.

The new auction facility also means that the duration of an auction may be reduced from the present 30 minutes to maximum 15 minutes. This reduces the market risk to which auction bidders are exposed from submitting their bids and until the outcome of the auction is released.

In the secondary market, an electronic market-maker system in Treasury bills will be established. Under the system, Treasury bills are issued to the participants in the system who commit to quoting current tradable bid and ask prices in Treasury bills within predefined maximum spreads and for minimum amounts.

The issuance of Treasury bills and current price-quoting by market makers will take place on MTSDk where a special sub-segment will be established for issuance of and trading in Treasury bills. The market-maker system in Treasury bills is open to primary dealers in government bonds and to single-market specialists in Treasury bills.

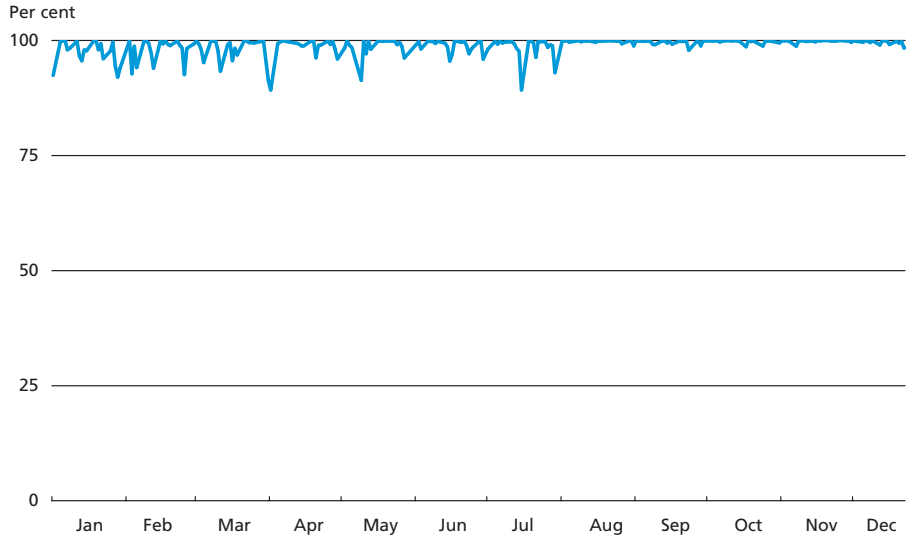
A market-maker system in Treasury bills will contribute to a more transparent market for trading in Treasury bills. Today, a number of banks have an interdealer price-quoting system in Treasury bills, but the system is not associated with any current price-quoting scheme. Instead, there is a "quote-on-request" system under which binding quotes are made only if a participant asks one or more price quoters for a price. This price is provided only to the participant making the request.

Market-making and trading on MTSDk in 2004

Government Debt Management evaluates the primary dealers on the basis of a general assessment of compliance with their obligations and their work in a broader sense to ensure an efficient government bond market. The evaluation does not apply narrow mathematical criteria to the ranking of the primary dealers. Use of narrow criteria could create the wrong incentives for primary dealers, e.g. arranging sale and buying back securities for the sole purpose of raising turnover.

The key obligation of the primary dealers is to quote current prices within predefined maximum spreads and for minimum amounts. The order coverage – i.e. the time during which prices are quoted in the system – has been satisfactory throughout 2004, cf. Chart 3.2.1. For most of the opening hours, it is possible to trade Danish government bonds on MTSDk at current market prices.

ORDER COVERAGE IN DANISH GOVERNMENT BONDS ON MTSDk IN 2004 Chart 3.2.1



Note: The total order coverage is calculated as a simple average of all securities included in the primary dealer system. Order coverage of 100 per cent means that *throughout* the period from 9.00 am to 4.30 pm, bid and ask prices are quoted that are in compliance with the criteria for spreads and amounts, specified for *all* securities covered by the scheme.

Source: MTS Denmark.

The primary dealers' share of turnover on MTSDk gives an indication of the concentration in the wholesale market for Danish government bonds. The six largest market participants accounted for 65 per cent of the overall turnover on MTSDk in 2004, cf. Chart 3.2.2.

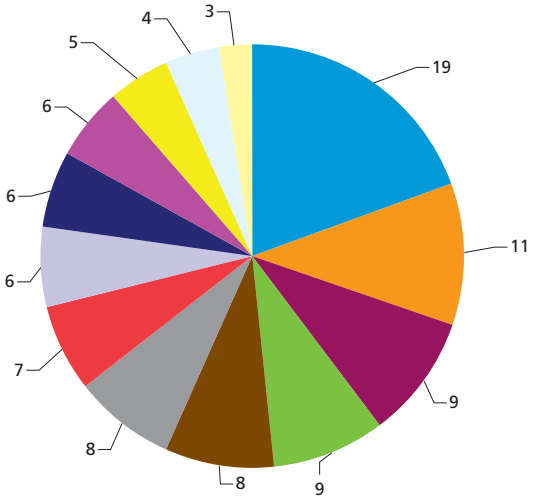
The breakdown of the issuance of government bonds to primary dealers generally reflects the same trend. In 2004, the six largest market participants took approximately 70 per cent of the issuance of government bonds. Compared with the situation before the establishment of the primary dealer system, the government bond market is now less concentrated. In 2001, the six largest market participants took approximately 95 per cent of the issuance of government bonds.

The spread between the best bid and ask prices reflects the cost of buying and simultaneously selling a bond. The narrower the spread, the lower the cost – and the more efficient the price formation. Liquid markets, in particular, are characterised by relatively narrow spreads.

The primary dealers have an obligation to quote bid and ask prices with a maximum spread in benchmark securities of 3, 5 and 7 ticks in the 2-, 5- and 10-year maturity segments, respectively. The maximum spread increases with maturity due to the increased market risk attached to securities with a longer maturity.

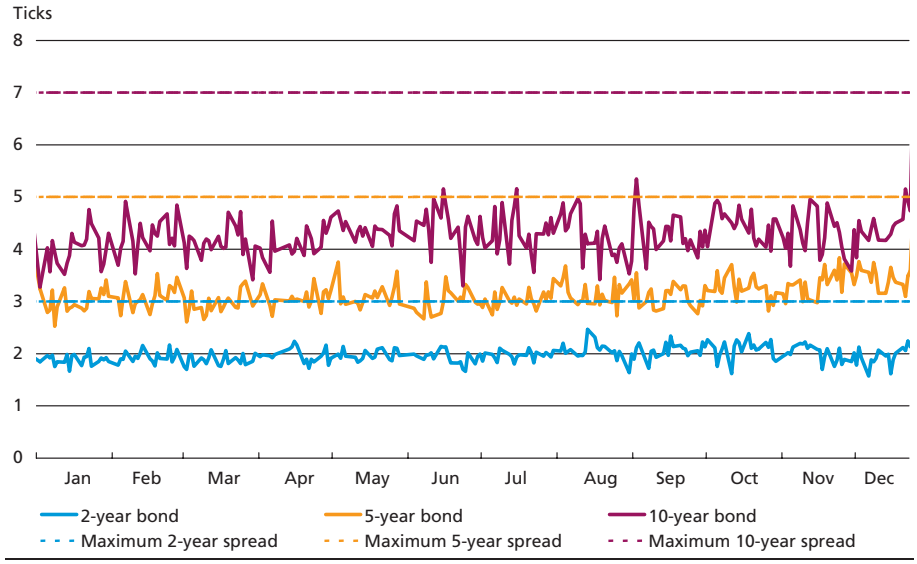
Throughout 2004, the spread in the benchmark securities on MTSDk has been around 2, 3 and just over 4 ticks in the respective maturity

PRIMARY DEALERS' MARKET SHARE OF TURNOVER IN DANISH GOVERNMENT BONDS ON MTSDk IN 2004, PER CENT — Chart 3.2.2



Note: The primary dealers are anonymised. The primary dealers' turnover in central-government euro loans on MTSDk and central-government issuance and buy-back transactions on MTSDk are not included in the turnover figures.
Source: MTS Denmark.

SPREAD BETWEEN BEST BID AND ASK PRICES IN BENCHMARKS ON MTSDk IN 2004 Chart 3.2.3



Note: The spread is calculated as a time-weighted average between best bid and ask prices. 4 per cent 2005 and 5 per cent 2013 are, respectively, 2-year and 10-year benchmark securities until 30 June. As from 1 July, the 3 per cent 2006 and the 4 per cent 2015, respectively, are 2- and 10-year benchmark securities. The 4 per cent 2008 is the 5-year benchmark bond until 30 September. As from 1 October, the 4 per cent 2010 is the 5-year benchmark bond.
Source: MTS Denmark.

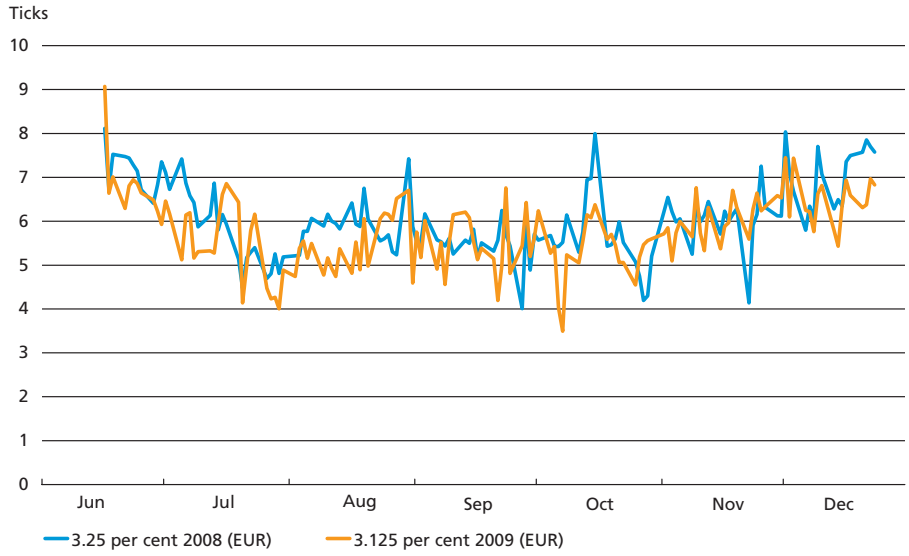
segments, i.e. the spread has been narrower than the primary dealer obligation, cf. Chart 3.2.3. One reason is opposing trading interests in the market, combined with competition between primary dealers. A primary dealer wishing to buy (sell) a government bond will raise the bid price (lower the ask price) in order to obtain the best bid price (ask price) in the market, thereby increasing the possibility of concluding a trade. This means that the spread between the best bid and ask price is narrowed.

Since June 2004, the central government's two euro loans have been traded on MTSDk. A group of market makers comprising most of the primary dealers and one single-market specialist in euro loans have committed to quoting current bid and ask prices with a maximum spread of 10 ticks. Over the market-making period, the price spread has averaged around 6 ticks, cf. Chart 3.2.4.

The depth of the market, like the spread, provides an indication of market liquidity. Depth is here calculated as the time-weighted average of the volume of bonds entered at the best bid and ask price.

Each primary dealer has an obligation to quote a bid price, as well as an ask price, for a minimum of DKK 80 million, DKK 40 million and DKK 40 million in the benchmark securities in the 2-, 5- and 10-year maturity segments, respectively. The primary dealers must quote for a larger amount in the short maturity segment in view of a smaller market risk.

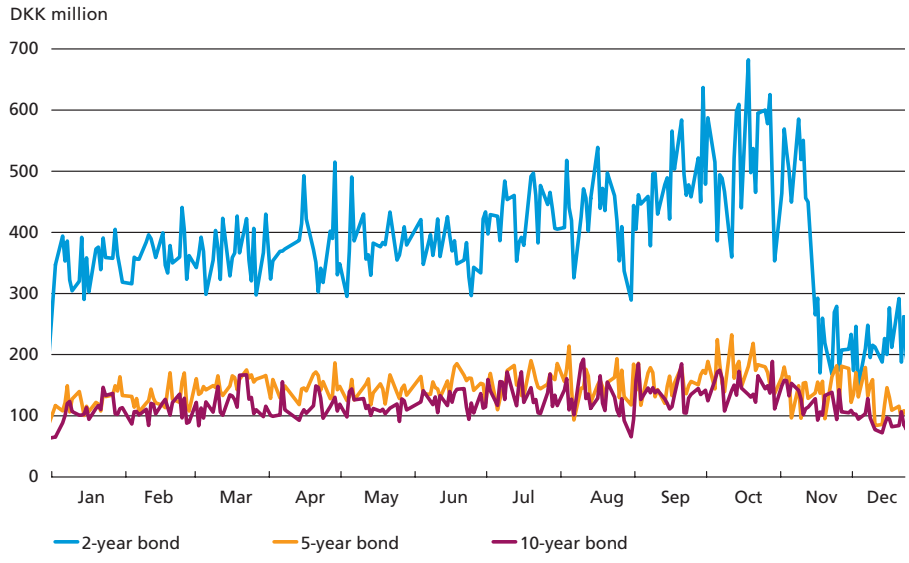
SPREAD BETWEEN BEST BID AND ASK PRICES IN EURO LOANS ON MTSDk IN 2004 Chart 3.2.4



Note: The spread is calculated as a time-weighted average between best bid and ask prices.
Source: MTS Denmark.

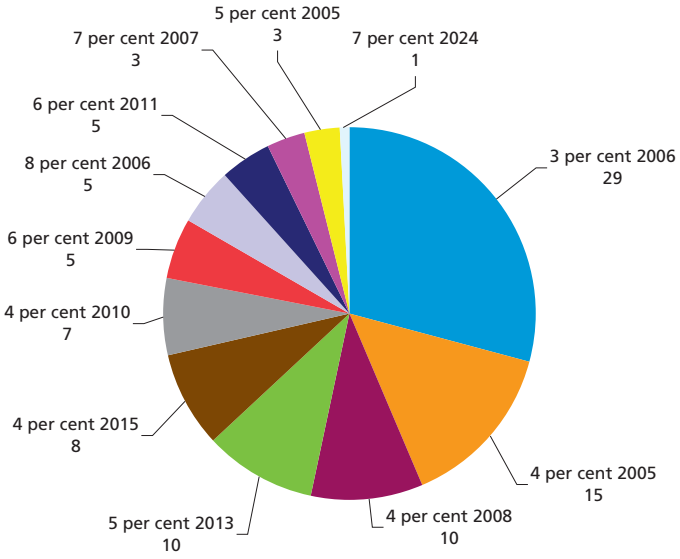
The lower market risk in short maturity segments may explain why the depth in the 2-year benchmark has been relatively high throughout most of 2004, cf. Chart 3.2.5. Another factor may be that – in view of the low level of interest rates and expectations of rising interest rates –

DEPTH RELATED TO BEST PRICES IN BENCHMARKS ON MTSDk IN 2004 Chart 3.2.5



Note: Depth is calculated as a time-weighted average of tradable volumes at best bid and ask prices. The benchmarks throughout 2004 are stated in the notes to Chart 3.2.3.
Source: MTS Denmark.

TURNOVER SHARES OF GOVERNMENT BONDS ON MTSDk IN 2004, PER CENT Chart 3.2.6



Note: Turnover shares of government bonds covered by the primary dealer system. Issuance and buy-back transactions on MTSDk are not included in the turnover figures.
Source: MTS Denmark.

there was special interest in trading in securities with a shorter maturity in 2004. More than 50 per cent of MTSDk's turnover in 2004 was in securities maturing in 2005 or 2006, cf. Chart 3.2.6, even though the outstanding amount in these securities at year-end accounted for only one-third of the overall outstanding amount in the central government's bullet loans.

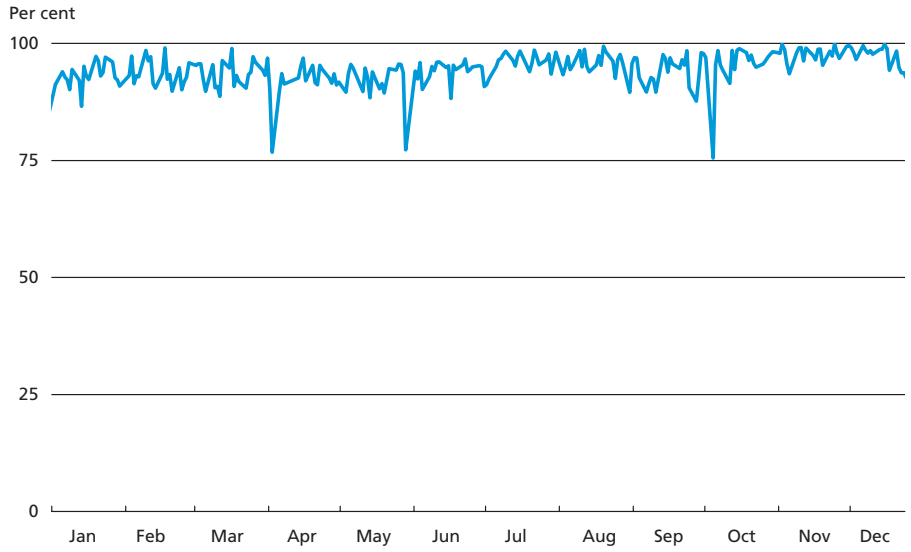
THE COPENHAGEN STOCK EXCHANGE'S PRICE-QUOTING SCHEME 3.3

Government Debt Management has a price-quoting scheme with six banks (market makers) under which the banks are obliged to quote current prices in Danish government bonds on the Copenhagen Stock Exchange.[1] The price-quoting scheme is designed to give smaller investors access to a transparent government-bond market.

The market makers commit to quoting bid and ask prices within predefined maximum spreads and for minimum amounts for 95 per cent of the time between 9.00 am and 4.30 pm. The scheme comprises central-government bullet loans denominated in Danish kroner with a remaining maturity of more than 13 months and prices are quoted on the Saxess electronic trading platform of the Copenhagen Stock Exchange.

[1] The six banks are: Danske Bank, Fionia Bank, Jyske Bank, Nordea, Nykredit and Sydbank.

ORDER COVERAGE IN DANISH GOVERNMENT BONDS ON THE COPENHAGEN STOCK EXCHANGE IN 2004 Chart 3.3.1



Note: The total order coverage is calculated as a simple daily average of the order coverage in the securities included in the system from 8.30 am to 5.00 pm.
Source: The Copenhagen Stock Exchange.

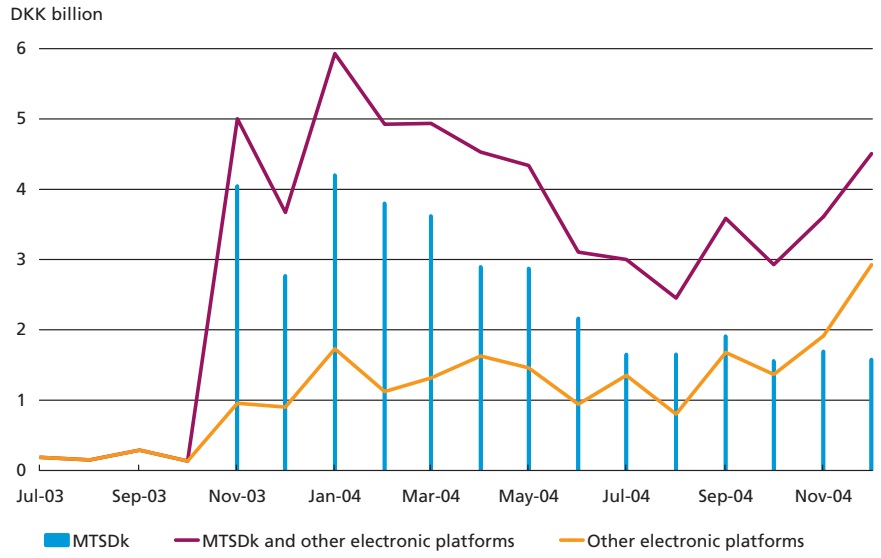
The market makers' current price-quoting means that the order coverage of the Copenhagen Stock Exchange in the interval between 8.30 am and 5.00 pm was generally high throughout 2004, cf. Chart 3.3.1.

Members of the Copenhagen Stock Exchange's bond market may trade with the market makers or may themselves enter bid and ask prices in the system. Moreover, other investors may – via their banks – enter their orders directly in the trading system. An investor order will narrow the spread between the best bid and ask prices if the order totals DKK 1,000 or more, and if the price is better than the existing best bid and ask prices in the trading system.

TRADING IN DANISH GOVERNMENT BONDS 3.4

Danish government bonds are traded on a number of electronic trading platforms on which several traders quote binding prices at which the members of the platform can trade (multidealer platforms). In 2004, Danish government bonds were traded on e.g. electronic "dealer-to-customer" trading platforms, such as BloombergBondTrader, BondVision and TradeWeb, in addition to electronic trading in the interdealer market. Price-quoting schemes on dealer-to-customer platforms are usually quote-on-request schemes that are not subject to current price-quoting.

AVERAGE DAILY TURNOVER IN DANISH GOVERNMENT BONDS ON ELECTRONIC TRADING PLATFORMS — Chart 3.4.1



Note: Government bonds comprise all bullet loans denominated in Danish kroner. Issuance and buy-back transactions on the Copenhagen Stock Exchange (before November 2003) and MTSDk are not included in the turnover figures.
Source: MTSDk, The Copenhagen Stock Exchange, TradeWeb, ICAP/BrokerTec (turnover in 2004) and BondVision.

Market-making and quote-on-request schemes both contribute to enhancing the transparency of price formation to the individual investor. Market-making on MTSDk e.g. gives investors better access to information on current market prices in the wholesale market. The quote-on-request schemes on dealer-to-customer trading platforms increase investors' opportunities to trade at competitive prices.

Electronic trading in Danish government bonds has increased significantly compared with the situation before November 2003 when Danish government bonds were introduced on MTSDk and several electronic dealer-to-customer trading platforms, cf. Chart 3.4.1.

CHAPTER 4

The Social Pension Fund, the High-Technology Foundation and the Financing Fund

SUMMARY 4.1

Danmarks Nationalbank, as agent for the Danish Ministry of Finance within the central-government debt area, manages the funds of the Social Pension Fund (SPF) and – starting in 2005 – the two new funds: the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund). The assets of the funds are set off against the central-government debt.

The Social Pension Fund (SPF) was established by law in 1970. Payments to SPF ceased in 1982. The proceeds are invested primarily in Danish government bonds. The aim is to achieve a satisfactory return on SPF's assets while taking due account of the overall budgetary consequences of SPF's transactions. Each year, the Danish Finance Act stipulates an amount to be transferred from SPF to the Ministry of Social Affairs. In 2004, an amount of DKK 8.4 billion was transferred.

The High-Technology Foundation Act was adopted in December 2004, while the Financing Fund was established under the Danish Finance Act for 2005. In 2005, DKK 3 billion and DKK 1 billion, respectively, will be allocated to the funds. The capital of the funds is placed in Danish government bonds. On investing the capital of the funds, the aim is to achieve a high return while keeping risk at a reasonable level. The subsequent build-up of capital and disbursements from the funds will be stipulated in the annual Finance Acts.

SPF 4.2

SPF was established by law in 1970, whereby a special national retirement pension contribution was introduced. The proceeds were allocated to SPF and invested in bonds. With effect from 1982, the Act was amended, and the payments to SPF ceased. SPF was continued as an asset of the central government. Each year, the Danish Finance Act stipu-

MANAGEMENT OF SPF — Box 4.1

SPF is part of the remit of the Ministry of Social Affairs and the Ministry of Finance. The governance of SPF is handled by a committee with representatives from the Ministry of Finance, the Ministry of Social Affairs and Danmarks Nationalbank. The management of the assets of SPF is handled by Government Debt Management at Danmarks Nationalbank.

The principles for the management of SPF's capital are set out in a regulation.[1] The regulation states that the aim is to achieve a satisfactory return on SPF's assets, while taking due account of the overall budgetary consequences of SPF's transactions. Moreover, the regulation states that the capital is to be invested primarily in government bonds. It is the intention for SPF's purchases to take place without significantly affecting the formation of interest rates in the bond market.

The interest on SPF's bond portfolio after payment of pension-fund tax is used to finance pension improvement measures or is allocated to SPF. SPF's core capital can be used to finance pension improvements, should the cost of such measures exceed SPF's income from interest.

The Finance Act stipulates the amount to be transferred from SPF to the Ministry of Social Affairs on a current basis to cover the costs of pension improvement measures.

[1] The regulation is available at www.nationalbanken.dk.

lates an amount to be transferred from SPF to the Ministry of Social Affairs to cover pension improvement measures.

SPF's capital is invested in listed bonds, primarily government bonds. SPF does not invest in on-the-run or benchmark securities. The principles for the management of SPF's capital are described in Box 4.1.

SPF's income from interest was DKK 8.3 billion in 2004, cf. Table 4.2.1. An amount of DKK 8.4 billion was transferred to the Ministry of Social Affairs to cover pension improvement measures, while SPF's pension-fund tax amounted to DKK 1.5 billion. Bonds for a total of DKK 15.7 billion at market value were drawn or sold, including the sale of 8 per cent bullet loans 2006 to the central government for DKK 8.3 billion and the sale of 7 per cent bullet loans 2004 for DKK 1.3 billion.

SPF's REVENUE AND EXPENDITURE — Table 4.2.1

DKK billion	2003	2004
Revenue		
Interest, etc.	9.6	8.3
Expenditure		
Transfer to the Ministry of Social Affairs	8.1	8.4
Pension-fund tax	1.3	1.5
Net	0.1	-1.5

Note: Figures for 2003 are taken from the central-government accounts, while figures for 2004 are provisional figures from the central-government accounts.

SPF's BOND PORTFOLIO, 1999-2004 Table 4.2.2

DKK billion	1999	2000	2001	2002	2003	2004
Nominal value	141.6	139.6	141.1	141.4	138.7	136.9
Quoted value	150.7	149.1	150.5	155.0	152.4	151.8

Note: The portfolio is calculated as of year-end. The figures for nominal value include index-linked bonds at indexed value. The quoted value is calculated on the basis of the official prices at the end of 2004 in accordance with the accounting practice for the central-government accounts.

SPF's purchases in 2004 totalled DKK 14.3 billion at market value. Purchases of 4 per cent bullet loans 2008 accounted for DKK 0.6 billion, 5 per cent bullet loans 2013 for DKK 6.1 billion, 6 per cent bullet loans 2009 for DKK 1.0 billion, 6 per cent bullet loans 2011 for DKK 6.5 billion, and 7 per cent bullet loans 2024 for DKK 0.1 billion.

At the end of 2004, SPF's bond portfolio totalled DKK 136.9 billion at nominal value and DKK 151.8 billion at quoted value, cf. Table 4.2.2. The portfolio's nominal value decreased by almost DKK 2 billion from 2003 to 2004, while the portfolio's quoted value decreased by just over DKK 0.5 billion.

As mortgage-credit bonds are drawn or mature and the proceeds are reinvested in government bonds, the latter account for an increasing proportion of the total bond portfolio. At year-end 2004, the government-bond portfolio accounted for 88.3 per cent, cf. Table 4.2.3. SPF owns a relatively large proportion of the total outstanding amount in several government securities series. The remainder of the portfolio predominantly comprises mortgage-credit bonds and index-linked bonds.

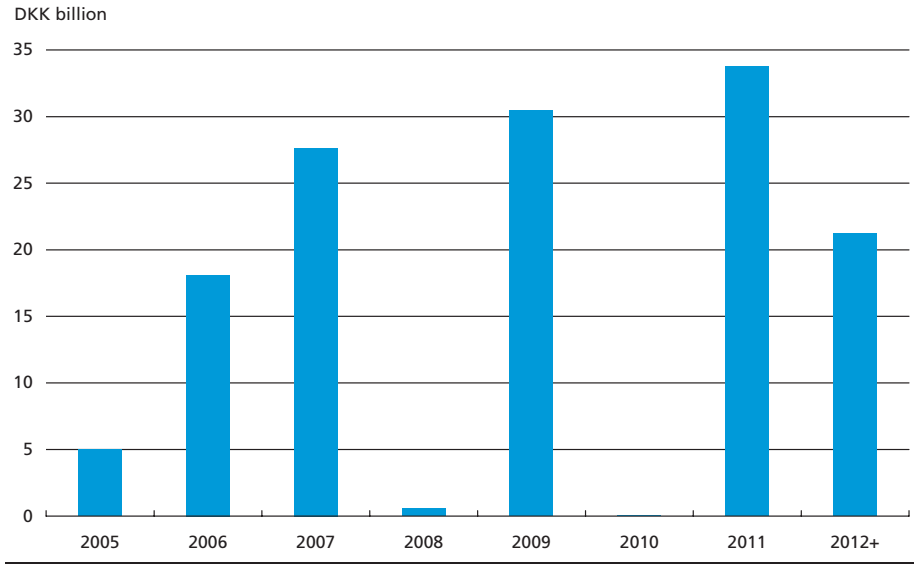
SPF's BOND PORTFOLIO DISTRIBUTED BY BOND TYPES, END-2004 Table 4.2.3

Nominal value	DKK billion	Per cent	Per cent of total outstanding amount in the government bond
5 per cent bullet loans 2005	5.0	3.6	9.2
8 per cent bullet loans 2006	18.1	13.2	39.1
7 per cent bullet loans 2007	27.6	20.2	53.0
4 per cent bullet loans 2008	0.6	0.4	1.4
6 per cent bullet loans 2009	30.1	22.0	45.5
6 per cent bullet loans 2011	33.4	24.4	55.2
5 per cent bullet loans 2013	5.6	4.1	7.1
7 per cent bullet loans 2024	0.5	0.3	1.8
Government bonds, total	120.8	88.3	
Mortgage-credit bonds, etc.[1]	8.7	6.3	
Index-linked bonds[2]	7.4	5.4	
Total	136.9	100.0	

[1] Mortgage-credit bonds, etc., comprise mortgage-credit bonds as well as municipal and Fisheries Bank bonds other than index-linked bonds.

[2] Indexed value.

SPF's BOND PORTFOLIO DISTRIBUTED BY YEAR OF MATURITY, END-2004, NOMINAL VALUE — Chart 4.2.1



SPF's nominal portfolio of government securities as of the month-end is published on the first banking day of the subsequent month on Danmarks Nationalbank's website, www.nationalbanken.dk, under Government debt.

The ongoing management of SPF's capital is aimed at smoothing the placement requirement, particularly in the immediately following years. Sale to the government in 2005 of the relatively large portfolios maturing in 2006 and 2007 may help to smooth the placement requirement, cf. Chart 4.2.1. The sale will also meet the government's buy-back need, cf. Chapter 2.

The duration of SPF's bond portfolio was 4.1 years at the close of 2004, cf. Table 4.2.4. The duration decreased slightly throughout most of the year. The duration of SPF's bond portfolio is part of the management of the overall duration of the central-government debt.

DURATION OF SPF's BOND PORTFOLIO — Table 4.2.4

Year	End-2003	End-2004
Government bonds	4.2	4.0
Mortgage-credit bonds, etc.	1.1	0.2
Index-linked bonds	10.0	10.2
Total portfolio	4.2	4.1

Note: For callable mortgage-credit bonds an option-adjusted duration is applied, and the duration of index-linked bonds is calculated using an inflation assumption of 2 per cent per year

LENDING UNDER SPF's SECURITIES LENDING FACILITY, 2004 Table 4.3.1

DKK billion	
5 per cent bullet loans 2005	0.2
8 per cent bullet loans 2006	0.3
7 per cent bullet loans 2007	2.9
4 per cent bullet loans 2008	0.4
6 per cent bullet loans 2009	1.0
6 per cent bullet loans 2011	4.6
7 per cent bullet loans 2024	1.0
Total	10.4

SPF's SECURITIES LENDING FACILITY 4.3

SPF's securities lending facility comprises government securities that are bullet loans. The facility supports liquidity in off-the-run government issues. Lending is extended to primary dealers in Danish government securities against the payment of a fee to SPF and is collateralised by other government securities. In 2004, lending predominantly comprised 7 per cent bullet loans 2007 and 6 per cent bullet loans 2011, cf. Table 4.3.1.

The fee income from the facility totalled DKK 0.3 million in 2004. The terms for SPF's securities lending facility are presented in the Appendices to this publication.

THE HIGH-TECHNOLOGY FOUNDATION 4.4

The High-Technology Foundation Act[1] was adopted in December 2004. The objective of the High-Technology Foundation is to strengthen growth and employment by supporting Denmark's further development as a high-technology society, cf. Section 1(2) of the High-Technology Foundation Act. Under the agreement with the Ministry of Finance, the capital of the Fund is managed by Danmarks Nationalbank acting as agent for the Ministry of Finance within the central-government debt area. The capital of the Fund is placed in Danish government bonds. On investing the capital of the Fund, the aim is to achieve a high return, while keeping risk at a reasonable level.

The build-up of the Fund's capital is stipulated in the annual Finance Act. The explanatory notes to the Act state that the aim is for the Fund's core capital to be increased to at least DKK 16 billion during the period up to 2012. As established by the 2005 Finance Act, DKK 3 billion is allocated to the Fund in 2005. Each year, the amount stipulated in the an-

[1] Act No. 1459 of 22 December 2004.

nual Finance Act is transferred from the High-Technology Foundation to the Ministry of Science, Technology and Innovation. In 2005, an amount of DKK 100 million is transferred.

THE FINANCING FUND 4.5

The Financing Fund was established under the 2005 Finance Act. The Fund's capital is invested in Danish government bonds and managed by Danmarks Nationalbank as agent for the Ministry of Finance within the central-government debt area. In the investment of the Fund's capital, the aim is to achieve a high return, while keeping risk at a reasonable level. The Finance Act stipulates the amount to be made available by the Fund for increased distributions from the Danish National Research Foundation.

As stipulated by the 2005 Finance Act, an amount of DKK 1 billion is allocated to the Financing Fund in 2005. Each year, the amount stipulated in the annual Finance Act, is transferred from the fund to the Ministry of Science, Technology and Innovation. DKK 40 million is transferred in 2005.

CHAPTER 5

Government Loan Guarantees and Re-Lending

SUMMARY 5.1

A number of government-owned companies may raise government-guaranteed loans or raise loans directly from the central government through re-lending. These are typically companies whose tasks and borrowing frameworks are defined in an act or legal document. Moreover, Danish Ship Finance (DSF) has access to a re-lending facility.

Most of the government guarantees are issued through Government Debt Management at Danmarks Nationalbank. At the close of 2004, these guarantees amounted to DKK 82.4 billion. Re-lending amounted to DKK 19.1 billion at the end of 2004.

FRAMEWORK FOR GOVERNMENT LOAN GUARANTEES AND RE-LENDING 5.2

Government loan guarantees and re-lending support the financing of specific projects. Most government loan guarantees and re-lending are issued to government-owned companies involved in large infrastructure projects.

A government guarantee means that the central government guarantees the company's loans up to a certain limit. The guarantee reduces private lenders' risk in connection with the provision of loans to the government-guaranteed company and thus also reduces the borrowing costs of the company.

Most of the central government's re-lending precisely reflects loans in existing government securities, meaning that coupon rates, interest-payment dates and redemption dates correspond to the characteristics of underlying government securities. The price is determined on the basis of the market conditions when the loan is raised. The list of government securities in which re-lending can be granted (the re-lending list) is determined by Government Debt Management. Re-lending is usually possible in all government bonds that are bullet loans in maturity segments between 2 and 10 years.

The central government's exposure to a company's ability to pay is the same regardless of whether the company raises a government-guaranteed loan or uses re-lending. Internationally, there is increased focus on how government guarantees are handled, including the budgetary aspect. Chapter 9 describes this development as well as the Danish model for government guarantees and re-lending.

The board of directors and management of each government-guaranteed company are responsible for the company's financial transactions, risk management, etc. The central government establishes guidelines for the government-guaranteed companies' activity in the loan markets. In principle, the financial risks incurred by the central government in connection with guarantees are equivalent to the risks assumed when the central government borrows directly in its own name. The guidelines must therefore ensure that the government-guaranteed companies do not in their borrowing, etc., assume risks that the central government would not assume directly. For example, the companies' currency exposure should normally be limited to euro. The guidelines for borrowing by the companies are described in Box 5.1.

GUIDELINES FOR BORROWING BY THE COMPANIES — Box 5.1

The guidelines apply to A/S Storebælt, A/S Øresund, Ørestadsselskabet I/S (the Ørestad Development Corporation), Øresundsbron (the Øresund Bridge), DSB (the Danish State Railways), Hypotekbanken (the Mortgage Bank of the Kingdom of Denmark) and Danmarks Radio (the Danish Broadcasting Corporation). The guidelines for the borrowing by the companies are stated in a set of agreements comprising three elements: an agreement between the ministry in question and Danmarks Nationalbank; an agreement between the ministry and the individual company; and finally a list of acceptable loan types. This list is drawn up and maintained by Government Debt Management. As far as Øresundsbron is concerned, a tripartite agreement has also been concluded between Øresundsbron, Riksgäldskontoret and Government Debt Management.

The list of acceptable loan types is based on the following criteria:

- Transactions must be customary, i.e. known and used in the market by reputed borrowers.
- Transactions must be built up from simple elements that make them transparent.
- It is emphasised that the management of the credit risk should be based on a rating-based limit system.
- Unilateral agreements are concluded on the provision of collateral (CSA agreements) to minimise the credit risk at all times. As from July 2005, swaps may be transacted only with counterparties with whom a CSA agreement has been signed.
- The currency exposure of the loan portfolio should as a general rule be limited to euro, so that the final exposure is in Danish kroner or euro (or Swedish kronor as far as Øresundsbron is concerned).

GOVERNMENT LOAN GUARANTEES — Table 5.3.1

DKK billion	End-2004
Hypotekbanken	2.7
A/S Storebælt	37.9
A/S Øresund	6.6
Øresundsbron	22.5
DSB and DSB S-tog A/S	10.1
Danmarks Radio	2.5
Total	82.4

Note: The debt of Øresundsbron is jointly guaranteed by the Danish and Swedish governments.

GOVERNMENT LOAN GUARANTEES 5.3

A/S Storebælt, A/S Øresund, Danmarks Radio (the Danish Broadcasting Corporation), DSB (the Danish State Railways), Hypotekbanken (the Mortgage Bank of the Kingdom of Denmark) and Øresundsbron (the Øresund Bridge) are eligible for government guarantees within certain limits. The Danish central government, in cooperation with its Swedish counterpart, guarantees the debt, etc., of Øresundsbron. The borrowing of Øresundsbron is subject to guidelines laid down by the Swedish and Danish governments. These guidelines are equivalent to those for the other government-guaranteed companies. At the end of 2004, the companies in question had issued government-guaranteed debt totalling DKK 82.4 billion, cf. Table 5.3.1.

RE-LENDING 5.4

A/S Storebælt, A/S Øresund and Ørestadsselskabet I/S (the Ørestad Development Corporation) have access to central-government re-lending. Moreover, Danish Ship Finance has access to a special re-lending facility, cf. below. At the end of 2004, outstanding re-lending totalled DKK 19.1 billion, cf. Table 5.4.1.

In 2005, Energinet.dk, a new public company, has gained access to the re-lending facility. The objective of Energinet.dk is to ensure efficient operation and development of the overall electricity and gas infrastructures.[1] So far, Energinet.dk has not utilised the re-lending facility.

Re-lending facility for Danish Ship Finance (DSF)

In 2003, DSF gained access to a special re-lending facility in connection with the adoption by the Folketing (Parliament) of temporary operating

[1] See www.energinet.dk for further information.

RE-LENDING, NOMINAL VALUE — Table 5.4.1

DKK billion	End-2004
A/S Storebælt	1.0
A/S Øresund	3.9
Ørestadsselskabet I/S[1]	13.6
Danish Ship Finance[2]	0.5
Total	19.1

[1] Ørestadsselskabet I/S is a general partnership of which the central government is a co-owner. It may borrow directly in the central government's name.
[2] Re-lending issued to Danish Ship Finance is converted to DKK using the USD exchange rate at 30 December 2004 (DKK 546.76 per USD 100).

aid for Danish shipyards. This facility is subject to a system of agreements similar to the system applying to government-guaranteed companies.

A special characteristic of the DSF facility is that the re-lending does not precisely reflect loans in existing government securities; instead it is granted as fixed-rate serial loans with a maturity of up to 12 years. The interest rate on re-lending is determined on the basis of the zero-coupon yield curve for government securities estimated on the basis of the market prices of existing government securities. Re-lending may be effected in kroner or dollars. The DSF re-lending facility is described in further detail in Chapter 10 of *Danish Government Borrowing and Debt*, 2003.

Towards the end of 2004, DSF – for the first time – was granted re-lending in two instances totalling DKK 0.5 billion, cf. Table 5.4.1. The Finance Act for 2005 budgets for re-lending to DSF for DKK 2.3 billion.

Each of the re-lendings granted to DSF in 2004 was for USD 47.4 million, with half-yearly payments of interest and redemptions until maturity in 2016. The central government entered into two currency swaps from kroner to dollars simultaneously with the re-lending to DSF. Over the maturity of the loans, DSF's dollar payments on the re-lending (payment of interest and redemptions) are equivalent to the central government's dollar payments to the swap counterparty.

CHAPTER 6

Risk Management of Central-Government Debt

SUMMARY 6.1

Government Debt Management manages interest-rate risk, exchange-rate risk, credit risk and operational risk in relation to the central-government debt.

Interest-rate risk is the risk of higher interest costs on government debt as a result of the development in interest rates. Interest-rate risk is managed by determining a strategic benchmark of 3.0 years ± 0.5 years for the Macauley duration and a narrower target band of 3.0 years ± 0.25 years for a duration measure calculated with a fixed discount rate and a fixed balance of the central government's account. Cost-at-Risk analyses of interest-rate fixing support the determination of the strategic benchmark for duration. Interest-rate fixing is the amount on which an interest rate must be fixed within one year.

Exchange-rate risk is the risk that the government debt increases as a result of changes in exchange rates. To minimise exchange-rate risk, foreign debt raised to maintain the foreign-exchange reserve is exposed in euro. A minor share of the central-government debt is in US dollars, reflecting re-lending in dollars to Danish Ship Finance. The central government is not exposed to fluctuations in the dollar rate as a result of such re-lending since its liabilities (the dollar debt) match its assets (the re-lending).

Credit risk is the risk of financial loss as a consequence of a counterparty's default on its payment obligations. The central government limits the credit risk by transacting swaps only with counterparties with a high credit standing that have signed a unilateral collateral agreement.

Operational risk is the risk of financial loss resulting from failed internal processes, people and systems, or from external events. Operational risk is limited via a clear division of functions in Government Debt Management, use of standardised financial instruments and clear and unambiguous procedures.

RISK MANAGEMENT 6.2

The overall objective of the government debt policy is to cover the central government's financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk. Government Debt Management manages interest-rate risk, exchange-rate risk, credit risk and operational risk in relation to central-government debt.

Risk is managed on the government debt adjusted for re-lending assets. This ensures a higher degree of consolidation in risk management.

INTEREST-RATE RISK 6.3

Interest-rate risk is the risk of higher interest costs on government debt as a result of the development in interest rates. Fixing interest rates for a long period of time reduces the fluctuation in annual interest costs, and

DURATION Box 6.1

The duration of the debt is calculated as a Macauley duration (V_{Mac}) defined as:

$$V_{Mac}(s, i_s) = \sum_t (t-s) \frac{C_t (1+i_s)^{-(t-s)}}{\sum_u C_u (1+i_s)^{-(u-s)}}$$

where s is the time of calculation, i_s is the discount rate, and t is the time of the future payment C_t. For the Social Pension Fund's portfolio of callable mortgage-credit bonds, an option-adjusted duration is applied. Callable bonds have a shorter duration than equivalent non-callable securities, due to the probability of early redemption.

Average fixed-interest period: in Danish government debt management, duration is applied as a measure of the average fixed-interest period. Long duration means that for a large proportion of the debt the interest rate is locked for a long period of time. Long duration reduces the variation in the annual interest costs and thus implies a low risk on the government debt.

Floating and fixed discount rates: duration can be calculated using a floating or fixed discount rate. Interest-rate changes influence the weighting of the individual payments on the portfolio and thus the duration of the portfolio. However, interest-rate changes do not influence the timing of the actual payments, nor the risk profile of the portfolio. Calculating duration on the basis of a fixed discount rate eliminates the fluctuations in duration that exclusively result from interest-rate changes. When duration is calculated with a fixed discount rate, both the duration of the individual securities and their weightings in the duration of the total government debt are calculated on the basis of the fixed discount rate. In the day-to-day risk management, the duration of the central-government debt calculated with a fixed discount rate and a fixed balance of the central government's account is applied. The fixed balance of the government's account ensures that management is not based on day-to-day fluctuations in the account.

thus entails lower risk. On the other hand, average costs will usually be higher when interest rates are fixed for a long period of time, since interest rates normally increase with time to maturity.

In the risk management, duration is used to express the average fixed-interest period of the portfolio, cf. Box 6.1. Since duration does not indicate the absolute interest-rate exposure or its dispersion over time, the duration target is supplemented with interest-rate fixing. The interest-rate fixing is the amount on which an interest rate must be fixed within one year, cf. Box 6.2. The interest-rate fixing is used to support the choice of duration.

Management of interest-rate risk

In day-to-day management of interest-rate risk, a strategic benchmark for duration is used. For 2005, the strategic benchmark for the Macauley duration is set at 3 years ± 0.5 years and 3 years ± 0.25 years for the duration calculated with a fixed discount rate and a fixed balance of the central government's account. This is a continuation of the duration bands for 2004. Duration band and development are shown in Chart 6.3.1.

Instruments for interest-rate risk management

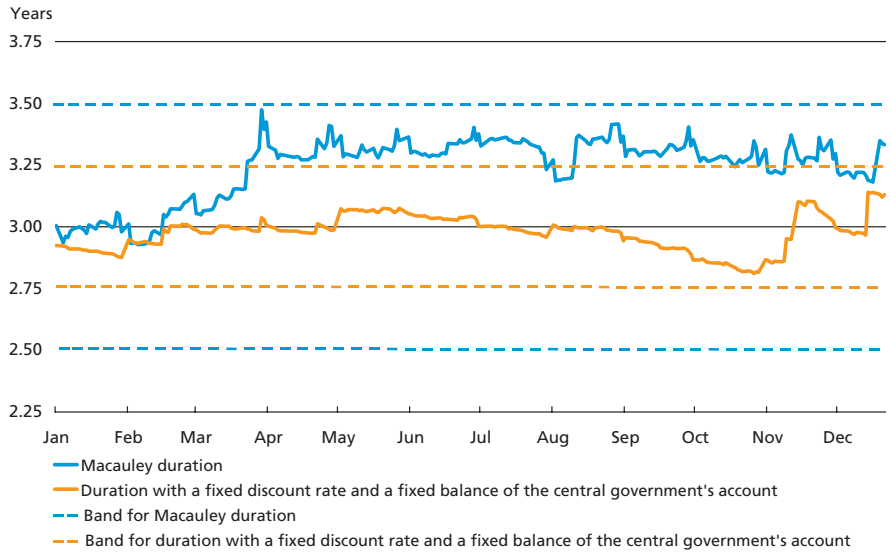
Interest-rate risk is affected by the issuance and buy-back strategy and by interest-rate swaps. The issuance strategy, which is primarily aimed at building up liquid bond series, is separated from interest-rate risk management via interest-rate swaps and buy-back. Buy-backs are primarily

INTEREST-RATE FIXING — Box 6.2

The interest-rate fixing, calculated for a given time, is the amount on which an interest rate is to be fixed within one year. The portfolio at a given time has an impact on interest-rate fixing via the redemptions maturing within the coming year, as well as the size of the floating-rate debt and the swap portfolio for which a new interest rate is to be fixed within one year. At end-2004, this part of the interest-rate fixing totalled DKK 290 billion. The analyses of the interest-rate fixing take into account the Ministry of Finance's expectations of future budget surpluses or deficits, which respectively reduce and increase the interest-rate fixing, as well as new swaps and buy-backs.

All other things being equal, it is desirable to smooth interest-rate fixing over time in order to smooth the interest-rate risk. The level of interest-rate fixing is analysed annually. More interest-rate swaps from fixed to floating interest rates increase interest-rate fixing and lower the duration. This reduces the expected interest costs, but entails higher interest-rate risk. The interest-rate fixing is analysed in absolute terms and relative to GDP. The interest-rate fixing as a proportion of GDP is a measure of the central government's "real" interest-rate exposure.

DURATION BAND AND DEVELOPMENT IN 2004 Chart 6.3.1



used to smooth the redemption profile and to maintain liquid on-the-run issues. Interest-rate swaps are used to transfer interest-rate exposure from one maturity segment to another.

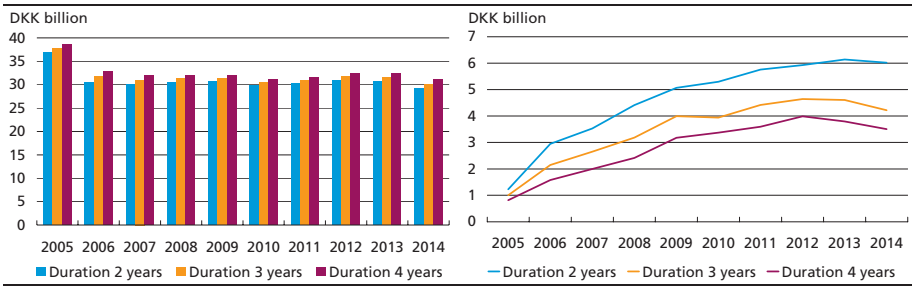
The Cost-at-Risk (CaR) model

The CaR model is used to analyse the trade-off between interest costs and interest-rate risk on central-government debt. In the CaR model, the interest costs on government debt are simulated 10 years ahead on the basis of 2,500 interest-rate scenarios. These scenarios are used to calculate the expected interest costs and various risk measures, cf. Table 6.3.1.

COST AND RISK MEASURES Table 6.3.1

Measure	Explanation
Expected interest costs	The mean of the calculated interest-cost scenarios in a given year.
Absolute CaR	The maximum interest costs with a probability of 95 per cent in a given year.
Relative CaR	The difference between absolute CaR and the expected interest costs. Relative CaR thus indicates the maximum increase in costs compared to the mean in a given year with a probability of 95 per cent.
Conditional relative CaR	Relative CaR for a given year assuming that interest rates are known until this year. This measure is not affected by an increase in the calculation horizon. This makes it easier to compare the development in risk in the individual years.

EXPECTED COSTS AND RELATIVE CaR Chart 6.3.2



CaR results for 2005-2014

The Ministry of Finance's projections of government finances and interest-rate development in the next 10 years are entered as assumptions in the CaR model. The projections show government surpluses and rising interest rates. Viewed in isolation, the assumed surpluses entail falling debt and interest costs, while the assumption of rising interest rates leads to higher interest costs. The two effects almost cancel out, resulting in a relatively stable development in interest costs. The expected costs are DKK 37 billion in 2005 at a duration of 3 years, cf. Chart 6.3.2.

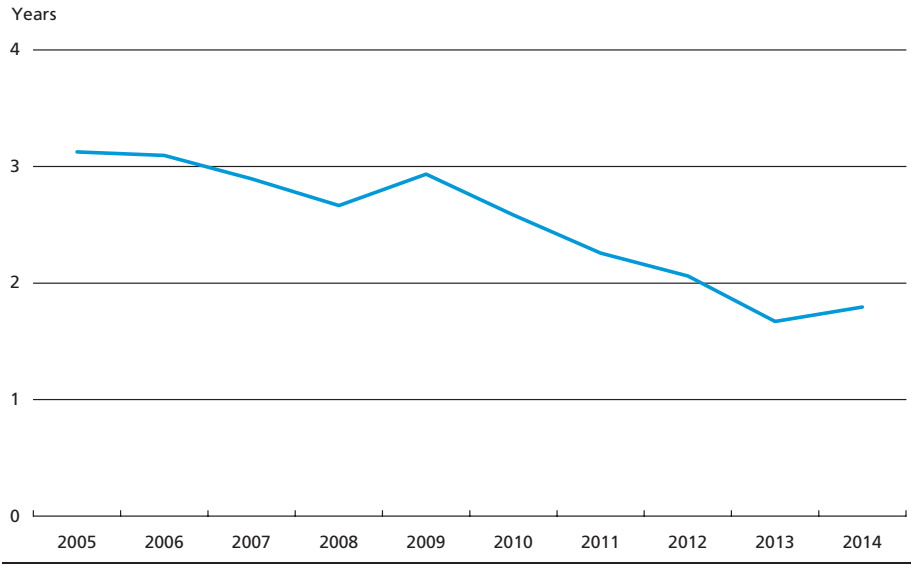
The risk in terms of relative CaR, increases with shorter duration while expected costs decline. Relative CaR increases in the period, to around DKK 5 billion at a duration of 3 years. Relative CaR is generally increasing over the calculation horizon. When viewed *conditionally* on the development in interest rates up to the year in question, the risk is around DKK 1.5 billion per year.

If the duration is reduced by transacting interest-rate swaps from fixed to floating interest rates, the interest-rate fixing increases since a larger proportion of the debt is exposed to the current development in interest rates. For instance, lowering the duration from 3 years to 2 years will increase the level of interest-rate fixing by DKK 50 billion.

Based on the analysis of the trade-off between interest-rate risk and costs, it was decided to maintain the strategic benchmark for duration at 3 years ± 0.5 years in 2005. The decision to maintain the duration was supported by the current historically low level of interest rates.

The "real" interest-rate risk of the central government can be expressed as the interest-rate fixing as a ratio of GDP. If the interest-rate fixing as a ratio of the Ministry of Finance's projection of GDP is kept constant for the next 10 years, this is equivalent to a shortening of duration from 3 years to 2 years, cf. Chart 6.3.3. Reducing the duration will be consistent with the central government assuming a greater risk in step with an increase in GDP.

DURATION AT CONSTANT INTEREST-RATE FIXING RELATIVE TO GDP, 2005-2014 Chart 6.3.3



EXCHANGE-RATE RISK 6.4

Foreign borrowing mainly takes place to refinance debt raised to maintain the foreign-exchange reserve. This foreign debt is exposed exclusively in euro, which entails a low exchange-rate risk due to Denmark's fixed-exchange-rate policy vis-à-vis the euro. Moreover, the foreign-exchange reserve is predominantly placed in euro.

A minor share of the foreign debt is in US dollars as a result of re-lending to Danish Ship Finance. The central government is not exposed to fluctuations in the dollar rate since the dollar-denominated debt matches the government's re-lending assets.

CREDIT RISK 6.5

Credit risk is the risk of a financial loss as a consequence of a counterparty's default on its payment obligations. Interest-rate and currency swaps entail credit risk for the central government. The credit risk arises because the market value of a swap may develop to the advantage of the central government during the lifetime of the swap. When a swap is initiated, its market value is normally zero. Over time, the development in interest rates and exchange rates will imply that the market value may become both positive and negative for the central government. A swap with a positive market value is an asset for the central government

CENTRAL-GOVERNMENT CREDIT MANAGEMENT Box 6.3

The central government's credit risk is minimised by following a number of credit management principles. The key principles are:

- Counterparties must have high credit ratings
- The credit exposure for a counterparty must be kept within relatively narrow lines
- Swaps are transacted only with counterparties that have signed a unilateral collateral agreement
- Swaps can be terminated if the counterparty's rating falls below a certain level (rating triggers).

The central government's credit exposure on a counterparty is a measure of the expected maximum positive market value of all swaps, less collateral, transacted with the counterparty. This is equivalent to the expected maximum loss to the central government as a consequence of a counterparty's default on its payment obligations. Since counterparties must maintain a high credit rating throughout the lifetime of the swap, the probability of losses resulting from default is kept at a low level. If a counterparty defaults on its payment obligations, the unilateral collateral requirement limits the central government's loss. The collateral agreements entail that counterparties must deposit securities with the central government if the market value of the swap portfolio exceeds a threshold value. This threshold value depends on the credit rating of the counterparty.

and therefore subject to credit risk since the central government is exposed to the swap counterparty's ability to pay. The key principles of the central government's credit management are described in Box 6.3. A more detailed account is found in the Appendices.

In 2004, the central government initiated 51 swaps with a total principal of DKK 17.1 billion, while 16 swaps expired. At end-2004, the number of swaps was 329, with a total principal of DKK 138.8 billion, cf. Table 6.5.1.

CENTRAL-GOVERNMENT SWAP PORTFOLIO, 2002-04, YEAR-END Table 6.5.1

	2002	2003	2004
Number of counterparties	31	29	26
Number of swaps	276	294	329
		DKK billion	
Interest-rate swaps, Danish kroner	37.0	43.6	59.7
Interest-rate swaps, other currencies	51.9	52.7	47.4
Currency swaps, DKK-EUR	16.2	16.2	16.2
Currency swaps, DKK-USD[1]	-	-	0.5
Currency swaps, other	39.9	24.1	14.8
Structured swaps	1.7	1.6	0.2
Principal, total	146.8	138.2	138.8

[1] In connection with re-lending to Danish Ship Finance.

EXCHANGE-RATE EXPOSURE OF THE SWAP PORTFOLIO TO USD, YEAR-END Table 6.5.2

DKK billion	2001	2002	2003	2004
Change in market value on appreciation of USD vis-à-vis DKK by 1 per cent	0.49	0.32	0.18	0.11

The market value of the swap portfolio

The development in the market value of the central government's swaps primarily reflects fluctuations in the dollar exchange rate and the level of interest rates. The market value, and thus the credit exposure, increases when the dollar appreciates and/or interest rates fall. The reason is that the central government mainly receives dollars in currency swaps and that interest-rate swaps are typically used to restructure debt from long-term to short-term interest rates. As the foreign borrowing strategy since 2002 has focused on euro-denominated loans, the central government has a smaller portfolio of currency swaps exposed in dollars than previously. Consequently, fluctuations in the dollar rate do not affect the market value of the swap portfolio to the same extent as before, cf. Table 6.5.2.

In connection with re-lending to Danish Ship Finance, the central government transacts currency swaps from kroner to dollars. Unlike before, the central government will have to make payments in dollars on these swaps. Consequently, an appreciating dollar will reduce the market value of the swaps.

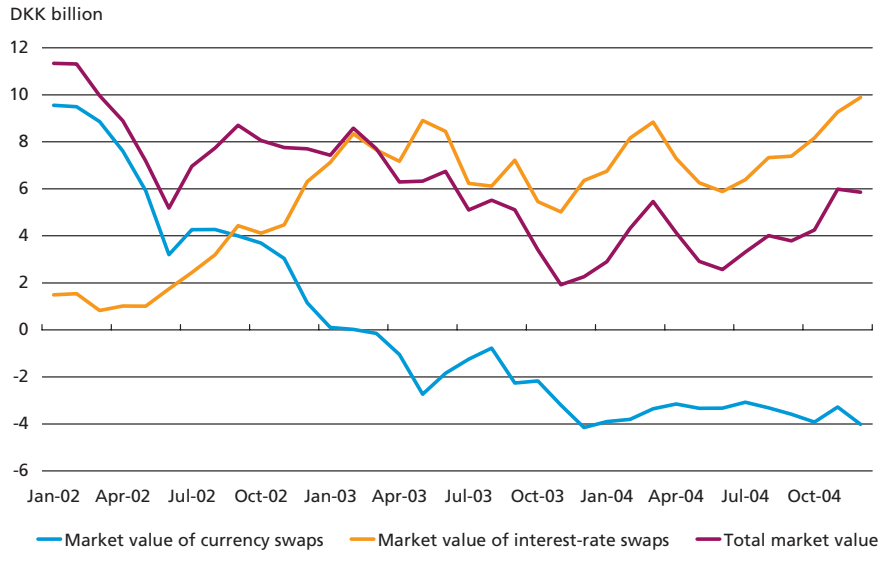
The market value of the central government's swap portfolio decreased significantly in the period 2002-03 due to the falling dollar exchange rate, which more than offset the effect of falling interest rates, cf. Chart 6.5.1. In 2004, the market value of the swap portfolio rose to DKK 5.9 billion, cf. Table 6.5.3. The reason was that a number of currency swaps with a negative market value expired and that the value of the central government's interest-rate swaps increased in view of the falling level of interest rates.

Credit exposure on the swap portfolio

The credit exposure on the swap portfolio is calculated on the basis of the current market value of the portfolio, the value of pledged collateral and a supplement to take account of potential future fluctuations in the market value.

New swaps are transacted only with counterparties who have signed a unilateral collateral agreement. In 2004, the credit exposure on the swap portfolio rose by DKK 0.4 billion to DKK 5.9 billion, cf. Table 6.5.4. This is attributable to an increase in the current exposure by almost DKK 3 bil-

MARKET VALUE OF THE CENTRAL-GOVERNMENT SWAP PORTFOLIO, 2002-04 Chart 6.5.1



lion, which was only partly offset by a small decrease in the potential exposure and an increase by DKK 2 billion in the pledged collateral.

At year-end, the central government had signed unilateral collateral agreements with 22 counterparties. Swaps transacted with these counterparties account for 96 per cent of the total swap portfolio in terms of swap principals, cf. Table 6.5.5.

The proportion of the swap principal covered by collateral agreements was 100 per cent for three of the four lowest rating classes, A-, A+ and AA, and 95 per cent for the AA- rating class. For the two highest rating classes, AAA and AA+, the proportion covered is somewhat lower, but

MARKET VALUE (NET) OF THE SWAP PORTFOLIO, 2002-04, YEAR-END Table 6.5.3

Mia.kr.	2002	2003	2004
Interest-rate swaps, Danish kroner	3.8	4.0	5.6
Interest-rate swaps, other currencies	2.5	2.4	4.3
Currency swaps, DKK-EUR	-0.0	-0.0	-0.0
Currency swaps, DKK-USD[1]	-	-	-0.0
Currency swaps, other	1.2	-4.2	-3.9
Structured swaps	0.2	0.1	0.0
Total	7.7	2.3	5.9

Note: The net market value of the swap portfolio is the sum of market values of the individual swaps. When the central government's credit exposure is calculated, the starting point is the net market value of the central-government swaps calculated for each swap counterparty. The reason is that netting is applied in the event of counterparty default so that swaps with negative market values are offset against swaps with positive market values in the calculation of the final claim on the default estate.

[1] In connection with re-lending to Danish Ship Finance.

CREDIT QUALITY OF THE SWAP PORTFOLIO, 2002-04, YEAR-END — Table 6.5.4

Rating	2002		2003		2004	
	Number of counter-parties	Credit exposure (DKK billion)	Number of counter-parties	Credit exposure (DKK billion)	Number of counter-parties	Credit exposure (DKK billion)
AAA	7	1.0	6	0.8	6	1.2
AA+	3	1.8	3	1.1	3	0.8
AA	2	0.7	5	1.4	5	1.8
AA-	9	2.3	7	1.2	6	1.2
A+	10	2.4	7	1.0	5	1.0
A	-	-	-	-	-	-
A-	-	-	1	0.0	1	0.0
Total	31	8.2	29	5.5	26	5.9
Of which:						
- Current market value		8.6		6.2		9.2
- Collateral pledged		-4.4		-3.4		-5.6
- Potential exposure		4.0		2.8		2.4

Note: The credit exposure comprises both the current credit exposure, equivalent to positive market values calculated in net terms for each swap counterparty, and the potential credit exposure, which is an estimate of future positive market values. Pledged collateral is deducted from the calculation. A more detailed description of the calculation method for credit exposure is found in *Danish Government Borrowing and Debt*, 2000, Appendix 11.B.

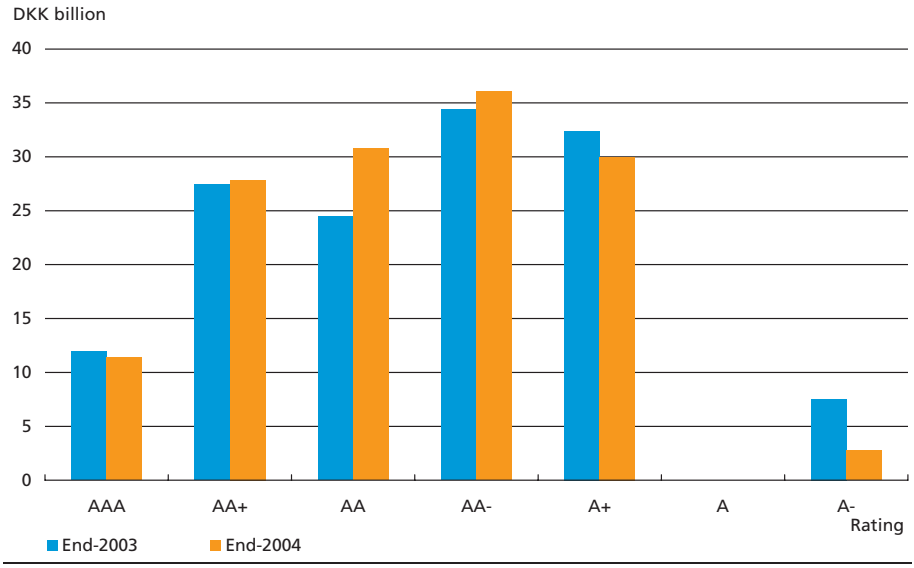
on the other hand credit risk is limited in view of the high credit ratings of these counterparties. The proportion of the swap portfolio not covered by collateral agreements decreases as old swaps with counterparties who have not signed collateral agreements expire.

There were no significant shifts in the ratings of the counterparties from 2003 to 2004, cf. Chart 6.5.2. The reduction in the lowest rating class, A-, in which the central government has only one counterparty, is attributable to the expiry of two large currency swaps. The increase in the AA rating class reflects that more swaps have been transacted with counterparties with this rating, as well as upgrading of a counterparty.

COVERAGE OF SWAP PORTFOLIO BY COLLATERAL AGREEMENTS, DISTRIBUTED BY RATING, END-2004 — Table 6.5.5

Rating	Number of counter-parties	Principal, DKK billion	Percentage with collateral agreement	Credit exposure, DKK billion
AAA	6	11	78	1.2
AA+	3	28	94	0.8
AA	5	31	100	1.8
AA-	6	36	95	1.2
A+	5	30	100	1.0
A-	1	3	100	0.0
Total	26	139	96	5.9

PRINCIPAL OF THE SWAP PORTFOLIO BY COUNTERPARTY RATINGS Chart 6.5.2



OPERATIONAL RISK 6.6

The Bank for International Settlements (BIS) has defined operational risk as "…the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events".[1]

Operational risk is minimised by applying a number of different measures. Government Debt Management is divided into front, middle and back offices with separate functions. A clear division of functions reduces operational risk and facilitates internal control. Moreover, clear procedures have been defined for the individual tasks, and only standardised and well-known financial instruments are used. A "Second Site" contingency plan has been prepared so that key Government Debt Management operations can continue in the event of major business disruption.

Legal risk is minimised by using standardised contracts exclusively.

[1] *Sound Practices for the Management and Supervision of Operational Risk*, February 2003, Basel Committee on Banking Supervision.

CHAPTER 7

Government Debt and Interest Costs

SUMMARY 7.1

The central-government debt decreased by DKK 22.1 billion in 2004 to DKK 493.6 billion at year-end. Interest costs amounted to DKK 25.1 billion, equivalent to a decline of DKK 1.9 billion from 2003.

According to the Ministry of Finance estimate, the general-government surplus was DKK 21.9 billion in 2004, corresponding to 1.5 per cent of GDP. The gross general-government debt (EMU debt) is estimated at DKK 607.4 billion at end-2004, equivalent to 41.6 per cent of GDP.

At the end of 2004, non-resident investors held 27 per cent of Danish government securities. Adjusted for the portfolio of government securities held by the Social Pension Fund (SPF), the non-resident ownership share was 33 per cent. Non-resident ownership of Danish Treasury bills increased throughout 2004 to 47 per cent at the close of the year.

GOVERNMENT DEBT AND INTEREST COSTS 7.2

The central-government debt is compiled as the total domestic and foreign government debt less the balance of the central government's account with Danmarks Nationalbank and the assets of the Social Pension Fund and – as from 2005 – the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund) and the High-Technology Foundation. The debt is compiled at nominal value, cf. Box 7.1.

At end-2004, the central-government debt compiled at nominal value was DKK 493.6 billion, equivalent to a decrease by DKK 22.1 billion from the previous year, cf. Table 7.2.1.

Central-government debt as a ratio of GDP has been declining since 1995 and was 34 per cent at end-2004, cf. Chart 7.2.1. Interest costs on the government debt as a percentage of GDP have also been falling since 1995 and was 1.7 per cent of GDP in 2004.

Interest costs totalled DKK 25.1 billion in 2004, cf. Table 7.2.2, down by DKK 1.9 billion from 2003. This is attributable mainly to lower interest costs on the domestic debt.

COMPILATION OF CENTRAL-GOVERNMENT DEBT AND INTEREST COSTS Box 7.1

The central-government debt is compiled as the nominal value of domestic and foreign debt less the balance of the central government's account with Danmarks Nationalbank and the assets of the Social Pension Fund (SPF) and – as from 2005 – the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund) and the High-Technology Foundation. The distribution on respectively domestic and foreign borrowing is based on currency. Domestic debt is exposed in kroner, while foreign debt is exposed in foreign exchange.

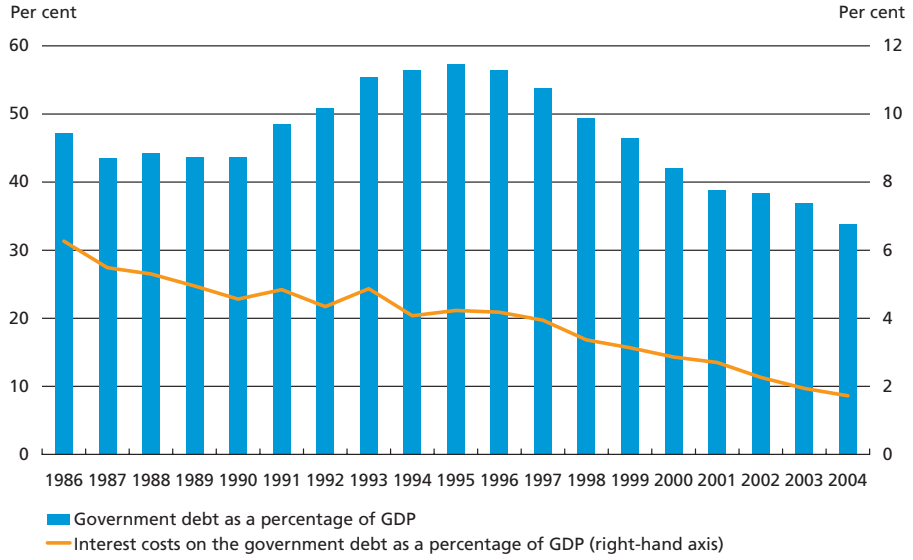
The compilation of the central-government debt only includes liabilities related to re-lending, i.e. government issues to finance re-lending, whereas the central government's claims on entities that receive re-lending are not included. The central-government debt adjusted for re-lending is the central-government debt less outstanding re-lending to Ørestadsselskabet I/S, A/S Øresund, A/S Storebælt and Danish Ship Finance.

The change in the central-government debt corresponds to the net borrowing at nominal value minus the change in the assets of SPF, the Financing Fund and the High-Technology Foundation. Net borrowing at nominal value consists of borrowing at market value with addition of value adjustments in connection with issuance and buy-backs.

Interest costs related to the central-government debt comprise interest, distributed capital losses on issue and realised exchange-rate losses. Interest on government issues to finance re-lending is thus included in interest costs. On the other hand, interest income to the central government in connection with re-lending is not included in the compilation of interest costs. Both interest costs and interest income on re-lending are included in the compilation of the central government's net financing requirement.

Interest and capital losses on issue are accrued on the basis of an earnings principle. The interest costs are compiled as a ratio of the interest credited for the year, equivalent to the number of days that a loan has run in that year. The capital loss on issue is the difference between the nominal value and the market value on issue, and is distributed linearly over the term of the loan.

GOVERNMENT DEBT AND INTEREST COSTS, 1986-2004 Chart 7.2.1



NET BORROWING AND CHANGES IN THE CENTRAL-GOVERNMENT DEBT, 2001-04 Table 7.2.1

DKK billion	2001	2002	2003	2004
Net borrowing				
Domestic borrowing	-14.0	8.6	-13.6	-10.4
Foreign borrowing[1]	-1.4	-0.1	0.1	-0.1
Drawing on the central government's account at Danmarks Nationalbank	-8.3	-6.3	5.5	-17.6
Net borrowing at market value	-23.7	2.2	-8.0	-28.0
Capital losses				
Domestic capital losses on issue[2]	1.0	5.3	-0.4	4.0
Foreign capital losses on issue[2]	-0.1	0.0	0.1	0.1
Total capital losses	0.9	5.4	-0.3	4.1
Net borrowing at nominal value	-22.7	7.5	-8.3	-23.9
Balance-sheet items, year-end, nominal value				
Domestic debt	611.0	624.9	611.0	604.6
Foreign debt	83.8	83.7	83.9	83.9
Central government's account at Danmarks Nationalbank[3]	-39.6	-46.0	-40.5	-58.0
The Social Pension Fund[4]	-141.1	-141.4	-138.7	-136.9
Government debt at nominal value	514.1	521.3	515.7	493.6
Outstanding re-lending[5]	5.8	12.5	14.7	19.1
Government debt adjusted for re-lending	508.3	508.8	501.0	474.6

Source: Central-government accounts 2001, 2002 and 2003. For 2004 provisional figures from central-government accounts.

[1] Including exchange-rate adjustments.

[2] Including capital losses on buy-backs.

[3] For 2004, the central government's account is compiled in accordance with the monthly balance sheet of Danmarks Nationalbank.

[4] The Social Pension Fund's portfolio of index-linked bonds is compiled at indexed value.

[5] Re-lending to Ørestadsselskabet I/S, A/S Storebælt, A/S Øresund and from 2004 Danish Ship Finance.

INTEREST COSTS ON THE CENTRAL-GOVERNMENT DEBT, 2001-04 Table 7.2.2

DKK billion	2001	2002	2003	2004
Domestic debt				
Interest	39.8	37.4	34.7	32.5
Distributed capital losses on issue	2.7	2.3	1.6	1.0
Interest costs, total	42.5	39.8	36.3	33.5
Foreign debt				
Interest	4.0	3.2	2.0	1.7
Realised exchange-rate losses on redemptions	0.8	-0.7	0.0	-0.1
Distributed capital losses on issue	0.0	-0.0	0.0	0.0
Interest costs, total	4.7	2.6	2.1	1.7
Interest concerning				
Central government's account at Danmarks Nationalbank	-2.2	-1.9	-1.7	-1.7
The Social Pension Fund	-9.3	-9.6	-9.6	-8.3
Total	35.8	30.8	27.0	25.1

Note: Interest income from re-lending is not included in the compilation of interest costs.
Source: Central-government accounts 2001, 2002 and 2003. For 2004 provisional figures from central-government accounts.

GENERAL-GOVERNMENT BUDGET BALANCE AND DEBT, 2001-05 Table 7.3.1

	2001	2002	2003	2004	2005
General-government balance in DKK billion	37.5	21.2	14.6	21.9	25.5
General-government balance as a percentage of GDP	2.8	1.6	1.0	1.5	1.7
Gross debt in DKK billion	633.2	642.8	624.8	607.4	590.6
Gross debt as a percentage of GDP	47.8	47.2	44.7	41.6	38.7

Source: *Economic Survey,* December 2004, Ministry of Finance.

THE GROSS GENERAL-GOVERNMENT DEBT (EMU DEBT) 7.3

Besides the central-government debt, the gross general-government debt also includes the local-government debt, etc. The central-government debt accounts for most of the gross debt of the general-government sector.

The gross general-government debt is compiled in accordance with the EU Treaty. The debt is compiled on a gross basis, but the general-government sector may consolidate the debt with claims on itself. This e.g. means that the portfolio of government securities of the Social Pension Fund (SPF) may be deducted from the debt. This is not the case for SPF's portfolio of non-government bonds and the balance of the central government's account with Danmarks Nationalbank.

The European Commission and the Ecofin Council monitor the development in the budgetary situation of the member states in order to assess whether budgetary discipline is maintained. This evaluation is based on the criteria set out in the EU Treaty and in the Stability and Growth Pact. According to the EU Treaty, as a general rule the general-government deficit may not exceed 3 per cent of GDP, and the general-government debt as a general rule may not exceed 60 per cent of GDP. A central obligation of the Stability and Growth Pact is that the member states must aim at budgetary positions "close to balance or in surplus" in the medium term.

At end-2004, the gross general-government debt is estimated at DKK 607.4 billion or 42 per cent of GDP, cf. Table 7.3.1.

OWNERSHIP OF DOMESTIC GOVERNMENT SECURITIES 7.4

At the close of 2004, the non-resident ownership share of domestic government securities was 27 per cent. The ownership share increased in early 2004, but subsequently fell back to the level at end-2003, cf. Table

OWNERSHIP DISTRIBUTION OF DOMESTIC GOVERNMENT SECURITIES, END OF QUARTER

Table 7.4.1

Per cent of nominal outstanding amount	Dec-03	Mar-04	Jun-04	Sep-04	Dec-04
Non-financial corporations	3	3	3	3	3
Financial institutions, including Danmarks Nationalbank	22	23	23	22	21
Insurance companies and pension funds	22	21	20	20	20
General government	23	22	22	22	23
Households, etc.	2	2	2	2	2
Non-residents	27	28	30	30	27
Unallocated	1	1	2	2	4
Total	100	100	100	100	100
Total nominal outstanding amount, DKK billion	627.9	650.9	664.4	681.6	629.7
Total market value, DKK billion	670.1	700.0	699.1	722.6	677.4

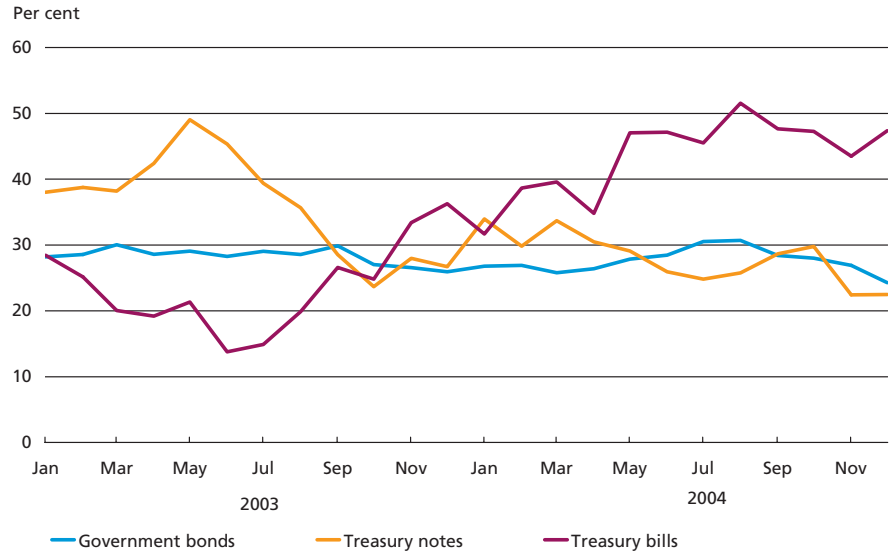
Source: Danmarks Nationalbank, *Securities Statistics*, December 2004.

7.4.1. Adjusted for SPF's portfolio of government securities, the non-resident ownership share of Danish government securities was 33 per cent at the close of 2004.

The non-resident ownership share of Treasury bills increased from 14 per cent in mid-2003 to 47 per cent at the end of 2004, cf. Chart 7.4.1. A significant share of Danish Treasury bills is held by foreign central banks.

FOREIGN OWNERSHIP SHARES AS A PERCENTAGE OF NOMINAL OUTSTANDING AMOUNT, 2003-04

Chart 7.4.1



Source: Danmarks Nationalbank, *Securities statistics*, December 2004.

Special-Topic Section

CHAPTER 8

Issuance of Government Bonds

SUMMARY 8.1

In Denmark, by far the majority of domestic government bonds are issued electronically on tap at MTS Denmark (MTSDk), while foreign issuance takes place via syndication. In other EU member states, it is more common for domestic government securities to be sold at auctions, sometimes combined with syndication or tap sale. There is no one best method of issuance. The various methods used reflect that many factors influence the choice of method, e.g. general market structure and traditions.

The Danish tradition for tap sale in the government bond market reflects experience from the mortgage-credit bond market, which made up the Danish bond market until the mid-1970s. Being a unit under Danmarks Nationalbank, Government Debt Management also has experience as a player in the bond market. So far, sale on tap has functioned satisfactorily, but the choice of method is monitored on an ongoing basis to ensure that the issuance method continues to be appropriate.

When securities are sold on tap, issuance takes place on an ongoing basis over the selected period of sale. Dispersing the sales reduces the risk compared with selling on single days. Particularly in periods of high volatility, it is expedient to be able to smooth sales over a longer period of time.

In practice, tap sale takes place to primary dealers in Danish government bonds on the electronic trading platform, MTSDk. Issuance takes place on an ongoing basis at the current market price quoted by the primary dealers (best bid price). Buy-back of government bonds with remaining maturities exceeding 13 months also takes place on an ongoing basis (buy-back on tap) at current market price (best ask price). Buy-back in government bonds with remaining maturities of less than 13 months takes place in a special sub-segment of MTSDk, where the central government can quote bid prices and volumes.

It is the aim of Government Debt Management that sales activities be neutral in relation to the market. Therefore sales take place at times when there is liquidity in the market. To ensure transparency, the year's

borrowing requirement is published on a regular basis, and information on the total volume of daily transactions is available before the following trading day.

ISSUANCE METHODS 8.2

In many countries, including Denmark, the overall objective of the government debt policy is to cover the central government's financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk. A well-functioning market for issuance of government securities is an important means of meeting this objective. When the primary market is structured to promote transparent and effective price formation at issuance, this creates a basis for achieving the lowest possible financing costs.

The structure of the market for issuance of government bonds also has an impact on the functioning of the secondary market and thus on another element of government debt policy: sustaining an effective secondary market. Effective price formation in the secondary market contributes to creating a market where investors can buy and sell government bonds on an ongoing basis and are interested in doing so. This supports interest at issuance.

The *Guidelines for Public Debt Management*[1] issued by the World Bank and the IMF recommend that issues are transparent, predictable and market-based in order to create the best basis for successful issuance of government securities.

Auction is the most widespread method of issuance in the EU member states. In several countries this is combined with syndication or tap sale, cf. Table 8.2.1. In most countries tap sale is used in special cases as a supplement to normal issuance via auctions. In Denmark auctions are used when opening government bond series, while tap sale is applied to subsequent issuance.[2] The three issuance methods are described in more detail in Box 8.1.

The use of syndication has developed over time. After the introduction of the euro, a number of relatively small euro area member states began to use syndication, whereby a consortium of banks acts as intermediaries when benchmark bonds are issued. An advantage of syndication is that it stimulates investor interest in the issue. Due to the large number of auctions in the euro bond market, this may be necessary in connection with issuances of small countries. In addition, syndicated issuance creates

[1] See http://treasury.worldbank.org.
[2] In addition, Treasury bills are sold at monthly auctions. This Chapter focuses solely on issuance of medium- and long-term securities.

ISSUANCE METHODS Box 8.1

Auctions

Auctions are often announced well in advance via an auction calendar. This contributes to creating awareness and thereby greater interest in the issue. Participation at the auction is typically limited to a group of banks – the primary dealers. End-investors participate in the auction via the existing group of participants, often subject to a small fee.

The development of electronic trading platforms in recent years has probably made it less attractive for end-investors to participate in the auctions. Via the electronic trading systems, end-investors can buy the same securities at known (tradable) prices, i.e. without incurring a market risk in periods when auctions are held. Since the primary dealers offer the securities on the electronic platforms within given volumes after the auction, a certain volume in the secondary market is also guaranteed.

The flexibility of auctions is limited by the announcements in the auction calendars. Consequently, there is a risk that an auction is held on a day when investor interest is low, due to e.g. uncertainty in the market.

Syndication

When issuance of government securities is syndicated, the government debt management office receives bids from investors via a group (syndicate) of banks that are responsible for "book-building". The final price is based on demand. Syndication increases investors' awareness of the issue, ensures targeted sales to investors and supports price formation for non-standardised products.

To target sales to investors, the syndicate markets the product to a broad group of investors at different geographical locations, in different sectors, etc. If a large proportion of the outstanding volume is placed with investors that are less inclined to buy and sell the securities, this may lead to a certain degree of sluggishness in the subsequent secondary trading. To reach as broad an investor group as possible, a syndicate comprising a group of banks that complement each other's investor relations is preferred.

The banks charge a fee for participating in the syndicate, typically calculated as a fixed payment. The advantages of syndication should therefore be viewed against the circumstance that the total (direct) costs of issuance are higher than for other methods of issuance.

Tap sale

In current tap sales, issuers are less exposed to the market risk on single days. Particularly in periods of high volatility, it is appropriate to be able to smooth sales over a longer period.

The ongoing presence of the government debt management office in the market also gives primary dealers an extra incentive to be active, which augments the liquidity of the market. At the same time, the current sales contribute to ensuring a continuous supply of securities so that on-the-run government securities are less likely to be affected by a shortfall and subsequent distorted price formation.

A major prerequisite to satisfactory tap sale is adequate market transparency so that the market participants are informed of the overall strategy and so that information on the borrowing requirement is published on an ongoing basis. In addition, constant monitoring of and presence in the market are required. Staffing requirements are therefore higher than for auctions.

OVERVIEW OF ISSUANCE METHODS — Table 8.2.1

	Auctions	Syndication of: Index-linked securities	Syndication of: Benchmark securities	Tap sale
Belgium	✓		✓	
Denmark	✓			✓
UK	✓			✓
Finland	✓		✓	
France	✓	✓		
Greece	✓	✓	✓	
Netherlands	✓		✓[1]	
Ireland	✓			✓
Italy	✓	✓	✓	
Portugal	✓		✓	
Spain	✓		✓	
Sweden	✓			
Germany	✓			✓
Austria	✓		✓	✓

Note: The overview covers issuance of domestic medium- and long-term bonds (maturities exceeding 1 year).
Source: Government debt management offices' websites.
[1] Dutch Direct Auctions, where ordinary auction procedures (Dutch auctions) are combined with book-building via the primary dealers.

a good basis for targeting issues at a broader group of investors, since it is the task of the syndicating banks to market the issue to a broad investor group. Syndication is primarily used when opening new securities series in order to attract more interest in the market, while subsequent issues are typically transacted via ordinary auctions.

In recent years, some countries (France, Greece and Italy) have begun to use syndication when issuing index-linked bonds, and Italy and Spain have done so when issuing bonds with very long maturities. Both products account for only a small proportion of the euro bond market and can be difficult to price. The syndicating banks' contacts with potential investors prior to issuance support price formation. As with benchmark issues, other advantages of syndication are that it stimulates investor interest in the issue and provides for greater influence on the investor mix.

Denmark does not use syndication for domestic issuance, but issues a syndicated euro-denominated loan every year.

ISSUANCE AND BUY-BACK OF GOVERNMENT SECURITIES IN DENMARK — 8.3

The primary consideration when planning sales of Danish government securities for a given year is for the sale of government securities to match the government borrowing requirement. Based on the general

yearly strategy, the monthly limits are determined at meetings between Government Debt Management's middle and front offices. The latter handles the practical aspects of the sales.

Electronic issuance and buy-back via MTSDk

Since November 2003, Danish government securities have been issued on the electronic interdealer market, MTSDk. In this connection, a number of banks have concluded a primary dealer agreement with Government Debt Management.[1] The key obligation of the banks is to ensure effective market-making, i.e. to quote two-way prices on an ongoing basis within predefined maximum spreads and minimum amounts in government bonds of the bullet loan type with maturities exceeding 13 months.

Government bonds are sold on tap at MTSDk with the primary dealers as counterparties. Government Debt Management sells securities on an ongoing basis at the current market price (best bid price), which is quoted by the primary dealers, and is thus a market player on the same terms as other market takers. Market-making ensures that there are tradable prices on the screen for most of the market's opening hours.[2]

New government securities series are opened in a special sub-segment at MTSDk where the central government can enter ask prices and volumes. The opening is announced about two weeks in advance, and information is provided on the bond (type, coupon, maturity, interest payment date, ID code, etc.). On the opening day, the initially offered volume and a maximum limit for sale on that day are announced. The market-making obligation of the primary dealers comes into force when the volume issued in the new bond reaches DKK 5 billion, so that the aim is to sell at least this volume on the opening day.[3]

In the same way, the central government on an ongoing basis buys back securities at MTSDk (buy-back on tap). Buy-back in government bonds with market-making takes place at the best ask price in the market. In addition, the central government buys securities for the Social Pension Fund's portfolio, and as from 2005 for the portfolios of the High-Technology Foundation and the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund).

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1 The primary dealer contract is available at Danmarks Nationalbank's website, www.nationalbanken.dk, under Government debt.

2 For further information on the transparency and liquidity of the Danish government securities market, see Danmarks Nationalbank, *Monetary Review*, 2nd Quarter 2004, Liquidity and Transparency in the Danish Government Bond Market.

3 For a more detailed review of MTS Denmark and the primary dealer system for Danish government securities, see *Danish Government Borrowing and Debt*, 2003, Chapter 9.

Market-making does not apply to government bonds with a remaining maturity of less than 13 months. Buy-back in these securities takes place in a special sub-segment where the central government can enter bid prices and volumes at all times. Primary dealers can also enter their ask prices and volumes.

Sale of government securities and buy-back in practice

Sales are spread over the year within fixed limits, but are not evenly distributed on all days of the year, cf. Chart 8.3.1. This is partly because, as stated above, a high initial sales volume is aimed at when the series opens. Moreover, a relatively large proportion of sales tends to take place in the first part of the year in order to meet the central-government funding objective.

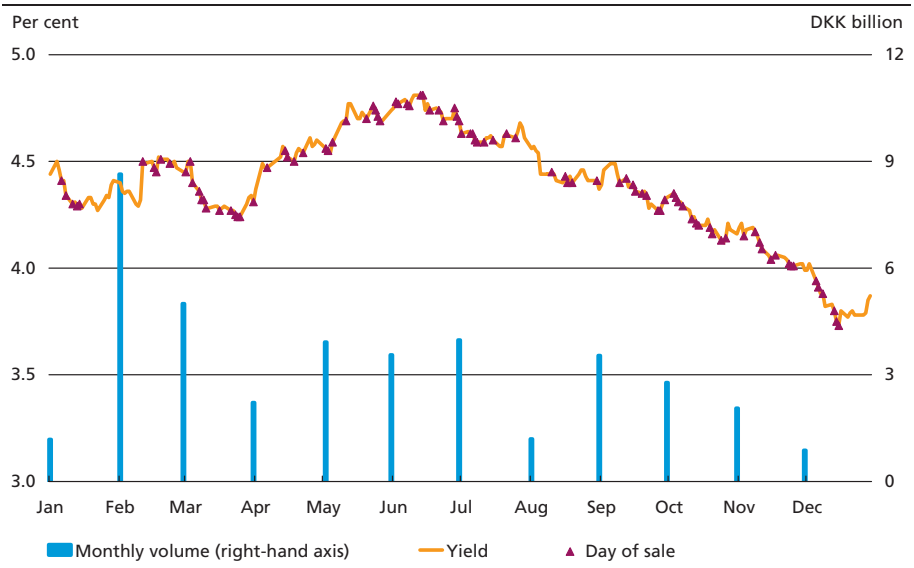
When sales are spread over the month and over the day, the aim is to ensure neutrality in the market and to avoid reinforcing a given market trend. This should be seen against the background of Government Debt Management's efforts to support an effective market and is therefore included as a declaration of intent in the primary dealer contract. Among other things, this means that the central government does not sell in an uncertain market where such sales might contribute to changing the market's course. Market trends are assessed in absolute terms as well as in relation to euro area member states, particularly Germany.

To avoid influencing the market, sales generally take place when there is considerable underlying interest. Indications to this effect are: the spread (the difference between the best bid and ask prices); the depth of the market (the volumes traded at the best bid and ask prices); and the yield spread to Germany. All other things being equal, the narrower the spread, the greater the market depth; and the narrower the yield spread to Germany, the greater the underlying interest is deemed to be.

To illustrate this, Chart 8.3.2. shows the average spread compared to the actual spread at the time of sale in 2004. The spread is generally narrower at the time of sale than on average. As stated above, this reflects that sale takes place at times of great underlying interest in the market.

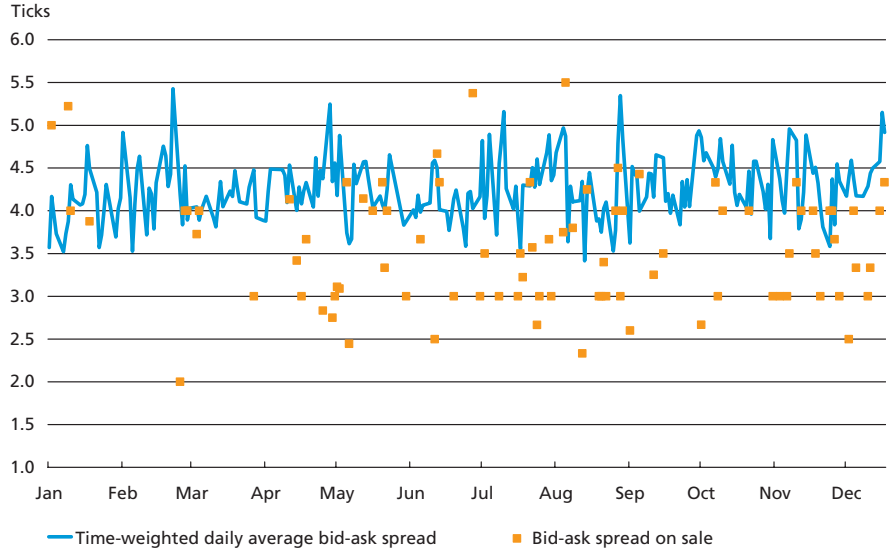
Buy-back takes place on an ongoing basis over the year, cf. Chart 8.3.3. Buy-back in government securities with a remaining maturity of less than 13 months is used to smooth the balance of the central government's account with Danmarks Nationalbank. Buy-back in government securities with a remaining maturity exceeding 13 months is primarily used to manage the interest-rate risk in order to smooth the central government's redemption profile and to maintain liquid on-the-run issues.

ISSUANCE AND YIELD TO MATURITY IN THE 10-YEAR ON-THE-RUN ISSUE, 2004 Chart 8.3.1



Note: In February 2004, a new on-the-run issue was opened in the 10-year segment, which explains the relatively high volume in this month. The pattern is similar for the 2- and 5-year on-the-run issues.

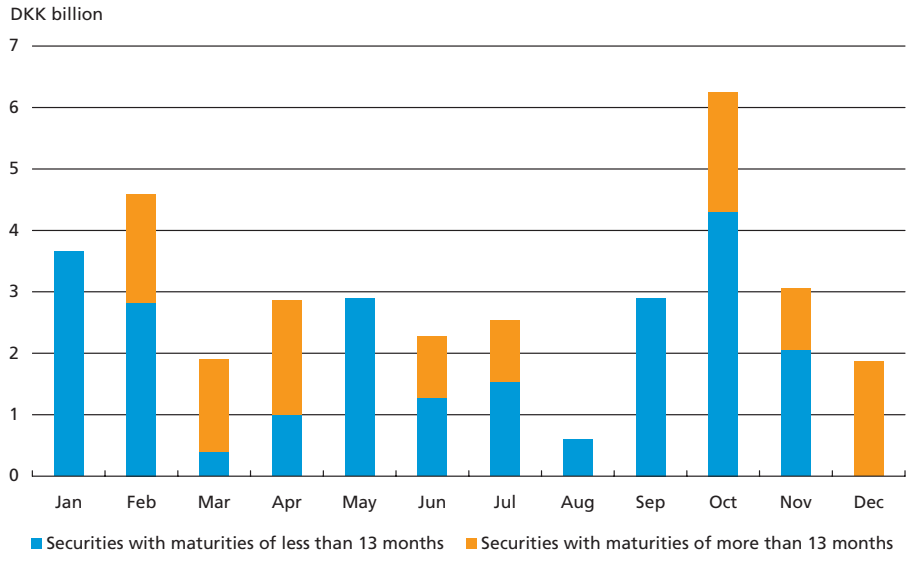
BID-ASK SPREAD ON SALE IN THE 10-YEAR ON-THE-RUN ISSUE, 2004 Chart 8.3.2



Note: The curve shows the time-weighted daily average bid-ask spread. The bid-ask spread on sale shows the actual bid-ask spread at the time that the sale was transacted. As data is generated via an algorithm, minor deviations from the exact time of the sale may occur. If more than one transaction took place on the same day, the Chart shows a simple average.

Source: MTS Denmark.

BUY-BACKS IN 2004, NOMINAL VALUE Chart 8.3.3



Transparency and information

After the transition to electronic issuance at MTSDk, pre-trading prices are available on an ongoing basis. In the course of the trading day, the primary dealers can consult their monitors to see the (tradable) prices at which the central government can execute trades. For a charge, international news agencies make the information available to other investors on a real-time basis. Finally, MTSDk provides free access to the same information with a 15-minute time lag. The general access to pre-trading information contributes to transparency.

In addition, Government Debt Management provides information on sales strategy, borrowing requirement, opening of new securities, etc. For a more detailed review of the ongoing information, see the Appendices to this publication.

IMPLICATIONS OF TAP SALE 8.4

Below, the issuance of government bonds by Government Debt Management will be assessed from two aspects: first the implications for risk and costs are assessed, and thereafter the consequences in terms of liquidity and pricing.

Comparison of risk and costs

Tap sale differs from other issuance methods in that sales are dispersed over the chosen period. An even distribution of sales reduces the risk of selling on days with less favourable market conditions. It will not gener-

ally be possible in practice to disperse sales completely evenly on all trading days within the period selected since the activities should be neutral in relation to the market, cf. Section 8.3.

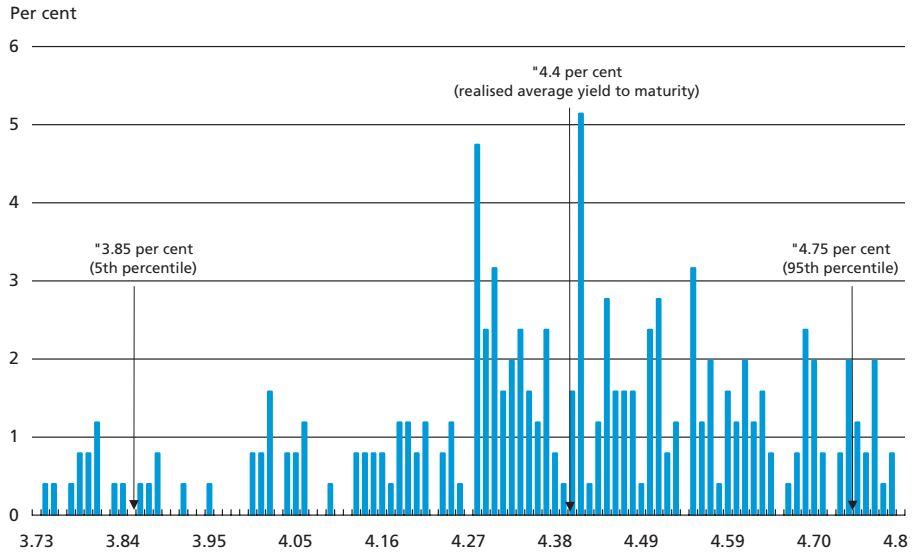
To assess implications for risk and costs, the average realised yield to maturity achieved via tap sale is compared with the distribution of the daily yields to maturity over the full year, cf. Chart 8.4.1.

The average realised yield to maturity on, or the cost of, tap sale in the 10-year on-the-run issue was 4.40 per cent in 2004. This observation is compared with the shape of the distribution, indicated by a lower 5th percentile and an upper 95th percentile of respectively 3.85 and 4.75 per cent. The latter illustrates that if issuance in the 10-year maturity segment takes place at one sale, there is a 5 per cent probability that the yield to maturity may exceed 4.75 per cent.

If a sales strategy is implemented with greater focus on one sale, issuance will be more dependent on the shape of the distribution. In periods of great uncertainty, the (5th and 95th) percentiles will be further shifted from the mean value. This reflects a relatively higher risk when selling on fewer days compared to current sales over the entire period. However, it is possible to buy derivative instruments in the financial markets to handle the risk of having to sell on specific future days.

The average realised yields to maturity for issues in the 2-, 5- and 10-year segments for 2003 and 2004 are compared with the distribution of the observed average yields to maturity, cf. Table 8.4.1. One result is

HISTOGRAM OF YIELD TO MATURITY IN THE 10-YEAR SEGMENT IN 2004 Chart 8.4.1



Source: Danmarks Nationalbank and own calculations.

ISSUANCE COSTS AND RISK — Table 8.4.1

Segment	2-year	5-year	10-year
2003			
Realised average yield to maturity on tap sale	2.77	3.48	4.31
Observed average yield to maturity	2.82	3.56	4.31
5th percentile	2.37	3.05	3.88
95th percentile	3.11	3.87	4.59
2004			
Realised average yield to maturity on tap sale	2.78	3.72	4.40
Observed average yield to maturity	2.76	3.63	4.38
5th percentile	2.45	3.09	3.85
95th percentile	3.05	4.14	4.75

Note: In 2003, the following on-the-run issues are included in the three segments: 2-year segment: 4 per cent bullet loans 2004 and 4 per cent bullet loans 2005; 5-year segment: 4 per cent bullet loans 2008; 10-year segment: 5 per cent bullet loans 2013. In 2004, the following on-the-run issues are included in the three segments: 2-year segment: 4 per cent bullet loans 2005 and 3 per cent bullet loans 2006; 5-year segment: 4 per cent bullet loans 2008 and 4 per cent bullet loans 2010; and 10-year segment: 5 per cent bullet loans 2013 and 4 per cent bullet loans 2015.

Source: Danmarks Nationalbank and own calculations.

that the realised average yields to maturity achieved through tap sales for all on-the-run issues are in line with the observed average yields to maturity.

Liquidity and pricing

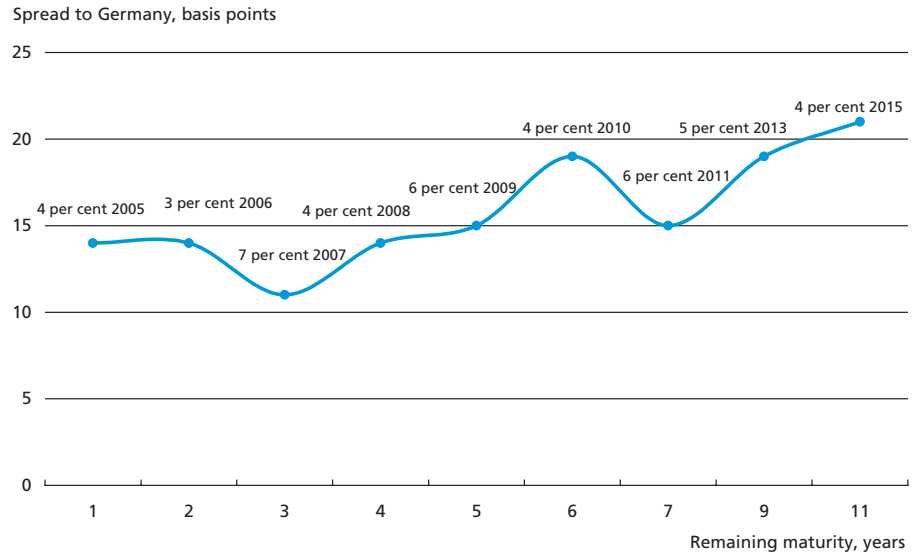
The method of issuance affects secondary trading. The build-up of outstanding amounts in a series is dependent on, among other things, the issuance method. In connection with tap sale, the outstanding amount is built up gradually as sales take place. In auctions, the outstanding amount is increased on a discretionary basis.

In a Danish context, the aim is to achieve an adequate outstanding amount at the first opening auction. This is a prerequisite for a well-functioning market in the first days after opening. As stated previously, the market-making obligation of the primary dealers comes into force when the volume in the newly-opened bond reaches DKK 5 billion. Subsequent tap sale takes place with a view to ensuring continued liquidity in the bond.

The planning of tap sales in Denmark entails a current supply, which prevents a shortfall, all other things being equal. To supplement tap sale, the primary dealers have access to the government's lending facility, in addition to the private market for securities lending. The fee is matched to the outstanding amount in the bond, so that an outstanding amount of less than DKK 20 billion entails a cost of 0.2 per cent, while the cost for an amount exceeding DKK 20 billion is 0.4 per cent.

In both the opening sale and tap sales, issuance takes place on an ongoing basis at the current market prices. To investigate price formation in

YIELD SPREAD BETWEEN DANISH GOVERNMENT SECURITIES AND THE GERMAN YIELD CURVE, 2004 Chart 8.4.2



Note: The yield differential is adjusted for differences in maturity and duration and is calculated as a simple average of daily observations for 2004.
Source: Bloomberg and own calculations.

the on-the-run issues, the average yield spread to the German curve in 2004 is compared with the remaining maturity of the government securities, cf. Chart 8.4.2.

Throughout most of 2004, the on-the-run issues in the 2- and 10-year segments were respectively 3 per cent bullet loans 2006 and 4 per cent bullet loans 2015. It is seen that on average they were priced at the level of the nearest off-the-run government securities. For most of 2004, 4 per cent bullet loans 2010 were the on-the-run issue in the 5-year segment. This bond had a wider spread to the German curve than the nearest off-the-run government securities.

In certain periods, the other on-the-run issues were also priced with a wider spread to the German curve. This phenomenon may be attributed to implicit market expectations of the future supply via tap sale being discounted in the market participants' pricing of the government securities.

CHAPTER 9

Loan Guarantees and Re-Lending

SUMMARY 9.1

There is increasing international focus on government guarantees, e.g. under the auspices of the IMF, the World Bank and the OECD. Prompted by the international work in the field of guarantees, the Ministry of Finance and Government Debt Management cooperate on reviewing the Danish model of loan guarantees and re-lending.[1] Government Debt Management, acting on behalf of the Ministry of Finance, manages most of the government-guaranteed loans and re-lending.

Government loan guarantees and re-lending are rooted in the political intention to support the financing of certain projects. In Denmark the major part of government loan guarantees and re-lending is issued to government-owned companies involved in large infrastructure projects.

By issuing a loan guarantee, the government guarantees that the lenders do not incur losses on their loans to the companies. In the case of government re-lending, the companies raise loans directly from the government. Both options entail lower financing costs than for non-guaranteed private borrowing. This is to the government's advantage in view of its ownership of the companies, but, at the same time, it often reflects a correspondingly higher risk.

Loan guarantees and re-lending expose governments to potential future losses and consequential budget deterioration. Focus of the international work in the field of guarantees and re-lending is therefore on their treatment in relation to government budgets and debt, as well as on how they are handled in relation to government risk management.

This chapter describes loan guarantees and re-lending; outlines a series of key recommendations from the IMF, the World Bank and the OECD; and rounds off by presenting a review of Danish practice.

[1] This Chapter is based on the cooperation between the Ministry of Finance and Government Debt Management.

LOAN GUARANTEES AND RE-LENDING IN BRIEF 9.2

Many countries use government loan guarantees and re-lending based on the political intention to support financing of certain projects. Large infrastructure projects are typical examples.

Under a government loan guarantee, the government guarantees that the repayments on the company's loans are met. Should the company default on a guaranteed loan, the company's obligations to the lender are transferred to the government. All other things being equal, this increases the government debt.

In the case of government re-lending, the company raises a loan directly from the government. The government finances the re-lending through government borrowing and pays the required proceeds to the company, which hereafter pays interest and redemptions to the government. Re-lending is a government asset that is set off by a government liability, i.e. higher debt. Should the company default on its re-lending obligations, this is equivalent to writing down the value of the government asset, while the government still holds the liability.

COST SAVINGS AND RISKS RELATED TO LOAN GUARANTEES AND RE-LENDING Box 9.1

For illustrative purposes, a borrowing rate, r, may be divided into three elements: 1) the risk-free interest rate, r_{rf}, 2) a premium, r_{el}, equivalent to the expected loss and 3) a risk premium, r_{rp}, reflecting an additional premium required by the market for assuming the credit risk. That is:

$$r = r_{rf} + r_{el} + r_{rp}$$

The risk-free interest rate, r_{rf}, is the interest rate on a loan with no credit risk. The premium, r_{el}, reflects *the expected loss* (in a statistical sense) resulting from the borrower's possible default on the loan. In addition to r_{rf} and r_{el}, a risk-adverse lender will demand compensation, r_{rp}, for the possibility that the actual loss may exceed the expected loss.

Assume, for example, that a lender grants a company a loan of DKK 100. With a probability of 60 per cent, the company will be able to repay the loan in full, and with a probability of 40 per cent, the company will be able to repay only DKK 80. For the purpose of simplification, it is assumed that the company can always pay the interest. The expected loss on the loan is calculated as DKK 100-(0.6*DKK 100+0.4*DKK 80)= DKK 8. The expected repayment is thus DKK 100 -DKK 8=DKK 92.

r_{el} is determined by setting the lender's expected return on lending at the risk-free interest rate equal to the expected return on the risky investment. If the risk-free interest rate is 5 per cent, r_{el} is then around 9 per cent:

$$100*(1+0.05)=92*(1+0.05+r_{el}) \Rightarrow r_{el}=0.0913$$

In this case, a risk-neutral lender will charge an interest rate totalling r=5 per cent +9.13 per cent =14.13 per cent on loans to the company.

However, the lender will never receive DKK 92 in repayment on the loan. The borrower either repays DKK 100 or DKK 80. Only if the lender has a large portfolio of similar loans, will he be repaid DKK 92 *on average*.

CONTINUED Box 9.1

The possibility of the lender receiving a lower return than expected will, for a risk-adverse lender, be reflected in the collection of a risk premium, r_{rp}. The size depends on the risk aversion of the investors.

If the government guarantees the company's borrowing, the company will, all other things being equal, be able to raise loans at the government borrowing rate. For a central government with a very high rating, such as the Danish central government, this will be approximately equivalent to the risk-free interest rate, r_{rf}. A loan guarantee thus reduces the company's borrowing costs because the lender does not require compensation for the credit risk in the form of r_{el} and r_{rp}.

In practice, the company's borrowing costs under a government guarantee are not necessarily equivalent to the government's own borrowing rate. The government achieves a liquidity premium by issuing large series that are traded actively on e.g. international electronic trading platforms. All other things being equal, investors are willing to pay a premium for a high turnover rate, and this helps to reduce borrowing costs. The companies cannot achieve a similar liquidity premium.

By guaranteeing the company's borrowing, the government assumes an increased risk. In the example, the government's expected loss on issuing a loan guarantee is DKK 8.

The companies' interest costs on re-lending are reduced if the re-lending rate reflects the government's own borrowing rate. On the other hand, the government is exposed to a potential loss. The expected loss on re-lending of DKK 100 to the company in the above example is DKK 8 – the same as for loan guarantees.

Government guarantees and re-lending in a similar way expose the government to a potential loss due to the credit risk on the companies' loans, and therefore cannot be considered free of charge. On the other hand, by utilising a high credit rating, loan guarantees and re-lending can reduce the companies' financing costs.

Borrowing under a government guarantee is de facto equivalent to borrowing in the government's name. When a bank determines the interest rate on a loan to a government-guaranteed company, the key aspect is the credit standing of the government rather than the company in question. In view of the guarantee, the company can typically achieve a lower interest rate in the private market than it would otherwise have achieved. All other things being equal, the interest rate will reflect the government's own borrowing rate. However, large issues mean that government issuers often achieve a liquidity premium that is not to the same extent available to the companies.

Through re-lending, the companies may similarly reduce their borrowing costs if the re-lending rate, i.e. the rate payable by the companies to the government, reflects the interest rate on the underlying government bond issues.

Box 9.1 describes the credit risk and the expected guarantee and re-lending costs.

INTERNATIONAL FOCUS ON GUARANTEES – BEST PRACTICE 9.3

Government guarantees have been the cause of major financial losses for a number of governments, highlighting that traditional debt figures do not always give a true and fair view of governments' actual financial obligations. Against this background, there is increasing international focus on the treatment of guarantees, and rating agencies increasingly take account of guarantees in their government credit ratings.

The IMF, the World Bank and the OECD have formulated *best practice* principles for handling government guarantees.[1] Some of the key recommendations are presented in Box 9.2. The point of departure is that the issue of government guarantees exposes governments to potential future budgetary losses. Therefore, two key areas of the recommendations are the treatment of guarantees in relation to government budget and debt compilation, and the handling of guarantees in relation to government risk management.

Debt compilation and budgetary treatment

Guarantees are not usually included in government budgets until they take effect and entail payments from the government to the beneficiary of the guarantee. The IMF and the World Bank, along with the OECD, point out that an estimate of the government's expected guarantee costs may be included in the budget process at the time that the decision to grant the guarantee is made. This can ensure that the political decision to issue a guarantee may be compared to other decisions regarding direct use of budgetary resources. This prevents that the issue of a guarantee may seem politically advantageous solely because the guarantee does not immediately strain the budget.

Budget funds may also be allocated to meet potential future obligations under government guarantees and to enhance transparency. The estimated cost may, for instance, be transferred to a guarantee fund.

Expected losses on loan guarantees are often difficult to estimate. This applies, for example, to government loan guarantees issued to government-owned companies set up for specific purposes and having no private-sector counterpart. In these cases there may be no performance history on which to base a risk assessment. However, the government's expected losses and risk may – with varying degrees of uncertainty – often be estimated using quantitative and qualitative assessments.

[1] *Best practice* literature focuses mainly on guarantees. In practice, guarantees and re-lending are often treated differently in relation to e.g. government debt and budgets. However, the economic implications of guarantees and re-lending may overall be equated, so many of the arguments in the field of guarantees may also be applied to re-lending.

GUARANTEES – BEST PRACTICE Box 9.2

In the publication *Guidelines for Public Debt Management*[1], the IMF and the World Bank have listed recommendations for handling contingent liabilities, including guarantees. Contingent liabilities are obligations determined by the occurrence of uncertain future events, for instance bankruptcy. Overall, these liabilities may be divided into explicit and implicit liabilities. Explicit liabilities are defined by acts or legally binding contracts, while implicit liabilities are political or moral obligations. Loan guarantees are typical examples of explicit contingent liabilities. Economic aid provided by governments in case of natural disasters is an example of an implicit contingent liability. The messages of the IMF and the World Bank include the following:

- "Debt managers should consider the impact that contingent liabilities have on the government's financial position, including its overall liquidity, when making borrowing decisions."
- "Governments should monitor the risk exposures they are entering into through their explicit contingent liabilities, and ensure that they are well informed of the associated risks of such liabilities. […] Some governments have found it useful to centralize this monitoring function. In all cases, the debt managers should be aware of the explicit contingent liabilities that the government has entered into."
- "The fiscal authorities should also consider making budget allowances for expected losses from explicit contingent liabilities. In cases where it is not possible to derive reliable cost estimates, the available information on the cost and risk of contingent liabilities or a liquidity drain can be summarized in the notes to the budget tables or the government's financial accounts, since contingent liabilities may represent a significant balance sheet risk for a government."

OECD recommendations related to guarantees are described in the report *Advances in Risk Management of Government Debt*[2]. They include the following:

- "A basic requirement of a sound governance system is that there are rules and procedures such that the costs of a guarantee are properly revealed when issued. To this end, decisions on guarantees should follow the same rules and procedures as decisions on direct use of government resources (state aid, loans, subsidies, etc.), usually involving the parliament."
- "A sound governance system must also have adequate rules for reporting of guarantees. Public accounting systems generally do not treat guarantees as liabilities. Even so, information about the guarantee portfolio should be published regularly, linked to the conventional debt portfolio."
- "[…] debt managers have a key role in risk management involving guarantees, as contingent debt is effectively a latent form of government debt. This calls for defining measures of cost and risks that encompass both the guarantee portfolio and the regular debt portfolio."

Continued

[1] *Guidelines for Public Debt Management* is available at http://treasury.worldbank.org.
[2] Forthcoming (2005).

CONTINUED Box 9.2

- "[…] the case for involving debt managers in issuance of guarantees is mixed. On the one hand, debt managers possess general financial and economic expertise, and they are likely to have the appropriate perspective on guarantee pricing. However, experience with credit and project evaluation, key aspects in guarantee pricing, are not important parts of conventional debt management. Guarantee programmes involving a large number of borrowers may also involve administrative burdens that have few similarities to conventional debt management."

Where it is not possible to deduce an estimate of the expected losses, the IMF and the World Bank emphasise that the information available on risk and costs may be listed in notes to the budget or the government accounts.

Sweden and the USA are two of the few countries in which potential guarantee costs – and in the case of the USA also re-lending costs – are included in the budget, cf. Box 9.3.

Guarantees are rarely included in the compilations of government debt. *Best practice* implies that the guarantees are, as a minimum, published at regular intervals as a supplement to the conventional debt statements.

Risk management and the role of government debt management offices

All other things being equal, the release of a guarantee will cause the government budget to deteriorate and increase government debt. The OECD, along with the IMF and the World Bank, highlights the importance of the availability of information to the government debt management offices on the expected payments under government guarantees. This will enable the borrowing and risk management of the government debt portfolio to be planned accordingly.

If the government guarantee portfolio gives rise to unacceptable risk, the government debt management office may adjust the government's risk exposure via adjustments to the government debt portfolio. The risk on loan guarantees depends on the credit quality of the underlying loans and it is difficult to directly adjust the government's exposure to credit risk. On the other hand, the market risk on government debt portfolios may typically be adjusted quickly, e.g. by changing the interest-rate or currency exposure, thereby affecting the government's overall risk. As highlighted by the OECD, government debt management offices may thus contribute to a consolidated management of government risk.

HANDLING OF GOVERNMENT GUARANTEES IN THE USA AND SWEDEN Box 9.3

USA[1]

The Federal Government in the USA has a large number of programmes under which it issues loan guarantees and direct loans. With the adoption of *The Federal Credit Reform Act* in 1990, a new budgetary practice was introduced for these programmes. Under this practice, the government's (expected) cost of issuing a loan guarantee or a direct loan must be budgeted as a cost at the time of the loan disbursement. In this way the budgetary costs of respectively direct loans and government guarantees are put on an equal footing, and the costs may be compared with other expenditure decisions. The key elements of the reform include the following:

- A subsidy cost is introduced: the subsidy cost is defined as the present value of all cash flows from and to the government respectively. The subsidy cost is the expected value of the loan or guarantee in a statistical sense.
- Congress must appropriate the subsidy cost before an agency can enter into obligations to disburse direct loans or guarantee loans made by others.
- The subsidy cost is recorded in the budget when the direct loan or guaranteed loan is disbursed.
- Modifications of direct loans or loan guarantees can change the subsidy cost. Moreover, the subsidy cost must be reestimated throughout the lifetime of the loan.
- Cash flows are recorded in separate financing accounts that are excluded from the budget totals because they do not measure a cost in a budgetary context.

Sweden[2]

The framework for the issue of guarantees in Sweden is determined in *budgetlagen* (Budget Act). Under this act, the issue of state guarantees is subject to a decision by *Riksdagen* (the Swedish parliament), specifying the objective and, normally, the maximum sum of the guarantee. The Budget Act also stipulates that a fee must be charged for a guarantee. This fee shall "correspond to the state's financial risk and the other costs of the commitment, provided that the *Riksdag* does not decide otherwise for a given commitment" (Section 15, State Budget Act, 1996:1059). One purpose of the fee is to ensure that the state allocates resources to meet expected future costs under the guarantee. The fee is collected either from the guarantee recipient or from the central-government budget if it is decided that the guarantee recipient is not to pay the fee. Application of fees also makes the cost of the guarantee decision explicit, enabling comparison of this cost with other expenditure decisions.

The issue of guarantees for specific projects or companies is normally managed by *Riksgäldskontoret*. The tasks of *Riksgäldskontoret* include determination of the size of the guarantee fee.

[1] U.S. Office of Management and Budget, Task Force on the Harmonization of the Public Sector Accounting (TFHPSA). "Direct Loans and Loan Guarantees: Controlling 'Off-Budget' Expenditures in the United States". The document is available at www.imf.org/external/np/sta/tfhpsa.

[2] The Swedish National Debt Office, *Central Government Borrowing: Forecast and Analysis,* 2003:2, State guarantees – proposals for an even better rule system. The publication is available at www.rgk.se.

REVIEW OF THE DANISH LOAN GUARANTEE AND RE-LENDING MODEL 9.4

In the light of the international work in the field of government guarantees, the Ministry of Finance and Government Debt Management at Danmarks Nationalbank cooperate on reviewing the Danish model, which is outlined below.

The portfolios in brief

Government Debt Management manages the largest part of the Danish government's loan guarantees and re-lending. Most government guarantees and re-lending relate to large infrastructure projects. The largest guarantee recipients are the companies behind the Great Belt and Øresund bridges. Most re-lending is issued to Ørestadsselskabet I/S (the Ørestad Development Corporation), which is e.g. responsible for establishing and running the metro.

At end-2004, Government Debt Management managed guarantees totalling DKK 82.4 billion, cf. Table 9.4.1.

Government Debt Management issues the guarantees on behalf of the relevant ministries and contributes to establishing overall guidelines for the companies' borrowing, etc.

At the close of 2004, outstanding re-lending totalled DKK 19.1 billion, cf. Table 9.4.2.

Most government re-lending precisely reflects existing government securities, meaning that coupons, interest-payment dates and redemption dates match the characteristics of underlying government securities. The government securities eligible for re-lending are established in a re-lending list comprising all fixed-rate government bonds that are bullet loans in Danish kroner in the 2- to 10-year maturity segments. The price is determined on the basis of the market conditions when the loan is raised.

GOVERNMENT LOAN GUARANTEES — Table 9.4.1

DKK billion	End-2004
Hypotekbanken	2.7
A/S Storebælt	37.9
A/S Øresund	6.6
Øresundsbron	22.5
DSB and DSB S-tog A/S	10.1
Danmarks Radio	2.5
Total	82.4

Note: The debt of Øresundsbron (Øresund Bridge) is jointly guaranteed by the Danish and Swedish governments.

RE-LENDING, NOMINAL VALUE — Table 9.4.2

DKK billion	End-2004
A/S Storebælt	1.0
A/S Øresund	3.9
Ørestadsselskabet I/S[1]	13.6
Danish Ship Finance[2]	0.5
Total	19.1

[1] No government guarantees are provided for the borrowing of Ørestad Development Corporation as this is a partnership with the Danish government as co-owner.
[2] Re-lending issued to Danish Ship Finance are converted into DKK at the USD exchange rate as of 30 December 2004 (DKK 546.76 per USD 100).

Danish Ship Finance may raise serial loans in kroner and US dollars. These loans do not reflect existing government securities. The interest rate on the serial loans is, however, based on the zero-coupon yield curve for government securities and, as such, reflects the government loan terms.[1]

Government-owned companies

Government loan guarantees and re-lending are mostly granted to government-owned companies. In view of the government's ownership of these companies, it is, all other things being equal, to the government's advantage that these companies have access to inexpensive financing. Lower financing costs improve these companies' bottom lines, which also benefits the government in its capacity as owner. However, less expensive financing via loan guarantees and, in certain cases, re-lending does also reflect increases in the government risk exposure.

The companies' loan savings and the government risk depend on the companies' legal structure. Most of the re-lending is to Ørestadsselskabet I/S, a partnership with the government as co-partner. Under this legal structure, the government is already a debtor in relation to the company's borrowing. The difference between the company's borrowing costs via re-lending and via the private borrowing market will therefore be limited. Moreover, the government does not assume an additional risk through re-lending relative to allowing the company to borrow in the private market.

As far as government-owned limited-liability companies are concerned – in which the government's risk is, in principle, limited to the equity contribution – the government's risk in connection with loan guarantees and re-lending is increased to include the credit risk on the debt. This enables the companies to save the interest premium on the government

[1] Re-lending to Danish Ship Finance is described in *Danish Government Borrowing and Debt*, 2003, Chapter 10.

borrowing rate that would have been payable to private banks for non-guaranteed loans. This interest premium reflects the expected loss on the loan as well as a risk premium, cf. Box 9.1. The government's immediate financial gain – via the ownership – from cheap funding of the companies therefore reflects expected future additional costs related to the credit risk.

Even though the government's expected loss on loan guarantees and re-lending is set off by higher profit transfers from the companies, this does not mean that the government is better prepared to meet future losses. That would require either that budget funds be allocated or that the increased profit transfers from the companies be reflected in a budget improvement.

Government budget and debt compilation

An overview of the Danish government's loan guarantees, re-lending, etc., is provided in the notes to the government accounts. The notes disclose information on nominal outstanding amounts that are the maximum hypothetical loss that the government may incur as a result of these exposures. The annual publication *Danish Government Borrowing and Debt* also provides information on the government's loan guarantees and re-lending managed by Government Debt Management.

Companies that are eligible to borrow with government guarantees or to obtain re-lending in principle pay a commission fee of 0.15 per cent of the borrowed amount. This commission is stated as revenue in the government budget in line with any profit transfers from the companies to the government. On the expenditure side no estimates are budgeted for the expected government expenditure as a result of the credit risk.

On re-lending and loan guarantees, issuance of the government's CIL (current, investment and lending) balance is not affected. In contrast to loan guarantees, re-lending does have an impact on the central-government debt and the EMU debt. Re-lending is financed via increased government bond issues, which increases the debt. The government achieves an asset through re-lending that is not set off against debt. Given that the government's risk is the same whether re-lending or loan guarantees are involved, this does not provide any economic justification for preferring loan guarantees to re-lending.

Risk management

Due to the financial risks incurred by the government on issuing guarantees, the government lays down the overall guidelines for the government-guaranteed companies' activity in the loan markets. The risks to which the government is exposed via the companies' own borrowing are

equivalent to the risks incurred by the government when it borrows in its own name. The guidelines are therefore designed to ensure that the government-guaranteed companies do not in their borrowing and other financial transactions assume risks that the central government would not assume directly. To this end, Government Debt Management prepares and maintains a list of acceptable loan types. In addition, the government-guaranteed companies must provide ongoing information on their borrowing, and meetings are held at regular intervals between the companies, the Ministry of Finance and Government Debt Management. The companies' boards of directors and management are, however, responsible for the companies' financial transactions, risk management, etc.

Establishing the interest-rate exposure on the central-government debt is a key element in Government Debt Management's risk management. Each year, a strategic benchmark is determined for the duration of the government debt which is a summary measure of the trade-off between interest costs and risk. The duration target is established on the basis of long-term analyses. In these analyses, the re-lending portfolio is set off as an asset against the liabilities in order to achieve a consolidated risk analysis.

The Ministry of Finance's estimate of budgetary developments is part of the analysis, given that the budget is crucial to debt and interest cost developments. Losses on loan guarantees and the re-lending portfolio result in budget deteriorations. Therefore, estimates of credit losses on loan guarantees and re-lending could, in principle, be included in the budget estimates, and thus in the determination of the government's interest-rate exposure. On the other hand, arguments can be presented for also including estimates of e.g. extraordinarily high profits from the government-owned companies. The potential impact on the government debt of credit losses on guarantees and re-lending forms part of the analysis on an ad hoc basis in line with other elements of budget uncertainty. This is achieved by performing stress tests on the budget in order to analyse interest-rate risk and the development in debt, subject to assumptions of various negative shocks to the budget.

Loan guarantees versus re-lending

From an overall perspective, loan guarantees and re-lending are equivalent in terms of objective, economic implications and government risk. In practice, however, there may be differences.

Use of re-lending rather than loan guarantees is supported by the government's falling borrowing requirement and intention to achieve liquid series. Re-lending increases the government's borrowing require-

ment and thereby sustains the possibility of building up liquid government series. By ensuring liquid series, the government achieves a liquidity premium that contributes to reducing its borrowing costs.

The government's liquidity premium on its own borrowing can be transferred to the government-owned companies. On account of the government ownership, this translates into government cost savings. Due to a limited borrowing requirement, the companies will not be able to achieve the same liquidity premium in their own government-guaranteed borrowing.

In principle, it is easier for the government to manage the companies' financial risks in the case of re-lending compared to allowing the companies to raise loans in the private market under loan guarantees. The companies' financial risks are, however, managed on the overall level by establishing a framework for the activities of the government-guaranteed companies in the financial market.

Besides, compared with loan guarantees, re-lending offers economies of scale in that the market access of Government Debt Management is made available to the companies. A limited range of borrowing opportunities under the re-lending facility may, however, entail that the companies' financial management may still require them to enter into financial transactions that do not form part of the government's re-lending facility.

Appendices

Information on Government Borrowing and Debt

Government Debt Management focuses on transparency vis-à-vis the general public and the financial markets with regard to the government debt policy and government transactions. Further information on government debt and government debt policy is available at Danmarks Nationalbank's website, www.nationalbanken.dk.

A wide variety of information concerning government borrowing and debt is published on an ongoing basis via the Copenhagen Stock Exchange and DN News[1]. Several news agencies re-transmit the information from DN News, e.g. Reuters. The information is also available at Danmarks Nationalbank's website. It is possible to be notified directly of new information and updates concerning government borrowing and debt by subscribing to Danmarks Nationalbank's electronic news service (see www.nationalbanken.dk under News service).

In addition, information on wholesale trading in Danish government securities is available at MTS Denmark's website, www.mtsdenmark.com.

Enquiries concerning government borrowing and debt should be directed to Danmarks Nationalbank, Government Debt Management Office, Financial Markets at governmentdebt@nationalbanken.dk.

The following table presents the information on government borrowing and debt that is published on an ongoing basis.

[1] Danmarks Nationalbank's system for transmission of information to connected news agencies.

CURRENT INFORMATION ON GOVERNMENT BORROWING AND DEBT

	Overall contents	Information at	Frequency
Danish Government Debt Management Strategy, June and December	• Borrowing strategy • On-the-run issues • Securities eligible for buy-back • Duration band	• CSE • www.nationalbanken.dk	Semi-annually
Opening of new securities	• Coupon • Maturity date • Opening date	• CSE • DN News, screens 55-57 • Reuters DKNA-55-57 • www.nationalbanken.dk	Irregularly
Treasury bill auction	• Convening of auction • Result of auction	• CSE • DN News, screens 52 and 53 • Reuters, DKNA-52 and 53 • www.nationalbanken.dk (result of auction)	Monthly
Daily buy-backs and sales	• Daily sales by securities • Daily buy-backs by securities	• DN News, screens 51 and 58 • Reuters, pages DKNA-51 and DKNA-58 • www.nationalbanken.dk	Daily
Monthly buy-backs and sales, 1st banking day	• Monthly sales by securities • Monthly buy-backs by securities • Monthly currency swaps	• www.nationalbanken.dk	Monthly
SPF's holding of government securities, 1st banking day	• SPF's holding of government securities as of end of previous month	• www.nationalbanken.dk	Monthly
Daily domestic borrowing requirement	• Domestic borrowing requirement based on *Budget Review* • Subsequent buy-backs • Subsequent currency swaps (monthly) • Total domestic borrowing requirement	• DN News, screen 54 • Reuters, page DKNA-54 • www.nationalbanken.dk	Daily
Central government's actual financing requirement, 2nd banking day	• Change in the balance of the central government's account • Gross central-government borrowing • Gross central-government financing requirement • Government redemptions and buy-backs	• DN News, screens 31-34 • www.nationalbanken.dk	Monthly
Day-to-day distribution of government payments, penultimate banking day	• Day-to-day distribution for liquidity impact of central-government payments in coming months	• www.nationalbanken.dk	Monthly
Danish Government Borrowing and Debt, Danish edition normally in February, and English edition normally in March	• Past year's development • Detailed statement of debt and transactions • Report on issues of relevance to debt management	• Publication from Danmarks Nationalbank • www.nationalbanken.dk	Annually
Budget Review, normally in May, August and December	• Gross financing requirement, current and coming years	• Publication from the Ministry of Finance • www.fm.dk (website of the Ministry of Finance)	Normally 3 times a year
Trading in Danish government securities on MTSDk	• Information about prices and turnover in Danish government securities traded on MTSDk	• www.mtsdenmark.com	Ongoing

Note: *Budget Review* is published by the Ministry of Finance. CSE denotes the Copenhagen Stock Exchange. CSE's website is at www.cse.dk.

Principles for Management of Credit Risk on Government Swaps

Counterparty credit standing (rating): To limit the credit risk on swap counterparties, swaps are only transacted with counterparties with a very high credit standing. A counterparty must normally be rated minimum Aa3/AA- by at least two well-reputed rating agencies (Moody's, Standard & Poor's or Fitch). If a counterparty is rated by three rating agencies, the minimum requirement is based on the lowest rating. For interest-rate swaps in kroner and DKK/EUR swaps, however, counterparties with a rating of minimum A3/A- are permitted.

Limits for credit exposure (lines): To avoid disproportionately high credit exposures, the credit exposure on a counterparty must be within an authorised line. The size of the lines granted depends on the counterparty's rating and net worth, cf. Table 1.

Compilation of counterparty credit exposure: Counterparties' credit exposure and utilisation of lines are monitored on an ongoing basis. The central government's credit exposure to a given counterparty is compiled as the current positive market value of the portfolio less any pledged collateral, plus a premium, the potential credit exposure, that takes into account that the portfolio can develop additional market value as a consequence of market development.

LINES FOR CREDIT EXPOSURE — Table 1

Counterparty rating		Lines (max. total credit exposure)		Threshold value (max. uncollateralised market value)
Moody's	Standard & Poor's, Fitch IBCA	DKK million	In per cent of counterparty's net worth	DKK million
Aaa	AAA	2,000	8.0	500
Aa1	AA+	1,500	7.0	400
Aa2	AA	1,000	6.0	300
Aa3	AA-	700	5.0	200
A1	A+	600	5.0	150
A2	A	400	4.5	100
A3	A-	200	4.0	50

Note: In case of different ratings, the lowest rating is the basis for the granting of a line and for determining the threshold value for the maximum uncollateralised market value in the favour of the central government.
If the counterparty has a rating of A1/A+ or below, the authorised line can only be used for interest-rate swaps in Danish kroner or DKK/EUR swaps with a maximum maturity of 10 years.

Handling of excess credit exposure: New swaps may only be transacted with a counterparty for as long as the credit exposure is less than 75 per cent of the authorised line. The remaining 25 per cent of the line is a buffer to limit the extent of excess credit exposure. In the event of excess credit exposure, the counterparty relationship is monitored closely. If the excess exposure is considered to be unacceptably high, it is sought to reduce the credit exposure.

Eligible swaps: Only plain-vanilla interest-rate swaps and plain-vanilla currency swaps may be transacted. The maturity will normally be 10 years or lower. Dual-currency swaps and zero-coupon swaps are considered to be plain-vanilla swaps. Structured swaps are no longer transacted. The same applies to deals that include option elements, including swaptions, interest-rate caps, etc.

Legal basis of agreement: Swaps are only transacted with counterparties with whom an ISDA Master Agreement, which governs the business relationship between the central government and the counterparty, and a collateral agreement, cf. below, have been established.

Netting: ISDA Master Agreements contain netting provisions whereby gains and losses on transacted swaps are set off in the event of counterparty default.

Master Agreements are signed only with counterparties domiciled in countries whose legislation is expected to provide for netting.

Early termination of swaps: It must be possible to terminate all swaps with a counterparty should the counterparty's rating fall to an unsatisfactory level. All new ISDA Master Agreements therefore contain rating triggers. A rating trigger entails that swaps can be cancelled should a counterparty's rating fall to a given level. In most of the central government's ISDA Master Agreements the rating trigger is BBB+/Baa1 or below[1].

As a subsequent safeguard against credit losses, cross-default clauses are also applied. These allow swaps to be terminated if the counterparty defaults on its payment obligations to a third party.

Collateralisation: To limit any losses in the event of counterparty default, swaps may only be transacted with counterparties that have signed collateral agreements (ISDA Credit Support Annex) to the ISDA Master Agreements that regulate the relationship between the central government and the swap counterparties. The key elements of the agreements are:

- The agreements are unilateral, so that only the central government's counterparties pledge collateral.

[1] Some Master Agreements, dating from before the rating trigger requirement was formalised, have none or a lower trigger.

- Collateral is not pledged unless the market value in the central government's favour exceeds an agreed amount (the threshold value). This threshold value will depend on the counterparty's rating, cf. Table 1.
- The market value of swaps is compiled on a regular basis and as needed. If the market value less the pledged collateral exceeds the agreed threshold, the counterparty is required to pledge collateral.
- Only collateral of DKK 10 million or more is transferred (reversed).
- Permitted collateral will normally be government bonds with a rating of minimum Aa3/AA-. Other bonds can also be accepted, subject to individual assessment, e.g. Danish mortgage-credit bonds. The collateral value of the bonds is calculated as the market value after a haircut. Haircuts will depend on the remaining maturity of the bonds and must take account of the risk of a decrease in the value of the bonds.
- The administration of bonds pledged as collateral to the central government is transferred to the custodian bank with which the securities are deposited. On behalf of the central government, the custodian bank will request the counterparty to provide additional collateral, should the collateral value of the deposited bonds decrease and become insufficient to cover the market value of the transacted swaps after deduction of the threshold. In the event of surplus cover, the custodian bank is equivalently authorised to release bonds to the counterparty.

Terms for the Central Government's and the Social Pensions Fund's Securities Lending Facilities

The central government's securities lending facility

- The lending facility applies to on-the-run government securities and government securities with benchmark status.
- The specific terms for lending in the individual government securities are published in the central government's announcements concerning on-the-run issues.
- For government bonds and treasury notes the lending facility is available for Primary Dealers.
- For T-bills the lending facility is available for eligible participants in the T-bill auctions.
- In normal circumstances the maximum lending in each issue is DKK 4 billion. However, this limit may be raised in the event of abnormal price formation on the market for securities lending.
- The fee is 0.2 per cent per year for securities lending of Treasury notes and government bonds with an outstanding amount below DKK 20 billion. The fee is 0.4 per cent per year for securities lending in securities with an outstanding amount above DKK 20 billion and for all Treasury bills.
- The lending facility is available as buy/sell-back transactions. Participants borrow bonds in one buy/sell-back transaction and lend (provide collateral) in another buy/sell-back transaction.
- The securities may be borrowed for a period from 1 to 5 trading days.
- The lending facility is open for transactions during the day between 9.00 a.m. and 3.30 p.m., but transactions should, to the extent possible, be concluded before 2.00 p.m.
- Lending in securities is granted in the order that requests to Danmarks Nationalbank are received from security dealers on the relevant day. The right to make discretionary allocations is reserved if deemed appropriate.
- Danish government securities (bullet loans) denominated in Danish kroner issued via the Danish Securities Services (VP) in series with an outstanding amount of at least DKK 3 billion are accepted as collateral.
- A haircut of 2.5 per cent is applied to each buy/sell-back transaction. Hence, the market price of the security lend by the central govern-

ment is raised by 2.5 per cent and the market price of the security provided as collateral by the borrower is lowered by 2.5 per cent.
- Settlement takes place on the following trading day.
- In case settlement only succeeds for one of the buy/sell-back transaction, be that the lending transaction or the collateral transaction as it may, borrowers are obliged to ensure immediate settlement of the failed transaction.
- For bond trading members of the Copenhagen Stock Exchange lending transactions are reported as two or more separate repurchase agreements to Copenhagen Stock Exchange under code 30.
- Government Debt Management may from time to time amend the terms and conditions applicable to the Central Government's Securities Lending Facility to reflect market practice and ensure a well-functioning securities lending facility. Government Debt Management informs Primary Dealers at least one week prior to implementation of any change to the terms of the lending facility.
- Any enquiries concerning securities lending transactions should be made to Danmarks Nationalbank, Market Operations, on tel. +45 3363 6747 or +45 3363 6736.

The Social Pension Fund's securities lending facility
- Lending is in all government bonds with more than 13 months remaining maturity of the type bullet loans in the Social Pension Fund's portfolio.
- The lending facility is available to Primary Dealers.
- The fee is 0.4 per cent per year.
- The lending facility is available as buy/sell-back transactions. Participants borrow bonds in one buy/sell-back transaction and lend (provide collateral) in another buy/sell-back transaction.
- The securities may be borrowed for a period from 1 to 5 trading days.
- The lending facility is open for transactions during the day between 9.00 a.m. and 3.30 p.m., but transactions should, to the extent possible, be concluded before 2.00 p.m.
- Lending in securities is granted in the order that requests to Danmarks Nationalbank are received from securities dealers on the relevant day. The right to make discretionary allocations is reserved if deemed appropriate.
- Danish government securities (bullet loans) denominated in Danish kroner issued via the Danish Securities Services (VP) in series with an outstanding amount of at least DKK 3 billion are accepted as collateral.
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- Settlement takes place on the following trading day.
- In case settlement only succeeds for one of the buy/sell-back transaction, be that the lending transaction or the collateral transaction as it may, borrowers are obliged to ensure immediate settlement of the failed transaction.
- For bond trading members of the Copenhagen Stock Exchange transactions are reported as two or more separate repurchase agreements to Copenhagen Stock Exchange under code 30.
- Government Debt Management may from time to time amend the terms and conditions applicable to the Social Pension Fund's Securities Lending Facility to reflect market practice and ensure a well-functioning securities lending facility. Government Debt Management informs Primary Dealers at least one week prior to the implementation of any change to the terms of the Social Pension Fund's Securities Lending Facility.
- Any enquiries concerning securities lending transactions should be made to Danmarks Nationalbank, Market Operations, on tel. +45 3363 6747 or +45 3363 6736.

Announcements on the Central Government's Borrowing and Debt (Translations)

DANISH GOVERNMENT DEBT MANAGEMENT STRATEGY 2005, 20 DECEMBER 2004

Key issues, 2005

The overall objective of the government debt policy is to cover the central government's financing requirement at the lowest possible long-term borrowing costs, subject to a prudent degree of risk. This objective is pursued with a strategy based on transparency and liquidity. Liquidity is supported by:

- ensuring liquid benchmark series in a few key maturity segments
- having Danish bonds traded on international trading platforms
- a market-making scheme
- a securities lending facility for primary-dealers.

Denmark has had a government-budget surplus since 1997, while the government debt has declined considerably. Consequently, Danish Government Debt Management will to a higher degree concentrate the debt in fewer series. Beyond an already active buy-back programme, the central-government in future intends to tap existing series with market-conforming coupons.

For 2005, the strategy comprises the following main elements:

- The domestic borrowing requirement for 2005 is estimated at DKK 67.7 billion and is financed through the issuance of fixed-rate bullet loans.
- The current on-the-run issues will continue to be tapped in 2005. Issuance in the current 2-year on-the-run issue will be discontinued in the latter part of the first half-year. It is expected to be replaced by the existing security 4 per cent bullet loans 2008.
- To support liquidity and promote trading on electronic platforms, the outstanding amounts of the current 5- and 10-year on-the-run issues are planned to reach at least DKK 35 billion and DKK 60 billion, respectively. Outstanding amounts of the 2-year on-the-run issue and 4 per cent bullet loans 2008 already exceed the minimum of DKK 35 billion. In order to continue to be present in the 2-year segment it is the intention to issue a minimum of DKK 20 billion in the 2-year segment.
- A new auction facility for Danish Treasury bills will be implemented in mid-2005, concurrently with market making for T-bills on MTSDk. Further details of the new set-up will be published prior to implementation.
- The strategy for foreign borrowing is to issue a large loan in euro every year, and to support liquidity through a broad investor base and

market-making on MTSDk. Along the lines of the current strategy, a euro loan in the 5-year maturity segment will be issued. It is the intention to issue an amount of EUR 1.5-2 billion. Issuance is expected in the first half of 2005.

- The interest-rate risk is managed within a duration band. For 2005 this band is set at 3 years +/- 0.5 years.

Financing requirement

In *Budget Outlook, December 2004,* from the Ministry of Finance, the central government's gross financing requirement for 2005 is estimated at DKK 91.9 billion. The gross domestic financing requirement is DKK 74.7 billion and the gross foreign financing requirement is DKK 17.2 billion in 2005.

The domestic borrowing requirement is covered by issuance of domestic securities, and is currently DKK 67.7 billion (value date 21 December).

CENTRAL-GOVERNMENT FINANCING REQUIREMENT, 2005 — Table 1

	DKK billion
Gross financing requirement (*Budget Outlook,* December 2004)	91.9
Gross domestic financing requirement *(Budget Outlook)*	74.7
Subsequent buy-backs of securities maturing in 2005 (21 Dec.)[1]	-0.5
Adjusted gross domestic financing requirement[2]	74.2
Gross foreign financing requirement *(Budget Outlook)*	17.2
Domestic borrowing requirement (value date 21 December)	67.7

[1] After the release of *Budget Outlook*, December 2004.
[2] The domestic financing requirement will be adjusted with buy-backs in 2004 of securities maturing in 2005.

Borrowing

The domestic borrowing requirement is financed through issuance of krone-denominated bonds in key maturity segments. On-the-run issues are listed in Table 2. To support liquidity and promote trading on electronic platforms, the 5- and 10-year on-the-run issues are planned to reach outstanding amounts of at least DKK 35 billion and DKK 60 billion, respectively. Issuance in the current 2-year on-the-run issue will be discontinued in the latter part of the first half-year, and it is expected to be replaced by the existing 4 per cent bullet loans 2008. The outstanding amounts of both securities already exceed the minimum of DKK 35 billion. In order to continue to be present in the 2-year segment, it is the intention to issue a minimum of DKK 20 billion in the 2-year segment.

The net financing contribution from Treasury bills is expected to be zero. New 12-months Treasury bills will be opened at auctions with settlement dates on the first banking days of February, May, August and November.

DOMESTIC ON-THE-RUN-ISSUES, JANUARY 2005 Table 2

Series	Maturity segment	Coupon/due date
4 per cent bullet loans 2015	10-year	15 November
4 per cent bullet loans 2010	5-year	15 November
3 per cent bullet loans 2006	2-year	15 November
Treasury bills	<12 months	
T-bill 2005 IV		1 November
T-bill 2005 III		1 August
T-bill 2005 II		2 May
T-bill 2005 I		1 February

Along the lines of the current strategy a euro loan in the 5-year maturity segment will be issued. It is the intention to issue an amount of EUR 1.5-2 billion. Issuance is expected in the first half of 2005.

Other debt-management instruments

As a supplement to the issuance policy, swaps, buy-backs and securities lending facilities are used in the management of central-government debt.

The central-government uses *interest-rate swaps* in the management of the duration of the debt. This allows for the separation of the issuance policy from the management of interest-rate risk. Interest-rate swaps are transacted in the domestic market and in the euro-swap market, depending on depth and market conditions.

Domestic issuance combined with *currency swaps* from DKK to euro or foreign issuance combined with currency swaps from euro to DKK are possible borrowing instruments. Furthermore, currency swaps between DKK and euro may be used to smooth the domestic or foreign redemption profile.

Buy-backs of securities maturing in 2005 are applied in the management of the central government's cash balances. Buy-backs of securities maturing after 2005 are primarily undertaken in order to manage the interest-rate risk, to smooth the redemption profile of the debt, and to maintain a liquid on-the-run issuance programme.

The *securities lending facilities* of the central government and the Social Pension Fund aim at supporting liquidity in respectively on-the-run issues and off-the-run issues, cf. Table 3.

BUY-BACKS AND SECURITIES LENDING FACILITIES — Table 3

	Outstanding amount value date 21 Dec. 2004 (DKK mill.)	Buy-back items	Central government's securities lending facility	Social Pension Fund's securities lending facility[1]
All Treasury bills	68,602		x	
Bullet loans				
5 per cent 2005	53,751	x		
4 per cent 2005	35,150	x		
8 per cent 2006	46,896	x		x
3 per cent 2006	36,540		x	
7 per cent 2007	52,069	x		x
4 per cent 2008	44,094			x
6 per cent 2009	66,146	x		x
4 per cent 2010	15,760		x	
6 per cent 2011	60,501	x		x
5 per cent 2013	79,325	x		x
4 per cent 2015	37,580		x	
7 per cent 2024	25,001			x
Serial bonds				
5 per cent S 2007	17	x		
4 per cent S 2017	68	x		
Perpetuals				
3.5 per cent 1886 perpetual	45	x		
3 per cent 1894 perpetual	17	x		
3.5 per cent 1901 perpetual	8	x		
3.5 per cent 1909 perpetual	16	x		

[1] The Social Pension Fund's portfolio of government bonds of the type bullet loans with a maturity exceeding 13 months are included in the securities lending facility.

Issuance and Trading

Danish government bonds are issued on MTSDk. The primary dealers in Danish government bonds provide liquidity and quote current two-way prices. As from 1 January 2005 Dresdner enters the market as a primary dealer. The group of primary dealers will then consist of 14 banks. Further details about the primary dealer system are given in Box 2.

In January a multi-feed solution for clearing and settlement will be introduced for trades on MTSDk. The primary dealers will have the option to choose whether to clear and settle a trade in the Danish Securities Services (VP) or in Euroclear.

Besides being traded on MTSDk and the Copenhagen Stock Exchange, Danish government bonds are traded on international trading platforms e.g. TradeWeb, Bondvision, Bloomberg BondTrader and ICAP.

In mid-2005 Government Debt Management intends to introduce a new auction facility for Danish Treasury bills based on the Telematico platform. The objectives are to broaden participation in the Danish T-bill programme and to increase transparency and liquidity in the secondary market.

The new auction system is designed to comply with international standards. It will be more effective than the current system, and will enable a shorter timeframe for T-bill auctions than is the case today. Market making in Danish Treasury bills on MTSDk will be introduced concurrently with the new auction system.

Further details of the new set-up for T-bills will be published prior to implementation.

MARKET-MAKING IN DANISH GOVERNMENT BONDS Box 2

On MTSDk primary dealers provide liquidity and quote two-way prices in Danish government bonds of the type bullet loans and with a maturity exceeding 13 months, cf. the Table below.

Government bonds are primarily issued by tap sale in the MTS trading system to the primary dealers. Initial sale in new issues and buy-backs in government securities are also transacted on MTS Denmark with primary dealers acting as counterparties. The primary dealers furthermore have access to the securities lending facilities of the central government and the Social Pension Fund for securities traded on MTSDk.

As from 1 January 2005 the primary dealers in krone-denominated Danish government bonds are: ABN Amro, Barclays, Danske Bank, Deutsche Bank, Dresdner, Fionia Bank, HSH Nordbank, JP Morgan, Morgan Stanley, Nordea, Nykredit Bank, SE Banken, Svenska Handelsbanken and Sydbank. Merrill Lynch is market taker. In addition, some primary dealers are market makers in specific euro-denominated bonds, cf. the Table below.

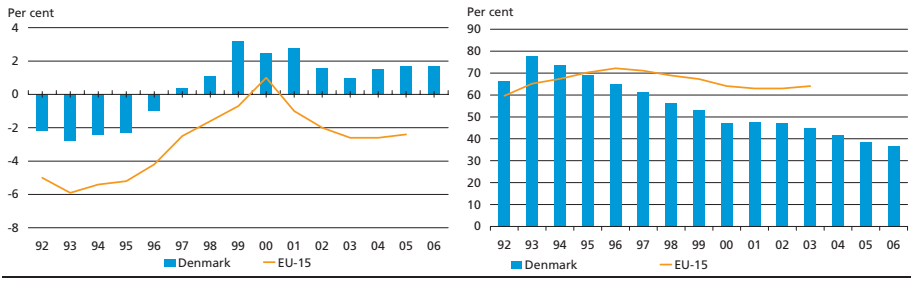
Some international vendors provide real-time information on pre-trade prices, etc. The same information is available with 15 minutes delay from the website of MTS Denmark at www.mtsdenmark.com. The website also provides additional information related to wholesale trading in Danish government bonds.

On the Copenhagen Stock Exchange's segment for government bonds, a group of banks – Danske Bank, Fionia Bank, Jyske Bank, Nordea, Nykredit and Sydbank – quotes two-way prices and provide liquidity for orders up to DKK 3 million per paper per bank in krone-denominated Danish government bonds of the type bullet loans with more than 13 months maturity (see www.cse.dk for more information).

MARKET MAKING ON MTS DENMARK, 1 JANUARY 2005

On-the-run issues:	Liquid bonds:	Euro-denominated bonds:
3 per cent 2006	8 per cent 2006	3.25 per cent 2008 (EUR)
4 per cent 2010	7 per cent 2007	3.125 per cent 2009 (EUR)
4 per cent 2015	4 per cent 2008	
	6 per cent 2009	
	6 per cent 2011	
	5 per cent 2013	
	7 per cent 2024	

GENERAL-GOVERNMENT BUDGET SURPLUS TO GDP AND DEBT TO GDP Chart 1



Note: 2005 and 2006 figures are estimations in *Economic Survey*, December 2004.
Source: Ministry of Finance.

Rating of Danish government securities

The domestic and foreign central-government debt has the highest rating from Fitch Ratings (AAA), Moody's (Aaa) and Standard & Poor's (AAA).

In September 2004, Standard & Poor's affirmed in the report *Research: Denmark (Kingdom of)* its long-term AAA rating and short-term A-1+ rating of Danish government bonds with an unchanged stable outlook. In September 2004, Moody's also affirmed Kingdom of Denmark's Aaa rating with an unchanged stable outlook.

Analytical reports and specific ratings on individual government securities are available on the websites of respectively Fitch Ratings (www.fitchratings.com), Moody's (www.moodys.com), and Standard & Poor's (www.ratingsdirect.com).

Information

Danish Government Debt Management Strategy is a semi-annual announcement from the Government Debt Management Office at Danmarks Nationalbank that provides information on objectives and strategies for the management of the debt. The announcement also gives information on the borrowing requirement, the funding policy and, the list of on-the-run and buy-back issues etc. This announcement was made public on 20 December 2004.

This announcement supplements the annual publication *Danish Government Borrowing and Debt,* which gives a more detailed presentation of the Danish government debt policy. It describes developments during the preceding year and reports on new issues of relevance to debt management. The forthcoming publication will be published in late February 2005 followed by an English translation in early March 2005.

Further information on government debt management can be obtained from Danmarks Nationalbank's website: www.nationalbanken.dk

under Government Debt. If you register with Danmarks Nationalbank's News Service, you will receive e-mail notifications of new information and updates concerning government borrowing and debt.

Additional information relating to wholesale trading in Danish government bonds is available from the MTS Denmark website at www.mtsdenmark.com.

Please direct enquiries concerning this announcement to Danmarks Nationalbank, Financial Markets, Head of Government Debt Management, Ove Sten Jensen, on tel.: (+45) 3363 6102 or by e-mail to governmentdebt@nationalbanken.dk.

THE CENTRAL GOVERNMENT'S BORROWING REQUIREMENT 2005, 27 JANUARY 2005

In *Budget Outlook 3,* December 2004, the central government's domestic gross financing requirement for 2005 is estimated at DKK 74.7 billion, cf. Table below. In 2004, subsequent to the publication of *Budget Outlook*, securities for a nominal amount of DKK 0.5 billion maturing in 2005 were bought back, reducing the financing requirement for 2005.

Following expected transactions of currency swaps in 2005, the domestic borrowing requirement for 2005 is reduced by DKK 6.5 billion. Further, transfer of excess sale in 2004 of DKK 28.0 billion to 2005 will reduce the domestic borrowing requirement.

In 2005 securities maturing after 2005 for an amount of DKK 2.0 billion were bought back which has increased the domestic borrowing requirement (value date 31 January 2005).

In aggregate the domestic borrowing requirement for 2005 is DKK 41.6 billion. Concurrently with buy-backs in domestic securities maturing after 2005, the domestic borrowing requirement will increase. Information on the domestic borrowing requirement is available daily from Danmarks Nationalbank website: www.nationalbanken.dk under government debt.

The strategy for financing of the domestic and foreign borrowing requirement is unchanged compared with the previous announcement *Danish Government Debt Management Strategy 2005*, released 20 December 2004.

CENTRAL GOVERNMENT'S DOMESTIC BORROWING REQUIREMENT, 2005[1]

DKK billion	
Gross domestic financing requirement (*Budget Outlook 3*, December 2004) ...	74.7
Subsequent buy-backs in 2004 of securities maturing in 2005	-0.5
Adjusted gross domestic financing requirement	74.2
Reduction in domestic borrowing related to currency swaps	-6.5
Transfer of excess sale in 2004 to 2005	-28.0
Buy-backs in 2005 of securities maturing after 2005	2.0
Domestic borrowing requirement, 2005	41.6

[1] Value date 31 January 2005.

Please direct enquiries concerning this announcement to Danmarks Nationalbank, Financial Markets, Head of Government Debt Management, Ove Sten Jensen, on tel.: (+45) 3363 6102 or by e-mail to governmentdebt@nationalbanken.dk.

Appendix of Tables

CENTRAL-GOVERNMENT DEBT, YEAR-END 1994-2004 Table 1

DKK million	1994	1995	1996
A. Debt			
Domestic debt denominated in DKK[1]			
- Fixed-rate bonds	409,565	466,608	516,812
- Floating-rate bonds	30,345	20,722	16,760
- Lottery bonds	1,200	1,200	1,200
- Compulsory savings	-	-	-
- Treasury notes	111,705	102,697	84,499
- Treasury bills	56,238	58,385	51,234
- Currency swaps from DKK to EUR	-	-	-
- Currency swaps from DKK to USD			
- Government securities held by the central			
- government	-	-	-
- Interest-rate swaps, notional amount			
from fixed rate	-	-	-
to floating rate	-	-	-
Domestic debt denominated in DKK, total	609,053	649,612	670,505
Domestic debt denominated in EUR[2 3]			
- Fixed-rate bonds	9,697	9,244	9,597
- Government securities held by the central			
- government	-970	-1,138	-2,372
Foreign debt, total	617,781	657,719	677,730
Foreign debt			
- in USD	24,913	6,425	4,562
- in CHF	18,393	13,836	6,179
- in JPY	10,419	9,329	2,396
- in EUR[3]	64,887	69,975	88,826
- in other currencies	12,954	11,599	6,519
- Government securities held by the central	-1,784	-5,516	-6,986
- government[4]			
Foreign debt, total	129,782	105,647	101,495
Domestic and foreign debt, total	747,563	763,366	779,225
B. Government deposits with the central bank[5]	-55,266	-33,677	-31,052
C. The Social Pension Fund			
- Government securities	-50,143	-68,889	-83,435
- Other securities	-96,689	-82,517	-65,336
The Social Pension Fund, nominal value, total[6]	-146,832	-151,406	-148,772
Central-government debt, total (A+B+C)	545,465	578,283	599,401
Central-government debt, percent of GDP	56.5	57.3	56.5

Note: + denotes liabilities, - denotes assets.

[1] Does not include the holdings of the central government under the location-swap facility, cf. *Danish Government Borrowing and Debt 1993*. The facility was established in July 1993 and ended in April 1998.

[2] In connection with the introduction of new accounting principles for the government debt the 8.5 per cent EUR bullet loan 2002 has been reclassified as foreign debt instead of domestic debt as of 1998.

[3] Comprises loans in EUR, currencies of the euro-area member states and XEU.

[4] Recorded at acquisition price. From 1993 exchange-rate-adjusted.

[5] For 2004, the central government's account is compiled in accordance with the monthly balance sheet of Danmarks Nationalbank.

[6] Index-linked bonds is compiled at indexed value.

CENTRAL-GOVERNMENT DEBT, YEAR-END 1994-2004 Table 1

1997	1998	1999	2000	2001	2002	2003	2004
556,874	550,989	537,289	506,992	494,875	497,938	480,874	480,590
9,848	4,346	-	-	-	-	-	
1,200	1,000	900	900	900	400	400	400
-	-	-	-	-	-	-	-
49,140	58,830	74,040	81,257	70,788	79,371	78,532	71,690
50,001	41,255	36,350	36,846	49,224	63,404	67,347	68,602
-	-	-	-	-4,800	-16,200	-16,200	-16,200
							-524
-	-	-	-2,000	-	-	-	
-	-500	-7,950	-20,950	-27,400	-37,300	-43,600	-59,700
-	500	7,950	20,950	27,400	37,300	43,600	59,700
667,063	656,420	648,579	623,995	610,987	624,913	610,953	604,558
6,634	-	-	-	-	-	-	
-	-	-	-	-	-	-	
673,697	656,420	648,579	623,995	610,987	624,913	610,953	604,558
1,514	1,336	1,187	-	-	-	-	518
3,974	1,094	3,616	3,822	-	-	-	
1,047	562	2,453	1,672	-	-	-	
90,661	84,982	82,386	79,287	83,753	83,689	83,861	83,370
6,418	365	383	428	42	42	42	40
-	-	-	-	-	-	-	-
103,613	88,338	90,025	85,209	83,795	83,730	83,903	83,929
777,310	744,758	738,604	709,204	694,782	708,644	694,856	688,486
-29,024	-30,400	-35,231	-31,332	-39,621	-45,952	-40,451	-58,006
-92,453	-100,135	-105,432	-106,312	-109,474	-113,132	-118,138	-120,799
-54,368	-43,468	-36,207	-33,244	-31,621	-28,230	-20,576	-16,065
-146,821	-143,603	-141,640	-139,556	-141,095	-141,362	-138,714	-136,864
601,465	570,755	561,733	538,316	514,066	521,329	515,691	493,617
53.9	49.4	46.5	42.1	38.8	38.3	36.9	33.8

THE CENTRAL GOVERNMENT'S CURRENT, INVESTMENT AND LENDING BALANCE, NET CASH BALANCE AND GROSS DEFICIT, 1994-2003 Table 2

DKK billion	1994	1995	1996
Current, investment and lending budget	-39.7	-31.3	-21.5
Net bond purchases[1]	-12.0	-11.5	-4.4
Re-lending of government loans	-5.1	-1.6	-1.4
Distributed capital losses on issue and due interest[2]	8.2	5.7	7.4
Other capital items[3]	-0.8	0.1	0.4
Net cash balance	-49.4	-38.5	-19.5
Redemptions on domestic government debt	73.0	104.5	76.7
Redemptions on foreign government debt	13.1	28.5	30.8
Gross deficit	-135.5	-171.5	-126.9
Gross domestic financing requirement	119.8	138.8	94.7
Sale of government securities, market value[4]	119.6	137.2	96.0

Note: Refer to chapter 2 for 2004.
Source: Central-government accounts.
[1] As from 1998, net bond purchases by the Social Pension Fund are no longer included in the net cash balance, but are instead included in the redemptions on the domestic government debt.
[2] Including capital losses on buy-back.
[3] Includes e.g. movements in the central government's holdings, cf. *Budget Review* from the Ministry of Finance.
[4] Includes net sales of Treasury bills.

THE CENTRAL GOVERNMENT'S CURRENT, INVESTMENT AND LENDING BALANCE, NET CASH BALANCE AND GROSS DEFICIT, 1994-2003 Table 2

1997	1998	1999	2000	2001	2002	2003
7.6	31.4	9.1	30.7	24.0	25.8	12.4
7.4	-	-	-	-	-	-
-0.8	0.3	-1.6	-2.8	-2.4	-8.9	-0.8
5.1	2.1	3.2	1.4	0.4	-0.1	-0.7
-6.6	0.1	0.2	-2.3	0.9	-20.0	-4.1
12.7	34.0	10.9	27.0	22.9	-3.2	6.9
81.4	79.0	75.9	91.3	101.2	112.4	106.3
31.4	37.4	20.0	15.7	17.8	22.5	17.1
-100.1	-82.5	-85.0	-80.0	-96.2	-138.1	-116.6
73.8	64.4	67.9	62.3	81.1	115.5	99.7
73.0	68.0	68.8	65.7	87.7	121.9	94.1

DOMESTIC GOVERNMENT SECURITIES ISSUED IN 2004 — Table 3

No. 487, 4 percent government bonds 2015 (4 pct. stående lån 2015)	
Issued in 2004, DKK million	37,580
Interest payable	15 Nov
Stock exchange code	0992143
Issue commenced	12 Feb 2004
Redemption date	15 Nov 2015
No. 428, 5 percent government bonds 2013 (5 pct. stående lån 2013)	
Issued in 2004, DKK million	1,380
Interest payable	15 Nov
Stock exchange code	0992089
Issue commenced	19 Feb 2002
Redemption date	15 Nov 2013
No. 490, 4 percent government bonds 2010 (4 pct. stående lån 2010)	
Issued in 2004, DKK million	15,760
Interest payable	15 Nov
Stock exchange code	0992178
Issue commenced	20 Apr 2004
Redemption date	15 Nov 2010
No. 424, 4 percent government bonds 2008 (4 pct. stående lån 2008)	
Issued in 2004, DKK million	2,740
Interest payable	15 Aug
Stock exchange code	0992070
Issue commenced	22 Jan 2002
Redemption date	15 Aug 2008
No. 485, 3 per cent Treasury notes 2006 (3 pct. statsgældsbevis 2006)	
Issued in 2004, DKK million	36,540
Interest payable	15 Nov
Stock exchange code	0992135
Issue commenced	13 Jan 2004
Redemption date	15 Nov 2006
No. 529, Treasury bills 2005 IV (Skatkammerbevis 2005 IV)	
Issued in 2004, DKK million	11,159
Interest payable	-
Stock exchange code	0981184
Issue commenced	1 Nov 2004
Redemption date	1 Nov 2005
No. 505, Treasury bills 2005 III (Skatkammerbevis 2005 III)	
Issued in 2004, DKK million	17,600
Interest payable	-
Stock exchange code	0981176
Issue commenced	2 Aug 2004
Redemption date	1 Aug 2005
No. 492, Treasury bills 2005 II (Skatkammerbevis 2005 II)	
Issued in 2004, DKK million	16,988
Interest payable	-
Stock exchange code	0981168
Issue commenced	3 May 2004
Redemption date	2 May 2005

DOMESTIC GOVERNMENT SECURITIES ISSUED IN 2004	Table 3
No. 486, Treasury bills 2005 I (Skatkammerbevis 2005 I)	
Issued in 2004, DKK million	22,855
Interest payable	-
Stock exchange code	0981141
Issue commenced	2 Feb 2004
Redemption date	1 Feb 2005
No. 484, Treasury bills 2004 IV (Skatkammerbevis 2004 IV)	
Issued in 2004, DKK million	10,726
Interest payable	-
Stock exchange code	0981133
Issue commenced	3 Nov 2003
Redemption date	1 Nov 2004
No. 473, Treasury bills 2004 III (Skatkammerbevis 2004 III)	
Issued in 2004, DKK million	5,733
Interest payable	-
Stock exchange code	0981125
Issue commenced	1 Aug 2003
Redemption date	2 Aug 2004
No. 463, Treasury bills 2004 II (Skatkammerbevis 2004 II)	
Issued in 2004, DKK million	2.538
Interest payable	-
Stock exchange code	0981117
Issue commenced	1 May 2003
Redemption date	3 May 2004

CENTRAL-GOVERNMENT FOREIGN BORROWING TRANSACTIONS IN 2004 Table 4

Loan no.	Accept-ance date[1]	Issue date[1]	Nominal rate of interest, per cent p.a.	Type of loan	Maturity date[1]	Nominal amount in million
1015	23-03-04	30-03-04	3.125	Bond Issue	15-10-09	2,100 EUR

[1] Date format: dd-mm-yy.

CENTRAL-GOVERNMENT FOREIGN BORROWING TRANSACTIONS IN 2004 Table 4

Lead Manager/Lender	Issue price	Commissions and expenses, per cent	Amount in DKK million
ABN/Barclays/Nordea	99.452	0.1	15,553.4

CENTRAL-GOVERNMENT DOMESTIC INTEREST-RATE SWAPS, 2004 Table 5a

Loan no.	Start date[1]	Termination date[1]	Amount in DKK million
488	20-02-04	20-02-14	300
489	03-03-04	03-03-14	200
491	26-04-04	26-04-14	400
493	06-05-04	06-05-14	200
494	24-05-04	24-05-14	400
495	28-05-04	28-05-14	400
496	09-06-04	09-06-09	400
497	10-06-04	10-06-09	400
498	22-06-04	22-06-09	400
499	28-06-04	28-06-09	300
500	30-06-04	30-06-09	200
501	13-07-04	13-07-09	400
502	16-07-04	16-07-09	400
503	28-07-04	28-07-09	400
504	29-07-04	29-07-09	300
506	30-07-04	30-07-09	300
507	24-08-04	24-08-09	400
508	25-08-04	25-08-09	500
509	31-08-04	31-08-09	500
510	03-09-04	03-09-14	200
511	07-09-04	07-09-14	200
512	15-09-04	15-09-14	400
513	16-09-04	16-09-14	400
514	22-09-04	22-09-14	500
515	24-09-04	24-09-14	500
516	28-09-04	28-09-14	400
517	29-09-04	29-09-14	300
518	30-09-04	30-09-14	300
519	06-10-04	06-10-14	300
520	13-10-04	13-10-14	300
521	15-10-04	15-10-14	400
522	19-10-04	19-10-11	500
523	20-10-04	20-10-11	400
524	22-10-04	22-10-11	400
525	25-10-04	25-10-11	400
526	26-10-04	26-10-11	400
527	27-10-04	27-10-11	300
528	28-10-04	28-10-11	300
530	17-11-04	17-11-14	200
531	24-11-04	24-11-14	300
532	26-11-04	26-11-14	200
533	29-11-04	29-11-14	300
534	03-12-04	03-12-14	300
535	08-12-04	08-12-14	200
536	14-12-04	14-12-14	300
537	17-12-04	17-12-14	300
538	20-12-04	22-12-14	300
Total			16,100

Note: The Kingdom of Denmark receives fixed interest and pays 6-month Cibor on all domestic interest-rate swaps entered into in 2004.

[1] Date format: dd-mm-yy.

CENTRAL-GOVERNMENT DOMESTIC INTEREST-RATE SWAPS
AS OF 31 DECEMBER 2004 Table 5b

Termination year	Notional amount in DKK million
2007	9,700
2008	800
2009	12,550
2010	14,600
2011	9,150
2012	0
2013	4,400
2014	8,500
Total domestic interest-rate swaps	59,700

Note: The Kingdom of Denmark receives fixed interest and pays 6-month Cibor on all domestic interest-rate swaps.

CENTRAL-GOVERNMENT FOREIGN SWAPS, 2004 Table 5c

Loan no.	Start date[3]	Receiving			Paying			Termination date[3]	Fee in DKK million
		Currency	Million	Interest	Currency	Million	Interest		
943[1]	08-03-04	GBP	6.2	3-month Libor -0.2%	EUR	9.0	6-month Euribor -0.195%	07-03-05	-1.9
941[2]	15-03-04	GBP	40.8	3-month Libor -0.2%	EUR	59.5	6-month Euribor -0.195%	15-03-05	-4.2

[1] Currency swap attached to loan no. 943.
[2] Currency swap attached to loan no. 941.
[3] Date format: dd-mm-yy.

CENTRAL-GOVERNMENT SWAPS FROM DKK TO USD, 2004[1] Table 5d

Loan no.	Start date[2]	Receiving			Paying			Termination date[2]	Fee in DKK million
		Currency	Million	Interest	Currency	Million	Interest		
20001	30-12-04	DKK	262.0	3.3798	USD	47.4	4.164	30-06-16	-3.4
20002	30-12-04	DKK	262.2	3.3798	USD	47.4	4.164	30-06-16	-3.4

[1] Currency swaps in connection with relending to Danish Ship Finance.
[2] Date format: dd-mm-yy.

CENTRAL-GOVERNMENT DOMESTIC DEBT AS OF 31 DECEMBER 2004 Table 6

Serial no.	Coupon, per cent	Name Issue Period[1]	Redemption date	Outstanding amount, DKK million.
Government bonds, fixed interest rate				
Bullet loans				
264	7	Stående lån 2024 6 Apr 1994-31 Dec 2000	10 Nov 2024	25,001.0
269	8	Stående lån 2006 5 Dec 1994-10 Apr 1996	15 Mar 2006	46,236.0
279	7	Stående lån 2007 10 Apr 1996-30 Dec 1997	15 Nov 2007	52,069.0
286	5	Stående lån 2005 14 Jan 1997-21 Jan 2002	15 Aug 2005	53,751.0
291	6	Stående lån 2009 14 Jan 1998-3 May 2000	15 Nov 2009	66,146.0
358	6	Stående lån 2011 4 May 2000-18 Feb 2002	15 Nov 2011	60,501.0
424	4	Stående lån 2008 22 Jan 2002-	15 Aug 2008	44,094.0
428	5	Stående lån 2013 19 Feb 2002-11 Feb 2004	15 Nov 2013	79,325.0
487	4	Stående lån 2015 12 Feb 2004-	15 Nov 2015	37,580.0
490	4	Stående lån 2010 20 Apr 2004-	15 Nov 2010	15,760.0
Amortised loans				
14	5	S 2007 20 Oct 1953-12 Sep 1958	15 Sep 2007[2]	16.5
16	4	S 2017 29 Nov 1955-12 Sep 1958	15 Jun 2017[2]	68.4
Perpetuals				
1	3,5	Dansk Statslån 11 Dec 1886	perpetuals[2]	40.9
80	5	Dansk-Islandsk Fond 1918 20 May 1919	perpetuals	1.0
Government bonds, fixed interest rate, total				480,589.8

CENTRAL-GOVERNMENT DOMESTIC DEBT AS OF 31 DECEMBER 2004 Table 6

Serial no.	Coupon, per cent	Name Issue Period[1]	Redemption date	Outstanding amount, DKK million.
Treasury notes				
Bullet loans				
457	4	Statsgældsbevis 2005 21 Jan 2003-12 Jan 2004	15 Nov 2005	35,150.0
485	3	Statsgældsbevis 2006 13 Jan 2004-	15 Nov 2006	36,540.0
Treasury notes, total				71,690.0
Treasury bills				
Zero-coupon loans				
486	0	Skatkammerbevis 2005 I 2 Feb 2004-1 Nov 2004	1 Feb 2005	22,855.0
492	0	Skatkammerbevis 2005 II 3 May 2004-1 Feb 2005	2 May 2005	16,988.0
505	0	Skatkammerbevis 2005 III 2 Aug 2004-	1 Aug 2005	17,600.0
529	0	Skatkammerbevis 2005 IV 1 Nov 2004-	1 Nov 2005	11,159.0
Treasury bills, total				68,602.0
Lottery bonds				
20	7	Præmieobligationslån af 1965/2010 22 Sep 1965	22 Sep 2010	100.0
21	7	Præmieobligationslån af 1969/2009 1 Oct 1969	31 Dec 2009	100.0
39	10	Præmieobligationslån af 1980/2005 28 Oct 1980	1 Jul 2005	200.0
Lottery bonds, total				400.0
Domestic government securities, total				621,281.8
Swap from DKK to EUR				-16,200.0
Swap from DKK to USD				-524.2
Central-government domestic debt, total				604,557.6

[1] The issue period refers to the period the series has been open for issue. For Treasury bills the dates refer to settlement date. Series still open for issue are marked with "-" after the first day of issue. Certain securities are only sold on one single date. For these securities only this date is stated.

[2] May be redeemed by the central government at three months' notice.

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount, DKK million (1)	Note
AUD loans					
838	3.46	1997/07 AUD(interest on 33.86 million)/JPY (redemption)	0.0	0.0	
-	3.46	1997/07 swap to DEM with floating rate	-0.0	-0.0	
Total AUD			0.0	0.0	
DKK loans					
1	3	1894 perpetual	16.6	16.6	(2)
2	3.5	1901 perpetual	7.6	7.6	(2)
3	3.5	1909 perpetual	15.7	15.7	(2)
Total DKK			39.9	39.9	
EUR					
DEM loans					
713	float.	1996/06 swap from FRF with floating rate	146.6	557.6	
735	6.3875	1996/06 swap from floating rate	146.6	557.6	
-	float.	1996/06 swap to fixed rate	-146.6	-557.6	
772	float.	1996/06 swap from USD with fixed rate	29.9	113.9	
790	5.925	1996/06 swap from floating rate	29.9	113.9	
-	float.	1996/06 swap to fixed rate	-29.9	-113.9	
794	float.	1997/07 swap from JPY with structured rate	13.6	51.8	
799	5.73	1997/07 swap from floating rate	13.6	51.8	
-	float.	1997/07 swap to fixed rate	-13.6	-51.8	
835	float.	1997/07 swap from JPY with fixed rate	69.4	264.1	
838	float.	1997/07 swap from AUD(interest)/JPY (redemption) with fixed rate	44.3	168.6	
842	5.826	1997/07 swap from floating rate	69.4	264.1	
-	float.	1997/07 swap to fixed rate	-69.4	-264.1	
844	5.6925	1997/07 swap from floating rate	44.3	168.6	
-	float.	1997/07 swap to fixed rate	-44.3	-168.6	
850	float.	1997/07 swap from JPY with structured rate	31.0	117.9	
853	float.	1997/07 swap from JPY with structured rate	7.6	28.8	
855	float.	1997/07 swap from JPY with fixed rate	49.3	187.4	
862	float.	1997/07 swap from USD with fixed rate	43.5	165.5	
870	float.	1998/05 swap from USD with fixed rate	908.6	3,455.4	
881	float.	1998/07 swap from NOK with fixed rate	74.3	282.5	
888	float.	1998/07 swap from SEK with fixed rate	102.0	387.9	
890	float.	1998/07 swap from SEK with fixed rate	101.5	386.0	
891	float.	1998/06 swap from SEK with fixed rate	81.9	311.5	
Total DEM			1,703.6	6,479.0	

[1] All loans are repaid at maturity unless otherwise stated.
The outstanding amount of some loans has been reduced during the term of the loan through buy-backs to which asset swaps often have been connected.
The redemptions are in some cases structured, i.e. they are calculated according to a certain formula and can be bigger or smaller than the outstanding amounts mentioned in the Table.

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount DKK million (1)	Note
EUR – continued					
EUR loans					(3)
879	4.625	1998/08	475.0	3,533.1	
895	float.	1999/06 swap to USD with fixed rate (Swap concerning buy-back (USD 20 million) of loan no. 772)	-17.1	-127.0	
907	float.	1999/05 swap from NOK with fixed rate	61.7	459.1	
913	float.	1999/05 swap from USD with fixed rate	465.0	3,458.7	
-	float.	2000/05 swap from USD with fixed rate	35.1	261.1	
914	5.125	1999/05 swap from floating rate	100.0	743.8	
-	float.	1999/05 swap to fixed rate	-100.0	-743.8	
915	5.1625	1999/05 swap from floating rate	100.0	743.8	
-	float.	1999/05 swap to fixed rate	-100.0	-743.8	
941	float.	2004/05 swap from GBP with floating rate	59.5	442.6	
943	float.	2004/05 swap from GBP with floating rate	9.0	66.7	
948	float.	2001/05 swap from GBP with fixed rate	40.7	302.6	
952	float.	2001/06 swap from USD with fixed rate	1,129.5	8,401.7	
953	float.	2001/11 swap from fixed rate	75.0	557.9	
-	4.985	2001/11 swap to floating rate	-75.0	-557.9	
954	float.	2001/11 swap from fixed rate	75.0	557.9	
-	4.985	2001/11 swap to floating rate	-75.0	-557.9	
10001	float.	2001/06 swap from DKK with floating rate	67.1	499.0	
10002	float.	2001/06 swap from DKK with floating rate	67.2	499.5	
10003	float.	2001/06 swap from DKK with floating rate	134.4	999.3	
10004	float.	2001/08 swap from DKK with floating rate	47.1	350.2	
10005	float.	2001/08 swap from DKK with floating rate	47.1	350.2	
10006	float.	2001/06 swap from DKK with floating rate	40.3	300.1	
10007	float.	2001/07 swap from DKK with floating rate	67.2	499.6	
10008	float.	2001/08 swap from DKK with floating rate	53.7	399.4	
10009	float.	2001/08 swap from DKK with floating rate	67.1	499.3	
10010	float.	2001/06 swap from DKK with floating rate	53.7	399.6	
957	float.	2002/12 swap from fixed rate	75.0	557.9	
-	5.0225	2002/12 swap to floating rate	-75.0	-557.9	
958	float.	2002/12 swap from fixed rate	60.0	446.3	
-	5.076	2002/12 swap to floating rate	-60.0	-446.3	
959	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.255	2002/12 swap to floating rate	-100.0	-743.8	
960	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.3825	2002/12 swap to floating rate	-100.0	-743.8	
961	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.455	2002/12 swap to floating rate	-100.0	-743.8	
962	4.875	2002/07	1,500.0	11,157.2	
963	float.	2002/07 swap from fixed rate	500.0	3,719.1	
-	5.025	2002/07 swap to floating rate	-500.0	-3,719.1	
964	float.	2002/07 swap from fixed rate	200.0	1,487.6	
-	5.02125	2002/07 swap to floating rate	-200.0	-1,487.6	
966	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.425	2002/12 swap to floating rate	-200.0	-1,487.6	
967	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.434	2002/12 swap to floating rate	-200.0	-1,487.6	
968	float.	2002/12 swap from fixed rate	100.0	743.8	

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount DKK million (1)	Note
EUR – continued					
EUR loans – continued					
-	5.49	2002/12 swap to floating rate	-100.0	-743.8	
969	float.	2002/12 swap from fixed rate	50.0	371.9	
-	5.2125	2002/12 swap to floating rate	-50.0	-371.9	
970	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.245	2002/12 swap to floating rate	-100.0	-743.8	
972	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.17625	2002/12 swap to floating rate	-200.0	-1,487.6	
973	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.205	2002/12 swap to floating rate	-200.0	-1,487.6	
974	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.195	2002/12 swap to floating rate	-100.0	-743.8	
975	float.	2002/12 swap from fixed rate	150.0	1,115.7	
-	5.17625	2002/12 swap to floating rate	-150.0	-1,115.7	
976	float.	2002/12 swap from fixed rate	100.0	743.8	
-	5.2125	2002/12 swap to floating rate	-100.0	-743.8	
977	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.2325	2002/12 swap to floating rate	-200.0	-1,487.6	
978	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	5.066	2002/12 swap to floating rate	-200.0	-1,487.6	
980	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	4.7525	2002/12 swap to floating rate	-200.0	-1,487.6	
981	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.85	2002/12 swap to floating rate	-100.0	-743.8	
982	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	4.9175	2002/12 swap to floating rate	-200.0	-1,487.6	
984	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.8375	2002/12 swap to floating rate	-100.0	-743.8	
987	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.735	2002/12 swap to floating rate	-100.0	-743.8	
988	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.76625	2002/12 swap to floating rate	-100.0	-743.8	
989	float.	2002/12 swap from fixed rate	200.0	1,487.6	
-	4.6375	2002/12 swap to floating rate	-200.0	-1,487.6	
990	float.	2002/12 swap from fixed rate	150.0	1,115.7	
-	4.621	2002/12 swap to floating rate	-150.0	-1,115.7	
991	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.58	2002/12 swap to floating rate	-100.0	-743.8	
992	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.5975	2002/12 swap to floating rate	-100.0	-743.8	
993	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.6025	2002/12 swap to floating rate	-100.0	-743.8	
994	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.635	2002/12 swap to floating rate	-100.0	-743.8	
995	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.666	2002/12 swap to floating rate	-100.0	-743.8	
996	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.621	2002/12 swap to floating rate	-100.0	-743.8	
997	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.645	2002/12 swap to floating rate	-100.0	-743.8	

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount DKK million (1)	Note
EUR – continued					
EUR loans – continued					
998	float.	2002/12 swap from fixed rate	100.0	743.8	
-	4.721	2002/12 swap to floating rate	-100.0	-743.8	
999	float.	2002/12 swap from fixed rate	50.0	371.9	
-	4.82375	2002/12 swap to floating rate	-50.0	-371.9	
10011	float.	2002/09 swap from DKK with floating rate	53.8	400.0	
10012	float.	2002/09 swap from DKK with floating rate	67.2	500.1	
10013	float.	2002/09 swap from DKK with floating rate	67.3	500.5	
10014	float.	2002/07 swap from DKK with floating rate	67.3	500.5	
10015	float.	2002/09 swap from DKK with floating rate	67.3	500.7	
10016	float.	2002/09 swap from DKK with floating rate	67.3	500.4	
10017	float.	2002/09 swap from DKK with floating rate	40.4	300.3	
10018	float.	2002/09 swap from DKK with floating rate	67.3	500.4	
10019	float.	2002/09 swap from DKK with floating rate	67.3	500.4	
10020	float.	2002/09 swap from DKK with floating rate	67.3	500.2	
10021	float.	2002/09 swap from DKK with floating rate	67.3	500.4	
10022	float.	2002/09 swap from DKK with floating rate	134.6	1,001.3	
10023	float.	2002/07 swap from DKK with floating rate	67.3	500.7	
10024	float.	2002/07 swap from DKK with floating rate	67.3	500.5	
10025	float.	2002/07 swap from DKK with floating rate	67.3	500.7	
10026	float.	2002/07 swap from DKK with floating rate	67.3	500.7	
10027	float.	2002/07 swap from DKK with floating rate	67.3	500.6	
10028	float.	2002/07 swap from DKK with floating rate	67.3	500.4	
10029	float.	2002/07 swap from DKK with floating rate	67.3	500.5	
10030	float.	2002/07 swap from DKK with floating rate	67.3	500.4	
10031	float.	2002/07 swap from DKK with floating rate	53.9	400.6	
10032	float.	2002/07 swap from DKK with floating rate	53.9	400.6	
10033	float.	2002/07 swap from DKK with floating rate	53.9	400.6	
1000	3.25	2003/08	2,300.0	17,107.6	
1001	float.	2003/13 swap from fixed rate	100.0	743.8	
-	4.095	2003/13 swap to floating rate	-100.0	-743.8	
1002	float.	2003/13 swap from fixed rate	100.0	743.8	
-	4.05875	2003/13 swap to floating rate	-100.0	-743.8	
1003	float.	2003/13 swap from fixed rate	100.0	743.8	
-	4.105	2003/13 swap to floating rate	-100.0	-743.8	
1004	float.	2003/13 swap from fixed rate	60.0	446.3	
-	3.73875	2003/13 swap to floating rate	-60.0	-446.3	
1005	float.	2003/13 swap from fixed rate	50.0	371.9	
-	3.68625	2003/13 swap to floating rate	-50.0	-371.9	
1006	float.	2003/13 swap from fixed rate	50.0	371.9	
-	3.6875	2003/13 swap to floating rate	-50.0	-371.9	
1007	float.	2003/13 swap from fixed rate	50.0	371.9	
-	3.81	2003/13 swap to floating rate	-50.0	-371.9	
1008	float.	2003/13 swap from fixed rate	50.0	371.9	
-	3.85	2003/13 swap to floating rate	-50.0	-371.9	
1009	float.	2003/13 swap from fixed rate	50.0	371.9	
-	4.0575	2003/13 swap to floating rate	-50.0	-371.9	
1010	float.	2003/13 swap from fixed rate	50.0	371.9	
-	4.0625	2003/13 swap to floating rate	-50.0	-371.9	
1011	float.	2003/13 swap from fixed rate	50.0	371.9	

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount DKK million (1)	Note
EUR – continued					
EUR loans – continued					
-	3.99875	2003/13 swap to floating rate	-50.0	-371.9	
1012	float.	2003/08 swap from fixed rate	50.0	371.9	
-	3.505	2003/08 swap to floating rate	-50.0	-371.9	
1013	float.	2003/13 swap from fixed rate	50.0	371.9	
-	4.3325	2003/13 swap to floating rate	-50.0	-371.9	
1014	float.	2003/13 swap from fixed rate	50.0	371.9	
-	4.295	2003/13 swap to floating rate	-50.0	-371.9	
1015	3.125	2004/09	2,100.0	15,620.0	
Total EUR			10,337.5	76,891.4	
FRF loans					
713	float.	1996/06	500.0	567.0	
-	float.	1996/06 swap to DEM with floating rate	-500.0	-567.0	
Total FRF			0.0	0.0	
EUR total			11,208.6	83,370.4	
GBP loans					
120	13	1980/05	25.5	267.5	
941	float.	2000/09 EIB loan, Danish Higher Education Framework A	40.8	428.2	
-	float.	2004/05 swap to EUR with floating rate	-40.8	-428.2	
943	float.	2000/09 EIB loan, Danish Motorways III B	6.2	64.5	
-	float.	2004/05 swap to EUR with floating rate	-6.2	-64.5	
948	13	2001/05 swap to EUR with floating rate	-25.5	-267.5	
Total GBP			0.0	0.0	
JPY loans					
794	float.	1997/07	1,000.0	52.7	
-	float.	1997/07 swap to DEM with floating rate	-1,000.0	-52.7	
835	2.63	1997/07	5,000.0	263.7	
-	2.63	1997/07 swap to DEM with floating rate	-5,000.0	-263.7	
838	0	1997/07 JPY(redemption)/AUD(interest)	3,000.0	158.2	
-	0	1997/07 swap to DEM with floating rate	-3,000.0	-158.2	
850	float.	1997/07	2,000.0	105.5	
-	float.	1997/07 swap to DEM with floating rate	-2,000.0	-105.5	
853	float.	1997/07	500.0	26.4	
-	float.	1997/07 swap to DEM with floating rate	-500.0	-26.4	
855	2.02	1997/07 EIB loan, Danish Road By-passes B	3,400.0	179.3	
-	2.02	1997/07 swap to DEM with floating rate	-3,400.0	-179.3	
Total JPY			0.0	0.0	
NOK loans					
881	6.25	1998/07	330.0	297.8	
-	6.25	1998/07 swap to DEM with floating rate	-330.0	-297.8	
907	5.75	1999/05	500.0	451.2	

CENTRAL-GOVERNMENT FOREIGN DEBT AS OF 31 DECEMBER 2004[1] Table 7

Loan no.	Rate of interest, per cent p.a.	Title	Outstanding amount, million of currency	Outstanding amount DKK million (1)	Note
-	5.75	1999/05 swap to EUR with floating rate	-500.0	-451.2	
Total NOK			0.0	0.0	
SEK loans					
888	5	1998/07	500.0	412.5	
-	5	1998/07 swap to DEM with floating rate	-500.0	-412.5	
890	5.12	1998/07	500.0	412.5	
-	5.12	1998/07 swap to DEM with floating rate	-500.0	-412.5	
891	5.065	1998/06	400.0	330.0	
-	5.065	1998/06 swap to DEM with floating rate	-400.0	-330.0	
Total SEK			0.0	0.0	
USD loans					
772	6.065	1996/06 swap to DEM with floating rate	-20.0	-109.4	
862	4	1997/07	30.0	164.0	
-	4	1997/07 swap to DEM with floating rate	-30.0	-164.0	
870	5.75	1998/05	500.0	2,733.8	
-	5.75	1998/05 swap to DEM with floating rate	-500.0	-2,733.8	
895	6.065	1999/06 swap from EUR with floating rate (Swap concerning buy-back (USD 20 million) of loan no. 772)	20.0	109.4	
913	6.625	1999/05	530.0	2,897.8	
-	6.625	1999/05 swap to EUR with floating rate	-500.0	-2,733.8	
-	6.625	2000/05 swap to EUR with floating rate	-30.0	-164.0	
952	5.125	2001/06	1,000.0	5,467.6	
-	5.125	2001/06 swap to EUR with floating rate	-1,000.0	-5,467.6	
20001	4.164	2004/16 swap from DKK with fixed rate	47.4	259.0	
20002	4.164	2004/16 swap from DKK with fixed rate	47.4	259.3	
Total USD			94.8	518.3	
Central-government foreign debt, total				83,928.5	

(1) The outstanding amount as of 31 December 2004 is calculated on the basis of the following exchange rates as of 30 December 2004 expressed as the exchange rate per 100 units: AUD = 424.09, EUR = 743.81, GBP = 1,049.39, JPY = 5.2741, NOK = 90.23, SEK = 82.50, USD = 546.76. The outstanding amount as of 31 December 2004 in the former national currencies in the eurozone is converted into DKK by use of the irrevocable fixed exchange rates vis-à-vis EUR: DEM = 1.95583, FRF = 6.55957.

(2) Multi-currency loan. The creditor can choose which currency to make payments in, however at a fixed rate of exchange. Redeemable by the Kingdom of Denmark at 3 months' notice.

(3) Including XEU loans issued before 1 January 1999.

SERVICE ON CENTRAL-GOVERNMENT DOMESTIC DEBT[1], END-2004 Table 8

DKK billion	Interest	Redemptions	Total
2005	27.7	89.1	116.8
2006	23.7	80.0	103.7
2007	18.9	45.8	64.7
2008	15.7	42.5	58.1
2009	14.0	60.5	74.5
2010	10.3	15.8	26.2
2011	10.3	60.5	70.7
2012	7.0	0.0	6.9
2013	6.9	79.3	86.2
2014	3.1	0.0	3.0
2015	3.3	37.5	40.8
2016	1.8	0.0	1.7
2017	1.8	0.0	1.8
2018	1.8	0.0	1.8
2019	1.8	0.0	1.8
2020	1.8	0.0	1.8
2021	1.8	0.0	1.8
2022	1.8	0.0	1.8
2023	1.8	0.0	1.8
2024	1.8	25.0	26.8
Total	156.5	536.0	692.4

[1] Excluding Treasury bills. Including net interest payments on domestic interest-rate swaps. Krone payments to and from the central government in currency swaps are included in the redemptions.

SERVICE ON CENTRAL-GOVERNMENT FOREIGN DEBT [1], END-2004 Table 9

DKK billion	Interest	Redemptions	Total
2005	1.5	8.0	9.5
2006	1.3	12.0	13.3
2007	0.9	19.4	20.4
2008	0.4	22.3	22.7
2009	-0.4	21.9	21.4
2010	-1.0	0.0	-1.0
2011	-1.0	0.0	-1.0
2012	-1.1	0.0	-1.1
2013	-0.1	0.0	-0.1
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.1	0.1
Total	0.4	83.9	84.3

[1] Including net interest payments on swaps. Krone payments to and from the central government in currency swaps are included in the redemptions.

KINGDOM OF DENMARK'S RATING IN DOMESTIC CURRENCY — Table 10a

	Moody's	Standard & Poor's
1986, Jul	Aaa	
1992, Jul		AAA
Current rating	Aaa	AAA

Note: Moody's Investors Service and Standard & Poor's use the following ratings:
Moody's: Aaa, Aa, A, Baa, Ba, B, Caa, Ca and C.
For the categories Aa to Caa are used 1, 2 or 3 to indicate a status slightly better or worse within the category.
Standard & Poor's: AAA, AA, A, BBB, BB, B, CCC, CC, C and D.
For the categories AA to CCC are used + or - to indicate a status slightly better or worse within the category.

KINGDOM OF DENMARK'S RATING IN FOREIGN CURRENCY — Table 10b

	Moody's	Standard & Poor's
1981, Mar		AAA
1983, Jan		AA+
1985, Apr	Aa	
1986, Aug	Aa1	
1987, Mar		AA
1991, Oct		AA+
1999, Aug	Aaa	
2001, Feb		AAA
Current rating	Aaa	AAA

Note: See the note in Table 10a for ranking of the rating categories.

RATING OF SELECTED COUNTRIES' CENTRAL-GOVERNMENT DEBT Table 11

	Moody's		Standard & Poor's	
	Domestic	Foreign	Domestic	Foreign
Australia	Aaa	Aaa	AAA	AAA
Belgium	Aa1	Aa1	AA+	AA+
Denmark	Aaa	Aaa	AAA	AAA
Finland	Aaa	Aaa	AAA	AAA
France	Aaa	Aaa	AAA	AAA
Greece	A1	A1	A	A
Netherlands	Aaa	Aaa	AAA	AAA
Ireland	Aaa	Aaa	AAA	AAA
Italy	Aa2	Aa2	AA-	AA-
Japan	A2	Aaa	AA-	AA-
New Zealand	Aaa	Aaa	AAA	AA+
Norway	Aaa	Aaa	AAA	AAA
Portugal	Aa2	Aa2	AA	AA
Switzerland	Aaa	Aaa	AAA	AAA
Spain	Aaa	Aaa	AAA	AAA
UK	Aaa	NR	AAA	AAA
Sweden	Aaa	Aaa	AAA	AAA
South Africa	A2	Baa1	A	BBB
Czech Republic	A1	A1	A	A-
Germany	Aaa	Aaa	AAA	AAA
USA	Aaa	Aaa	AAA	AAA
Austria	Aaa	Aaa	AAA	AAA

Note: As published in January 2005. See the note in Table 10a for ranking of the rating categories. NR denotes Non-Rated.
Source: Moody's Investors Service and Standard & Poor's.

Glossary

This glossary presents explanations of a number of key terms and concepts in the area of government debt. Terms in *italics* are included elsewhere in the glossary.

Acceptance date
The date on which a loan is agreed.

Accrued interest
Accrued interest is payment for the interest accruing on a paper since the last interest due date. In the Danish bond market trades are with coupons. The buyer of the paper pays a proportion of the coupon to the seller for the period from the last due date to the settlement date. In return, the buyer receives the whole of the following coupon.

Annuity loan
Loan for which service payments (interest and redemptions) are constant throughout the lifetime of the loan.

Auction
Issuance of government securities via auction is undertaken in large single issues at regular intervals. At an auction, a bond is offered at a given nominal interest rate, maturity and redemption profile. An eligible group of market participants may submit bids for a certain volume of bonds at a given price (or interest rate).

When government securities are sold via auction, a distinction is often drawn between two different methods of fixing the price paid by the bidders. In the "uniform pricing" method, a cut-off price is fixed on the basis of the bids received, and all bids at the cut-off price or above are met at the cut-off price. If the total volume of bids at the cut-off price and above exceeds the volume that the issuer intends to sell, allocation can take place on a pro-rata basis. This entails that for bidders who have submitted bids at the actual cut-off price only a part of the bids are honoured. The Danish central government uses auctions with "uniform pricing" on sale of Treasury bills where bids are made for an interest rate rather than a price.

By the "multiple pricing" method, a cut-off price is likewise fixed on the basis of the bids received, and all bids at the cut-off price or above

are met at the prices offered by the individual bidders. This method is used in the Danish central government's opening auctions for government bonds and Treasury notes.

Basis points
1 basis point is 0.01 percentage points. This is applied especially to *yield spreads*.

Benchmark bond
A key issue. Benchmark bonds are used as a reference in the pricing of other bonds and financial products in the market. Changes of the benchmark status of Danish government bonds are determined and published by Government Debt Management after discussion in the *Primary Dealer* Committee.

Bid/ask price
The bid/ask price is the price from the perspective of the market maker. The difference between the ask and bid price is the bid-ask spread.

Borrowing requirement
The part of the *gross financing requirement* that is covered by issuance of government securities. Both domestic and foreign borrowing requirements are applied.

Bullet loan
Loan on which only interest is paid during the term of the loan. The loan is repaid in full on the maturity date. Danish government bonds and Treasury notes are bullet loans.

Buy-back issues
The government securities, which the central government can buy back before maturity. Buy-backs are used to manage *interest-rate risk*, smooth the central government's redemption profile and to maintain liquid *on-the-run issues*.

Callable bond
Bond that can be redeemed before maturity by the borrower on terms agreed in advance. The debtor has a call *option* on the bond.

Capital losses/gains on issuance
Capital losses and gains on issuance arise when a loan is issued at prices above and below par respectively. Capital losses/gains on issuance are

distributed in the government accounts across the maturity of the loan under *distributed capital losses on issuance.*

Central-government debt
Comprises liabilities in the form of domestic and foreign debt as well as assets in the Social Pension Fund, the High-Technology Foundation, the Financing Fund for increased distributions from the Danish National Research Foundation (the Financing Fund) and the balance of the central government's account.

Cibor (Copenhagen InterBank Offered Rate)
The interest rate at which a bank in the Copenhagen interbank market is willing to lend Danish kroner without collateral to another creditworthy bank. Cibor is calculated on the basis of rates offered by a number of individual banks (Cibor quoters). Cibor is fixed for 8 different maturities: 1, 2, 3, 4, 5, 6, 9 and 12 months.

Cibor is the reference interest rate for a large number of financial contracts. See also *Euribor* and *Libor*.

Clearing
Compilation of each participant's purchase and sale resulting in the net position of each participant. See also *Settlement*.

Clearstream
Clearing/settlement and custody institution for securities.

Commercial Paper (CP)
Short-term debt instruments (zero-coupon paper) with maturities of up to one year. CP are mainly issued to cover a short-term financing requirement. The central government has a CP programme in the American and European markets.

Cost-at-Risk model (CaR model)
Simulation model developed by Government Debt Management to quantify the risk on the exposure of the central-government debt portfolio to future interest-rate developments. The model simulates 2,500 scenarios for the central government's annual interest costs 10 years ahead.

Absolute CaR for a given year indicates the maximum interest costs for the debt with a probability of 95 per cent. Relative CaR is the difference between absolute CaR and the expected interest costs (mean). Conditional CaR quantifies relative CaR for a given future year, conditional on

known interest rates up until that year. The target is therefore not affected by a longer calculation horizon.

Credit risk
The risk of a financial loss as a consequence of a counterparty's default on its payment obligations. In connection with the government debt the credit risk occurs in relation to *swaps*.

Cross default
Clause in loan or swap agreement that permits cancellation of the agreement should one of the parties default on its payment obligations vis-à-vis the counterparty or a third party.

Distributed capital losses on issuance
Capital losses/gains on issuance are distributed linearly in the government accounts over the maturity of the loan.

Dual currency bond
Loan raised and serviced in one currency but repaid in another currency. In reality, the loan is a combination of an *annuity loan* (interest payments) in one currency and a zero-coupon loan (redemptions) in the other currency. See also *Reverse dual currency bond.*

Duration
The average fixed-interest period for a financial *portfolio*. Long duration of the government debt implies a low risk, since on average smaller proportions of the interest costs are adjusted to changes in the level of interest rates.

In other contexts duration is also used to express the price sensitivity of the portfolio. The higher the duration, the greater the price sensitivity.

Electronic trading
Placement of orders (bid or ask) via electronic facilities to a trading system in which orders are matched and executed automatically.

Euribor (Euro InterBank Offered Rate)
The interest rate at which a bank in the euro-interbank market is willing to grant money-market loans in euro to another creditworthy bank. Used as reference interest rate in various financial contracts, e.g. *swaps*.

Euroclear
Clearing/settlement and custody institution for securities.

EuroMTS
Electronic trading platform for the most liquid *benchmark bonds* denominated in euro. Fully owned by MTS S.p.A. See also *electronic trading*.

Exchange-rate risk
The exchange-rate risk on the government debt is the risk of an increase in the value of the debt due to exchange-rate movements.

Final exposure
Denotes the currency or interest-rate exposure on a loan compiled after *swaps*.

Financial derivative
An instrument of which the value is derived from the price of an underlying asset, e.g. securities, goods or currency. *Options* and *swaps* are examples of financial derivatives.

Floating interest rate
An interest rate that is agreed to float as, or in step with, another interest rate listed on the market at specific shorter intervals than the maturity of the loan, typically every third or sixth month.

Floating rate note (FRN)
Bond issued with floating interest rate.

Foreign-exchange reserve
The purpose of the foreign-exchange reserve is first and foremost to support Denmark's fixed-exchange-rate policy vis-à-vis the euro area. The foreign-exchange reserve is held at Danmarks Nationalbank and mainly placed in foreign bonds and as foreign bank deposits.

Forward contract
Agreement on delivery and payment of goods, securities or currency on a future date at a price fixed at the time of the agreement (*forward price*).

Forward price
The price fixed at the time of agreement in a *forward contract* on future delivery of goods, securities or currency.

Government-guaranteed company
A company that can raise government-guaranteed loans.

Gross financing requirement
The gross domestic financing requirement is compiled as the net domestic financing requirement with addition of redemptions on the domestic debt including buy-backs, the net bond purchases of three government funds, and krone payments from the central government in currency swaps.

The gross foreign financing requirement is compiled as the net foreign financing requirement with addition of repayments on the foreign debt including buy-backs and foreign-exchange payments from the central government in currency swaps. See also *borrowing requirement* and *net financing requirement*.

Haircut
The deduction made from a paper's market value on determining its collateral value. This gives a prudent estimate of the value of the securities received as collateral for lending or another outstanding. A haircut takes account of the risk of the paper's depreciation from the date of compilation of the collateral value until the possible enforced realisation of the paper, if the pledgor of collateral (the borrower) defaults. The central government uses haircuts for collateral pledged by counterparties in connection with swaps and securities lending.

Interest-rate fixing
The interest-rate fixing at a given time is the amount for which a new interest rate is to be fixed within one year. The portfolio at a given time affects the interest-rate fixing via the redemptions within the next year as well as the size of the floating-rate debt and the swap portfolio on which a new interest rate is to be fixed within one year. Analyses of the interest-rate fixing take account of the expectations of the Ministry of Finance of future budget surpluses or deficits that respectively reduce and increase the interest-rate fixing, as well as new swaps and buy-backs.

Interest-rate risk
In connection with the government debt this is the risk of higher interest costs as a consequence of the development in interest rates. See also *refinancing risk*.

In other contexts, interest-rate risk applies to the risk of capital losses as a consequence of interest-rate fluctuations.

ISDA (International Swaps and Derivatives Association)
International association of financial institutions. ISDA's objective is to work for standardisation of practice and documentation in relation to *swaps*.

ISDA Master Agreement
Framework agreement whereby all swaps with one and the same counterparty are documented.

ISMA (International Securities Market Association)
International association of financial institutions that trade securities in the international market and e.g. work for standardisation of practice and documentation of settlement of trades.

During 2005, ISMA is expected to merge with International Primary Market Association (IPMA). The name of the new association will be International Capital Market Association (ICMA).

ISO currency codes

Country	Currency	ISO code
Australia	Dollar	AUD
Denmark	Krone	DKK
Euro area	Euro	EUR
Austria	*Schilling*	*ATS*
Belgium	*Franc*	*BEF*
Finland	*Markka*	*FIM*
France	*Franc*	*FRF*
Germany	*Deutsche Mark*	*DEM*
Greece	*Drachma*	*GRD*
Ireland	*Punt*	*IEP*
Italy	*Lire*	*ITL*
Luxembourg	*Franc*	*LUF*
Netherlands	*Guilder*	*NLG*
Portugal	*Escudo*	*PTE*
Spain	*Peseta*	*ESP*
Japan	Yen	JPY
Norway	Krone	NOK
Sweden	Krona	SEK
UK	Pound sterling	GBP
USA	Dollar	USD

Issuance
Danish government bonds are issued on *MTS Denmark*. See also *auction* and *tap sale*.

Lead manager
The bank(s) that arrange(s) a bond loan. Lead manager is responsible for coordination, distribution and documentation of the supply of bonds. A

syndicate of banks normally undertakes distribution of the bond loan, cf. also *syndicated bond issue.* Government Debt Management uses syndicated bond issues in its foreign borrowing.

Libor (London InterBank Offered Rate)
The interest rate at which a bank in the London interbank market is willing to undertake money-market lending in various currencies to another creditworthy bank. Used as a reference interest rate in a large number of financial contracts, e.g. *swaps*.

Liquidity
Liquidity expresses tradability. Liquid bonds are often characterised by a large outstanding amount, high turnover and a narrow spread between *bid and ask prices*. Investors will generally be willing to pay a higher price for a more liquid bond (liquidity premium).

Market maker
A securities dealer that quotes current tradable bid and ask prices in securities.

Medium Term Note (MTN)
A bond issued in accordance with standardised loan documentation.

Minimum coupon rate
The permitted minimum coupon rate for bonds that exempts the capital gains of investors who are liable to pay income tax in Denmark from taxation, cf. the Capital Gains Act (Legislative Order No. 964 of 21 September 2004).

Ordinary fixing of the minimum coupon rate takes place for the six-month periods January-June and July-December. The minimum coupon rate is fixed on the basis of a reference yield calculated on a daily basis by the Copenhagen Stock Exchange. The reference yield is calculated to two decimal places as a simple average of the yields to maturity for open, fixed-yield krone bonds (apart from *callable bonds* quoted above par and index-linked bonds) for the last 20 trading days prior to 15 December and 15 June. The minimum coupon rate is 7/8 of the average yield compiled, rounded down to the nearest integer number of percentage points.

The minimum coupon rate can be changed extraordinarily should the reference yield on 10 consecutive trading days be more than 2 percentage points higher, or 1 percentage point lower, than the average which is the basis for the current minimum coupon rate. The new minimum coupon

rate is 7/8 of the average of the reference yield for these 10 trading days, rounded down to the nearest integer number of percentage points.

Monetary-policy counterparties
Financial institutions with access to the monetary-policy instruments: deposits with Danmarks Nationalbank on a day-to-day basis, purchase of certificates of deposit and loans against securities as collateral. Danish banks and mortgage-credit institutes, as well as a number of branches of foreign credit institutions, comprise the monetary-policy counterparties.

MTS Associated Markets (MTSAM)
Belgian company with market segments for wholesale trading in Belgian, Danish and Finnish government securities.

MTS Denmark (MTSDk)
A market segment under *MTS Associated Markets (MTSAM)* for wholesale trading in Danish government bonds. The segment uses the electronic trading system *Telematico*. Further information on trading in Danish government securities is available on www.mtsdenmark.com. See also *Electronic trading*.

Net financing requirement
The net domestic financing requirement is compiled as the deficit on the central government's CIL (current, investment and lending) balance with addition of domestic *re-lending* (net of redemptions) and portfolio movements and accruals. The net foreign financing requirement corresponds to re-lending in foreign currency (net of redemptions). 2004 is the first year with a net foreign financing requirement.

Norm
Framework for the distribution of the central government's domestic and foreign borrowing. Under the domestic norm, the domestic borrowing in kroner in principle covers the central government's gross domestic financing requirement. The foreign norm entails that the foreign *borrowing requirement* matches the redemptions on the foreign debt raised to ensure a foreign-exchange reserve. See also *gross financing requirement*.

On-the-run issues
On-the-run issues comprise the government securities issued to cover the current domestic borrowing requirement. On-the-run government issues are open for current *issuance* and comprise government bonds in the 2-, 5- and 10-year maturity segments, as well as Treasury bills.

Operational risk
The risk of economic loss as a consequence of faults in internal processes, human errors or system faults, or as a consequence of external events.

Option
A contract giving the owner (the buyer) the right, but not the obligation, to buy or sell an underlying asset (goods, a financial instrument or a currency) at an agreed price (strike price) at an agreed future time or for an agreed future period. The seller is obliged to recognise the owner's right.

Option-adjusted duration
The *duration* for *callable bonds* where adjustments have been made for the uncertainty of the maturity structure as a consequence of the borrower's right to early redemption of the bond. The option-adjusted duration is lower than if the borrower did not have the possibility of early redemption. In connection with government debt, option-adjusted duration is used to calculate the duration of the Social Pension Fund's portfolio of callable bonds.

Perpetual
Loans with infinite maturity, i.e. the only payments are the ongoing coupon payments. The Kingdom of Denmark has a few minor perpetuals from the end of the 19th century and beginning of the 20th century.

Plain vanilla
Term used for standardised and simple products, e.g. *bullet loans* and simple interest-rate *swaps.* See also *Structured loans.*

Portfolio
Term used for holdings of assets and/or liabilities.

Primary dealer
Primary dealers are financial institutions that by agreement with the issuer, against special rights, are obliged to provide *liquidity* in specific government securities. Primary dealers typically have the exclusive right to bid at government securities auctions, and are normally obliged to accept a certain minimum amount. Primary dealers are also typically obliged to e.g. contribute to liquidity in the bond market by quoting current bid and ask prices for bonds vis-à-vis other banks (market-making).

Primary market
Market for issuance of bonds. See also *Secondary market.*

Private placement
Bond or other loan offered to a small group of buyers and not normally listed. See also *Public issue.*

Public issue
Bond loan that is offered to the general public and is listed. See also *Private placement.*

Rating
Credit rating given by rating institutes such as Standard & Poor's and Moody's, cf. Tables 10a, 10b and 11 of the Appendix of Tables.

Re-financing risk
The risk that the borrower has to refinance redemptions on the debt at a time when the interest-rate level is high, or in a period where the borrower's specific borrowing terms are particularly unfavourable.

Re-lending
Re-lending constitutes central-government loans to first and foremost Ørestadsselskabet I/S (the Ørestad Development Corporation), but also to A/S Storebælt and A/S Øresund, etc. These loans precisely reflect an existing government paper. Coupon, interest due date and maturity date will thus be identical with an existing government paper. The price of the loans is set on the basis of the current market conditions.

In addition, Danish Ship Finance (DSF) has access to a re-lending facility whereby re-lending is offered as fixed-rate serial loans with a maturity of up to 12 years. Re-lending to DSF can take place in both Danish kroner and US dollars.

Re-lending list
The range of government securities in which *re-lending* can be granted. The re-lending list is determined by Government Debt Management and comprises all fixed-rate government bonds that are bullet loans in Danish kroner in maturity segments between 2 and 10 years. The central government finances re-lending by issuing *on-the-run securities*.

Reverse dual currency bond
Loans raised and repaid in one currency, while interest is paid in another. See also *Dual currency bond.*

Saxess
Electronic trading system for bonds and shares used on e.g. the Copenhagen Stock Exchange. See also *Electronic trading*.

Secondary market
Market for trading of bonds after they are issued in the *primary market.*

Securities lending
Securities lending is a transaction whereby the seller/borrower is paid to transfer securities to a buyer/lender. On conclusion of the agreement, the seller/borrower simultaneously commits to buy back the securities at an agreed price on expiry of the agreement. For legal/technical reasons securities lending is defined in the contracts as sale and buy-back of securities, but in reality these are collateralised loans. The counterparty in this transaction lends against securities as collateral.

The central government and the Social Pension Fund lend government bonds to primary dealers in Danish government bonds.

Serial loan
A loan for which the debt is repaid in equal redemptions on each interest due date. As the outstanding debt decreases throughout the maturity of the loan, the interest payments, and thereby the overall payments, are lower for each due date.

Settlement
Completion of a trade by final settlement of agreed obligations. See also *Clearing*.

Strategic benchmarks
Guiding points for liquidity and interest-rate exposure used in the implementation of the Danish government debt strategy. For example, strategic benchmarks are set for the outstanding amount in *on-the-run* government securities and for the *duration* of the government debt.

Structured loan
A loan on special terms, e.g. special redemption terms or built-in *options,* is characterised as a structured loan, in contrast to a *plain vanilla* loan.

Swap
A swap is an agreement between two parties to exchange payments over a fixed period. A swap is a separate financial transaction.

Currency swaps are used to restructure debt among various payment currencies. Payments in one currency are thus swapped to payments in another currency. In a currency swap from kroner to euro, the central government e.g. receives interest in kroner at a floating rate and pays interest in euro at a floating rate. The counterparty pays interest and repays the krone principal, in return for payments on the euro principal. Normally, principals are exchanged both at the start and end of the deal.

Interest-rate swaps are typically used to restructure debt between fixed and floating interest rates. In an interest-rate swap from fixed to floating interest rates in the krone market, the central government e.g. receives interest on the swap at a fixed rate (e.g. 5- or 10-year) and pays interest in kroner at a floating rate. In contrast to a currency swap there is no exchange of principal between the parties in an interest-rate swap. The principal in an interest-rate swap is synthetic and is used only to determine the size of the interest payments at the individual due dates. The principal in an interest-rate swap is often described as the notional value rather than the nominal value. The central government's interest-rate swaps are typically transacted as portfolio swaps, i.e. not connected to specific loans.

The overall value of a swap is usually zero when the swap is transacted, but the value of the swap can subsequently become positive or negative, depending on market developments in interest and exchange rates.

Swap assignment
Term used when a *Swap* is assigned to another counterparty. The purpose of the transaction can be to reduce the *credit risk* on the original swap counterparty.

Swap interest rate
The swap interest rate is the fixed interest rate paid or received in an interest-rate swap against respectively receipt or payment of a floating interest rate (normally *Euribor* for euro interest-rate swaps and *Cibor* for krone interest-rate swaps).

Swap termination
When a swap agreement is cancelled before actual expiry, it is said to be terminated. This can be by specific agreement between the parties or because an event has occurred which gives one party the right to terminate the swap. On termination, settlement is at the market value of the swap.

Syndicated bond issue
Bond issue intermediated by a syndicate of banks, typically comprising 2-4 *lead managers* and 4-6 co-lead managers. The lead managers are responsible for coordinating and distributing the largest share of the issue, while the remaining bonds are sold via co-lead managers. Issuance is often based on bookbuilding whereby *lead managers* and co-lead managers obtain bids from investors. When the "book" of bids has been built up, the issuer determines price and allocation, that subsequently can be accepted by the investors.

Tap sale
Ongoing *issuance* in the same series. In Denmark, the issuance of government bonds, as well as mortgage-credit bonds, is normally via tap sale. See also *auction.*

Telematico
The dominant electronic trading system for wholesale trading of European bonds.

Value date
Settlement date, i.e. the date on which e.g. a securities deal is closed by delivery of securities against payment.

Volatility
The movements in the price of an asset, e.g. the fluctuation in a bond price.

VP Securities Services
Clearing/settlement and custody institution for securities. VP also handles electronic issuance of securities and registration of ownership and rights pertaining to electronic securities.

Yield curve
Relationship between the interest rate and maturity of securities. A rising yield curve – i.e. where interest rates for short-term securities are lower than interest rates for long-term securities – is called normal. If the yield curve is declining, it is described as inverse.

Yield spread
The spread between the *yields to maturity* on two bonds. On calculating yield spreads adjustment is often made for differences in the bonds'

remaining maturity, e.g. based on an estimated *yield* or *zero-coupon yield* curve.

Yield to maturity
The fixed discount rate that makes the present value of payments on the bond equivalent to the actual price of the bond. On calculating the yield to maturity all payments are included, irrespective of whether they are interest or redemption payments.

Zero-coupon bond
Loan that is not subject to current interest payments, and which is redeemed on maturity. The cost of borrowing is solely a result of a *capital loss on issuance*. Treasury bills are zero-coupon securities.

Zero-coupon rate
The *yield to maturity* on a *zero-coupon bond.* The zero-coupon-yield structure indicates the relation between remaining maturity and the zero-coupon rate.