# Danish Government Securities 1996



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Johan Alkjær

Danmarks Nationalbank Havnegade 5 DK-1093 Copenhagen K Telephone +45 33 63 63 63 (until March 16, 1996 +45 33 14 14 11) Telefax +45 33 63 71 09 (until March 16, 1996 +45 33 14 14 04)

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# **Introduction and Summary**

Danish Government Securities 1996 deals with the management of the domestic debt of the Kingdom of Denmark and the Danish securities market.

Since 1991, Danmarks Nationalbank - the Danish central bank - has acted as agent to the Ministry of Finance in the area of government borrowing, including the formulation of strategies for both domestic and foreign borrowing. The overall responsibility for the management of the government debt still rests with the Ministry of Finance, but within quarterly guidelines Danmarks Nationalbank is authorised to conduct the necessary debt transactions on behalf of the government.

#### The Danish Financial Market

The Danish bond market is among the largest in Europe. Besides government bonds, the Danish market has a large volume of mortgage-credit bonds. The large proportion of mortgage-credit bonds is explained by the long-standing Danish tradition of financing construction and private housing by issuing mortgage-credit bonds.

Denmark also has a well-functioning money market with liquid trading in instruments such as repos, Forward Rate Agreements and foreignexchange swaps. The well-functioning market among other things gives easy access to investment funding.

Until now the market has been organised as an integrated system consisting of the Copenhagen Stock Exchange (bond and stock trading), the FUTOP Clearing Centre (settlement and guaranteeing of derivatives) and the Danish Securities Centre (central securities depository and clearing centre).

A major reform of the securities market has taken effect from January 1, 1996. The main purpose of the reform is to guarantee open access to the Danish securities market for credit institutions and other investment firms from all EU member countries (or EU-based subsidiaries of companies from other countries)<sup>1),2)</sup> These companies can now participate in the Danish securities market on the same terms as Danish financial institutions. They can participate in trading by becoming a remote member of the Copenhagen Stock Exchange and participate in securities

Or countries with which the EU has an agreement on such matters.

<sup>2)</sup> The companies should have a licence from the financial supervisory authority of the home country.

clearing and settlement by becoming a member of the Danish Securities Centre (cross-border clearing is also possible) and obtaining a cash settlement account with Danmarks Nationalbank.

#### Government Bonds

The Danish government issues bonds, Treasury notes and Treasury bills. The issues are created with characteristics that investors in Denmark and abroad find attractive, i.e. bullet issues.

It is an important objective to create liquid issues that can be traded efficiently, domestically as well as internationally, and the number of issues open for sale has therefore been limited. The 10-year benchmark is of a size comparable to those of most important European bond markets.

Government bonds and Treasury notes are sold on tap. In the tap system each securities series is continuously open for sale over an extended period of time - normally 1-3 years - and the new issue is continuously added to the existing stock. This system has proved very flexible and has worked well in both positive and adverse market conditions.

#### Government Debt Policy

All domestic government securities are sold to the market by Danmarks Nationalbank acting as fiscal agent to the Ministry of Finance. The securities are sold via the Copenhagen Stock Exchange, where Danmarks Nationalbank participates as a trader.

The fundamental principle of the Danish government debt policy is that the gross domestic borrowing requirement be covered by the issue of domestic government securities. This modus operandi ensures that the liquidity effects of government spending are neutralised; the monetary policy can therefore pursue its own goals. The monthly deficit figures are, however, not necessarily closely matched by the monthly issue activity.

There are also two other central objectives: to minimise the costs of the government debt and to aim at a duration target. Furthermore, the government debt policy has a number of sub-targets, e.g. keeping a continuous and stable presence in the bond market and ensuring an appropriate redemption profile for the total debt.

### The Structure of this Book

Chapter 1 provides an overview of the government debt policy as well as the issue activity in 1995. Chapter 2 details the types of government securities and the issue in 1995. Chapter 3 describes the tap issue technique and explains the deliberations behind the planning of the issue. Chapter 4 gives a broader overview of the securities types and institutions of the Danish securities market.

# Chapter 1. Domestic Debt Management

# 1.1. The Borrowing Requirement

The central government's net deficit (on a cash basis) is expected to be DKK 24.5 billion in 1996 (2.4 per cent of GDP). The redemption of domestic debt amounts to DKK 78.2 billion and the gross domestic borrowing requirement is thus DKK 102.7 billion in 1996.

The gross domestic borrowing requirement is covered by issuing domestic government securities denominated in DKK. This modus operandi has been agreed for more than 10 years between the government and Danmarks Nationalbank. The agreement was formalised in 1993 in preparation for participation in the second phase of EMU. The agreement states that the issue of domestic DKK-denominated government securities should equal the central government's domestic borrowing requirement, cf. Table 1.1.1.

Table 1.1.1. The central government's net and gross deficit.

DKK billion	1992	1993	1994	1995	1996
Deficit on current, investment					
and lending account (CIL)	. 35.3	48.4	39.7	32.2	28.8
Capital items	4.4	-3.1	9.6	9.1	-4.4
Net deficit (cash basis)	. 30.8	45.3	49.4	41.4	24.4
Redemption of domestic debt:	2500 2000 1 40000 10				
Bonds <sup>1)</sup>	. 56.0	38.0	50.5	48.4	40.5
Treasury notes	. 39.9	36.3	22.5	56.1	37.7
Redemption of foreign debt	16.5	16.7	13.1	28.5	27.3
Gross deficit (cash basis)	143.3	136.3	135.5	174.3	129.9

Note: Figures for 1995 are preliminary. Figures for 1996 are based on the Finance Act.

<sup>1)</sup> Includes compulsory savings in 1992.

<sup>2)</sup> Gross deficit less redemption of foreign debt and securities bought back from the market and held by the government.

The purpose of the central government's foreign borrowing is to maintain an adequate level of foreign-exchange reserves, and the proceeds are added to the government's deposits with Danmarks Nationalbank.

Redemption of foreign loans is normally covered by new foreign loans, according to the agreement between the government and Danmarks Nationalbank.

In 1996 the gross domestic borrowing requirement is an estimated DKK 103 billion, or DKK 36 billion less than in 1995. This decrease can partly be explained by the very considerable redemptions in 1995, and partly by a decrease in the net deficit (cash basis) of DKK 17 billion.

Monthly figures for the net and gross deficit are shown in Chart 1.1.1. and more detail is given in Table 4 of the Appendix. The issue of DKK-denominated government securities during a year should cover the total domestic borrowing requirement of the year, but the deficits for the individual months are not necessarily so closely matched, cf. Chapter 3.

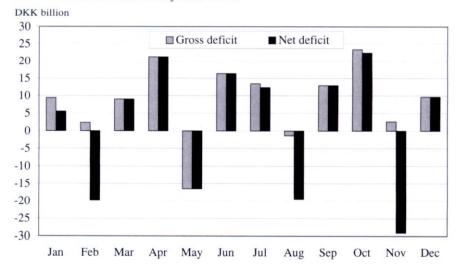


Chart 1.1.1. Gross<sup>1)</sup> and net deficit in 1996.

The exact domestic borrowing requirement is known only at the end of the year, and small differences between the borrowing requirement and actual borrowing are therefore unavoidable. The borrowing requirement and the differences for 1992-1995 are shown in Table 1.1.2.

<sup>1)</sup> Excluding redemption of foreign debt.

Table 1.1.2. Borrowing requirement and issue of domestic government securities.

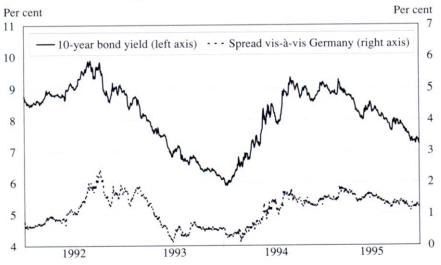
DKK billion	1992	1993	1994	1995
Central government domestic borrowing, market value Gross domestic	124.8	120.9	119.6	137.2
borrowing requirement	126.3	119.2	119.8	138.8
Difference	-1.5	1.7	-0.2	-1.6

Government securities may be bought back from the market and cancelled (redeemed extraordinarily) in order to reduce redemptions on later dates - within a year or between years. In 1995 securities with a nominal value of DKK 13 billion were bought back and cancelled.

### 1.2. Yields on Danish Government Securities

In 1995 the yield on Danish 10-year government bonds fell from 9.1 per cent to 7.2 per cent, cf. Chart 1.2.1.

Chart 1.2.1. Danish 10-year government bond yields and 10-year yield spread visà-vis Germany, 1992-1995.



The decline in interest rates was triggered by falling international interest rates. The international development was accompanied by a slight narrowing of the Danish interest-rate differential to Germany. The 10-year interest-rate differential to Germany started at around 1.5 percentage points and widened a little during the foreign-exchange turmoil in the spring. The spread narrowed slightly thereafter and at year-end was around 1.2 percentage points.

Yields on 2-year Treasury notes fell from around 8.1 per cent in the beginning of the year to around 5.1 at year-end, cf. Chart 1.2.2. The Danish yield curve therefore became steeper in 1995, thereby following the development in other European yield curves.

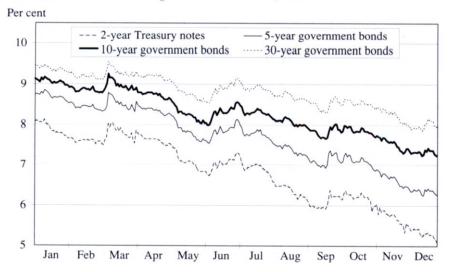


Chart 1.2.2. Yields on Danish government securities, 1995.

#### 1.3. The Issue of Government Securities in 1995

In 1995 66 per cent of the nominal issue was of 5, 10 and 30-year bonds, cf. Table 1.3.1. 33 per cent of the borrowing requirement was covered by issue of 2-year Treasury notes. The issue activity and the individual securities types are described in more detail in Chapter 2.

Table 1.3.1. The distribution of gross domestic borrowing at nominal value.

Per cent	1992	1993	1994	1995
Government bonds,				
fixed interest rate	68	50	71	66
Treasury notes	27	48	31	33
Treasury bills, net	5	2	-2	2
Total	100	100	100	100

#### 1.4 The Government Debt

The Danish central government debt was DKK 581 billion or 60 per cent of the gross domestic product (GDP) at the end of 1995, cf. Table 1.4.1. This was an increase of DKK 36 billion on 1994. In Table 1.4.1. the debt is measured according to the official Danish definition from the Ministry of Finance. The Maastricht Treaty of the European Union contains another specification, cf. Box 1.4.1.

Table 1.4.1. Central government debt. Nominal value, end of year.

DKK billion	1992	1993	1994	1995	1996
Central government debt:					
Domestic	511.5	562.2	618.8	657.9	691.1
Foreign	103.4	164.3	128.8	105.5	101.0
Total	614.9	726.5	747.6	763.4	792.0
Liquid assets: The Social Pension Fund	-132.2	-138.4	-146.8	-151.4	-150.0
Deposits with Danmarks Nationalbank	-30.9	-88.8	-55.3	-30.8	-28.0
Central government debt less liquid assets	451.9	499.3	545.5	581.1	614.0
Per cent of GDP	53.1	57.1	58.5	59.6	59.9

Note: + = liabilities, - = assets. Figures for 1995 are preliminary. Figures for 1996 are based on the Finance Act.

The foreign debt decreased by DKK 23 billion in 1995 due to both repayments and foreign-exchange gains. In accordance with the principles mentioned in Section 1.1. the repayments of the foreign debt were fin-

anced by drawing on the state's deposits with Danmarks Nationalbank. Therefore the repayments did not affect the net government debt.

Deducted from the government's gross debt are the central government's liquid financial assets, consisting of deposits with Danmarks Nationalbank and the assets of the Social Pension Fund. At the end of 1995 the Fund held a portfolio of Danish securities with a nominal value of DKK 151 billion. Of this, holdings of government securities of DKK 69 billion were roughly equal in size to holdings of mortgage-credit securities of around DKK 66 billion.

Chart 1.4.1. shows the domestic central government debt by securities type at the end of 1995. Of the total debt, 71 per cent of the nominal value is fixed-interest-rate government bonds. This proportion is due to the large issue of fixed-rate government bonds in recent years.

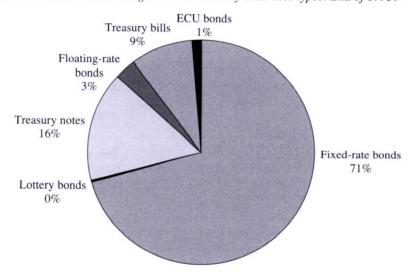


Chart 1.4.1. Domestic central government debt by securities types. End of 1995.

Note: ECU-denominated bonds were issued as part of the domestic debt programme on one occasion in 1992.

It was agreed in the Maastricht Treaty of the European Union, Article 104C, that on entering the second phase of the European and Monetary Union on January 1, 1994 the member states should endeavour not to have excessive budget deficits. The precise definitions of excessive deficits are set out in a protocol to the Maastricht Treaty and in Council regulation no. 3605/93, stating a public sector deficit of 3 per cent of GDP and a public sector debt of 60 per cent of GDP as criteria.

In the report to the European Commission in August 1995 the consolidated public sector debt at the end of 1994 was estimated at DKK 705 billion, amounting to 76 per cent of GDP, cf. Table 1. The Ministry of Economic Affairs estimates that the debt will be DKK 706 billion at the end of 1995, amounting to 72 per cent of GDP.

The gross debt figures should be adjusted for the amounts outstanding in the debt for the financing of public undertakings. The Council of the European Union and the European Commission have furthermore agreed that for Denmark government deposits with Danmarks Nationalbank and the assets held by the Danish Social Pension Fund against sectors outside the general government shall be specified in the presentation of the stock of public debt (the Social Pension Fund's holdings of government securities are deducted directly on calculating the consolidated public sector debt). These deductions amount to DKK 183 billion in 1995, implying a debt of 54 per cent of GDP at the end of 1995.

Table 1. Public sector debt.

DKK billion	1992	1993	1994	1995
The consolidated gross debt				
of the public sector	588	701	705	706
Per cent of GDP	69	80	76	72

Note: Figures for 1995 are estimates. Source: Ministry of Economic Affairs.

### 1.5. Holders of Government Securities

The distribution of holders of government securities has been estimated by Danmarks Nationalbank on the basis of figures from Statistics Denmark (the Danish central statistics agency). The results are shown in Table 1.5.1.

Danish financial institutions' holdings of government securities decreased by DKK 7 billion in 1995 and at year-end amounted to 25 per cent of all government securities, down from 30 per cent in 1994.

The holdings of the household sector increased by DKK 20 billion and at the end of 1995 amounted to 11 per cent of the government debt.

A significant proportion of Danish government securities are held by non-residents. Danish government securities are included in many of the international portfolios managed in accordance with the government bond indices published by some of the major international banks.<sup>1)</sup>

Holdings of Danish government securities by non-residents increased by DKK 53 billion in 1995. At year-end they amounted to DKK 218 billion, or 32 per cent of the government debt.<sup>2)</sup>

Table 1.5.1. Holders of government securities. Market value, end of year.

DKK billion	1994	1995
Non-financial corporate sector	49	45
Financial institutions incl. Danmarks Nationalbank	179	172
Insurance companies and pension funds	44	40
Public sector	91	106
Private, non-dividend paying institutions	10	11
Household sector	52	72
Non-residents	165	218
Other	14	11
Total <sup>1)</sup>	604	676

<sup>1)</sup> Excluding the holdings of the Ministry of Finance under the location swap facility.

# 1.6. Objectives of the Government Debt Policy

Besides covering the annual deficit, the central objective of the government debt policy is to minimise the cost of the government debt. This is achieved in several ways, one of the most important being to increase the government issues' attractiveness to investors. It is therefore considered important that the government issues become very liquid. This makes it necessary to focus the supply on a limited number of benchmark issues.

The indices typically include Danish government bonds corresponding to 1-2 per cent of the total (world) index value.

In addition, non-residents held mortgage-credit bonds for DKK 35 billion at the end of 1995.

An important objective of the management of the central government debt is to aim at a duration target that gives a broad view of the risk exposure and overall composition of the debt. It has been the policy in 1994 and 1995 to increase the duration of the debt. The duration was in 1995 increased to 3.9 years, cf. Table 1.6.1. At present, it is the intention to keep the duration of the debt at a level of around 4 years.

In addition to these targets, debt management is aimed at a number of sub-targets. The tap-issue system (see Chapter 3) necessitates a continuous and stable presence in the bond market and it is therefore considered important to issue regularly and transparently. This means continuous issue of a variety of government securities of different maturities.

Furthermore, it is preferred that the redemption profile of the overall debt be as smooth as possible.

The targets may, and indeed often do, point at different strategies. On these occasions, it has generally been considered most important to ensure the liquidity of the securities series in order to minimise the costs of the debt.

Table 1.6.1. Duration and average remaining time to maturity of the domestic government debt.

	Dura	ation	
-	Total debt	Fixed-rate debt	Average remaining time to maturity
1986	2.6	2.9	4.0
1987	2.1	2.4	3.6
1988	2.0	2.5	3.6
1989	2.2	2.8	4.0
19901)	2.4	3.1	4.4
1991	2.3	2.8	3.6
1992	2.8	3.2	4.2
1993	3.3	3.5	4.2
1994	3.3	3.4	4.4
1995	3.9	4.0	5.0

<sup>1)</sup> The calculation method was changed in 1990.

Macauley-type duration is used.

#### 1.7. Sources of Information

The borrowing requirement for 1996 was presented in the Finance Act for 1996 (the government's budget) which was approved by Parliament in December 1995. Revised estimates of the government deficit are normally published by the Ministry of Finance in May, August, October and December.

The Finance Bill for 1997 will be presented in August 1996, and the Budget would normally be approved by Parliament in December 1996. Information on the Finance Bill and the Budget will be available in English from the Ministry of Finance.

On the basis of the official estimates from the Ministry of Finance Danmarks Nationalbank estimates and publishes the net and gross borrowing requirements distributed on the individual months. This distribution is available via fax on request.

Information on the daily issue of government securities and figures for the borrowing requirement and other information on the issue of domestic government securities are available through several channels according to subject and the frequency of the information.

The daily issue of government securities is available on Reuters. On the morning of each trading day Danmarks Nationalbank publishes the nominal value of the issue of Danish domestic government securities on the previous trading day, as well as the accumulated issue from the beginning of the year. This information can be found on Reuters, pages DKMA-DKMB.

The actual gross domestic borrowing requirement of a month is published on the second banking day of the next month. This information is available via Reuters, pages DKMG-DKMH.

The market value of the actual issue in a month is published on the first banking day of the next month via the Copenhagen Stock Exchange. This information is available via fax on request and via Reuters, pages DKMG-DKMH.

Information on the result of Treasury-bill auctions is published on Reuters, pages DKME-DKMF, at 1.00 p.m. on the penultimate banking day of each month.

A list of the current issues open for sale is published biannually via the Copenhagen Stock Exchange and is also available via fax on request.

Questions concerning the borrowing requirement, the issue of Danish government securities or other aspects of Danish domestic debt policy should be directed to Danmarks Nationalbank, Securities Department, telephone +45 33 63 63 63 63 1, or telefax +45 33 63 71 09<sup>2</sup>.

Until March 16, 1996 the telephone number is +45 33 14 14 11.

<sup>2)</sup> Until March 16, 1996 the telefax number is +45 33 14 14 04.

Table 1.7.1. Sources of information.

Subject	Frequency	Source
Borrowing requirement, year total	Quarterly	Ministry of Finance
Borrowing requirement, monthly distr.	Quarterly	Danmarks Nationalbank
Actual borrowing requirement	Monthly	Reuters DKMG-DKMH
Issue (nominal)	Daily	Reuters DKMA-DKMB
Issue (market value)	Monthly	Reuters DKMG-DKMH
Result of Treasury-bill auctions	Monthly	Reuters DKME-DKMF
Current issues open for sale	Biannually	Danmarks Nationalbank
Questions on any of the aforementioned		
or other aspects of Danish domestic debt		Danmarks Nationalbank
policy		

# Chapter 2. Government Securities

# 2.1. Types of Danish Government Securities

The government currently issues fixed-rate bullet bonds with maturities of 5, 10 and 30 years, Treasury notes with maturities of around 2 years and Treasury bills with maturities on issue ranging between 3 and 9 months.

All domestic government securities are marketable and listed on the Copenhagen Stock Exchange. All securities open for issue, except Treasury bills, are sold on tap. The tap system is described in more detail in Chapter 3. The securities types are described in more detail in the sections below.

#### 2.2. Government Bonds

The current issues are straight bullet bonds in denominations of DKK 1,000 with annual payment of interest. The bonds may not be called by the issuer prior to ordinary redemption. Danmarks Nationalbank may, however, on behalf of the Ministry of Finance buy back securities from the market and cancel (or hold) those securities, cf. Section 2.5.

Usually, bond series are issued on tap for a period of 1-3 years. New issues are continuously added to the existing stock and the newly issued bonds in each series are fungible with (exactly equal to) the bonds in that series already traded in the market. Due to the practice of adding to the series over quite a long period of time, the issue price may deviate significantly from par during the issue period.

There are no rules concerning the length of the period in which a particular bond is issued. It may be decided to discontinue issue in a particular series, resume issue in a series or open a new series for issue. These changes are normally infrequent and the market is informed in good time.

For a number of years it has been an objective of Danish domestic debt policy to create issues with characteristics that investors in Denmark and abroad consider attractive. One element of this strategy has been to focus bond issues on straight bullet loans with one annual interest payment. Another element has been to create liquid issues which can be traded efficiently, domestically as well as internationally. The size of the issues has thus increased considerably during the last 5 years, and the most important issues are very liquid. The most important government bonds are shown in Table 2.2.1

Table 2.2.1. Most important government bonds at the end of 1995.

DKK billion	Due date	First issued	Issue discon- tinued	Amount issued in 1995	Size of series
7% 2024	Nov. 10	Apr. 6, 94	Still open	9.4	14.9
8% 2006	Mar. 15	Dec. 5, 94	Still open	50.2	52.8
7% 2004	Dec. 15	May 25, 93	Dec. 5, 94		74.5
8% 2003	May 15	Jan. 2, 92	Dec. 30, 93		69.0
8% 2001	Nov. 15	Jan. 9, 95	Still open	36.1	36.1
9% 2000	Nov. 15	Jan. 2, 90	Dec. 30, 92		59.2
6% 1999	Dec. 10	Apr. 14, 94	Still open 1)	0.1	41.4
9% 1998	Nov. 15	Jan. 2, 89	Mar. 31, 94		59.4

Note: Excluding the holdings of the Ministry of Finance under the location swap facility.

The coupon rate must be greater than or equal to the minimum coupon rate in force at the time of issue, cf. Box 2.2.1.

#### 5- and 10-year Government Bonds

The 10-year government bond has been the undisputed benchmark in the Danish bond market since 1991. The current benchmark issue, 8% government bonds 2006, had at the end of 1995 reached a size of well over DKK 50 billion, and issue in this series continues in 1996. The size is expected to reach a level comparable to that of the benchmarks of the most important European government bond markets, as did that of the previous benchmark (7% government bonds 2004). A volume in the range of DKK 60-80 billion is considered appropriate.

<sup>&</sup>lt;sup>1)</sup> The issue was discontinued on December 30, 1994 (a small amount was sold for value January 1995), and subsequently resumed on January 2, 1996.

At the end of January 1996 the outstanding volume was DKK 61 billion.

#### Box 2.2.1. The minimum coupon rate rule.

The coupon rate of Danish government bonds and notes shall at the time of issue exceed or equal a so-called "minimum coupon rate" which is calculated according to the Danish Capital Gains Tax Act. This rule is known as the "minimum coupon rate rule".

For private individuals in Denmark, capital gains on securities are not subject to taxation provided that the securities on issue satisfy the minimum coupon rate rule. These rules are of no taxation significance to non-resident investors. It is defined in the prospectuses that all interest-bearing government securities must satisfy the minimum coupon rate rule on issue. Changes in the minimum coupon rate may, therefore, force issuing in a series to be discontinued before the desired volume is reached.

The minimum coupon rate is fixed biannually (January 1 and July 1). It is based on an average yield calculated over 20 trading days before June 15 and December 15 respectively. The minimum coupon rate is the integer of 7/8 of this average yield. The calculation is based on a "reference yield" that is calculated and published daily by the Copenhagen Stock Exchange.

The minimum coupon rate may be adjusted extraordinarily if the reference yield during a 10-day period is more than 1 per cent lower or 2 per cent higher than the reference yield used to calculate the current minimum coupon rate. A new minimum coupon rate is then fixed until the next ordinary adjustment.

At the beginning of 1995 the minimum coupon rate was increased to 7 per cent (from 6 per cent). On December 22, 1995 it was lowered extraordinarily to 6 per cent and this level was maintained at the ordinary fixing on January 1, 1996.

On January 9, 1995 a new 5-year bond, 8% government bonds 2001 (maturing November 15, 2001), was opened. Approximately DKK 36 billion was issued in this series in 1995 and issue continues in 1996. This issue is expected to become the 5-year benchmark on the Danish securities market in the first half of 1996, when a sufficient amount has been issued. It will then replace the current benchmark, 9% government bonds 2000 (redemption on November 15, 2000). It is considered appropriate that the 5-year bonds reach a volume in the range of DKK 40-60 billion.

The issue of 6% government bonds 1999 was discontinued at the end of 1994 due to an increase in the minimum coupon rate, cf. Box 2.2.1. On December 22, 1995 the minimum coupon rate was lowered to 6 per cent and it was decided to re-open issue in 6% government bonds 1999

from January 1996, in order to increase the outstanding volume and enhance the liquidity of the series.

#### 30-year Government Bonds

The 30-year government bond 7% government bonds 2024 (maturing on November 10, 2024) was launched in 1994 as a natural consequence of the decision to increase the duration of the domestic debt. Although it is the intention to create a liquid 30-year benchmark bond in line with the general issue strategy, it was realised from the start that the issue period might be longer for this particular series.

Issuing of 7% government bonds 2024 has been in line with expectations in 1995. The issue continues in 1996.

# 2.3. Treasury Notes

Treasury notes have the same general characteristics (denominations of DKK 1,000, fixed interest rate and annual interest payment) as government bonds. Treasury notes are shorter than bonds as their maturity on issue is normally around 1½-2½ years.

Treasury notes form a separate programme characterised by the following:

- The issue period is normally 1 year.
- The coupon is set at approximately 1 percentage point below the average secondary market yield on government securities with a residual maturity of 1 to 4 years, but at least equivalent to the minimum coupon rate at the time of opening of the series.
- A new series is opened each January and July.

Danmarks Nationalbank considers it very important to create liquid series. A volume in the range of DKK 20-30 billion is considered appropriate. The current issues of Treasury notes are listed in Table 2.3.1.

Normally, two series of Treasury notes are open concurrently. However, on January 2, 1995 the minimum coupon rate was raised to above the coupon of Treasury notes 1997 I, which made it necessary to discontinue issue in this series. Therefore only one Treasury note series (7.00% Treasury notes 1997 II) was open for issue in the first half of 1995.

As mentioned above, one feature of the Treasury note programme is that a new series is opened twice a year. However, it was decided that extraordinarily a new series would not be opened in January 1996. The main consideration was that it would be difficult to ensure the liquidity of a new series in view of the other issues open for sale. Another consideration was that a new series would have had a maturity of  $2\frac{1}{2}$  years and thus a due date in the second half of 1998, when the government already has very large redemptions.

DKK billion	Due date	First issued	Issue discon- tinued	Amount issued in 1995	Size of series
7.00% 1998 I	Feb. 15	Jul. 3, 95	still open	11.4	11.4
7.00% 1997 II	Aug. 15	Jan. 4, 95	Dec. 29, 95	35.7	35.7
6.25% 1997 I	Feb. 10	Jul. 1, 94	Dec. 30, 94	-	18.3
5 25% 1996 II	Aug. 10	Jan. 3, 94	Jun. 30, 94	-	18.2

Table 2.3.1. Treasury notes at the end of 1995<sup>1)</sup>. Nominal amounts.

# 2.4. Treasury Bills

Treasury bills are zero-coupon securities issued in denominations of DKK 1 million in a regular programme. The Treasury bills are sold at monthly auctions by Danmarks Nationalbank.

New Treasury bill series with maturities of 9 months are opened at the beginning of January, April, July and October. New tranches of the series are issued at subsequent auctions, while the remaining time to maturity of the series decreases from 9 to 3 months. There is no issue of bills with a remaining time to maturity of less than 3 months. As a new series is opened every 3 months, the calendar implies that there are always 3 issues in the market.

The auctions are held by Danmarks Nationalbank on the penultimate banking day of each month, with settlement on the first banking day of the following month (two trading days is the normal settlement period for Treasury bills, against 3 trading days for other securities). Bids may be submitted by banks and stockbroking companies either for their own account or for the account of customers. All bills are settled at the cutoff yield. All bids with yields lower than the cut-off yield fixed by Danmarks Nationalbank will be accepted in full at the cut-off yield. A pro rata accommodation may be made of bids at the cut-off yield (bids with lower yields will not be affected). Bids must be submitted to Danmarks

<sup>1) 6.00%</sup> Treasury notes 1996 I with due date February 15, 1996 has been omitted. Note: Excluding holdings of the Ministry of Finance under the location swap facility.

Nationalbank by 10.30 a.m. on the auction day. The result of the auction is published at 1.00 p.m. on the auction day.

The auctions in March, June, September and December are settled on the redemption dates for maturing issues. As a consequence the amount bid for at these auctions is normally much larger than at the other auctions. The outstanding volume in 1995 is shown in Chart 2.4.1.

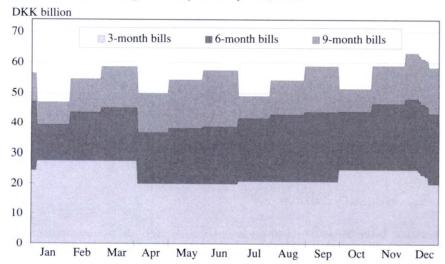


Chart 2.4.1. Outstanding volume of Treasury bills, 1995.

The volume of Treasury bills was gradually built up in the beginning of the 1990s. In the past few years, the outstanding volume has been relatively stable, and no major variations in the outstanding volume of Treasury bills are expected in 1996.

#### 2.5. Government Securities Issued in 1995

The total issue of Danish government securities in 1995 is shown below in Table 2.5.1.

Table 2.5.1. Issue of domestic government securities in 1995.

	Amour		
DKK million	Nominal value	Market value	Outstanding amount <sup>1)</sup>
7% government bonds 2024	9,378	7,644	14,915
8% government bonds 2006	50,165	48,706	52,760
8% government bonds 2001	36,135	35,473	36,135
6% government bonds 1999	109	98	41,350
Bonds, fixed interest rate	95,787	91,920	
7.00% Treasury notes 1998 I	11,400	11,429	11,400
7.00% Treasury notes 1997 II	35,682	35,288	35,682
Treasury notes	47,082	46,717	
Treasury bills 1996 III	15,121	14,552	15,121
Treasury bills 1996 II	23,153	22,326	23,153
Treasury bills 1996 I	24,829	23,749	20,111
Treasury bills 1995 IV	20,879	20,079	
Treasury bills 1995 III	10,624	10,370	
Treasury bills 1995 II	5,282	5,203	
Redemptions	97,741	97,732	
Treasury bills, net	2,147	-1,453	
Government securities, total	145,016	137,183	

<sup>&</sup>lt;sup>1)</sup> End of 1995. Does not include the holdings of the Ministry of Finance under the location swap facility.

As mentioned in Section 1.1., government securities may be bought back and cancelled (redeemed extraordinarily) in order to reduce redemptions on later dates. In 1995 DKK-denominated securities with a nominal value of DKK 13 billion were bought back and cancelled, cf. Table 2.1.2.

Table 2.1.2. Securities bought back and cancelled in 1995.

	Amount bought back		Outstanding
DKK million	Nominal value	Market value	amount, end of 1995 <sup>1)</sup>
9.25% Treasury notes 1995 II	2,600	2,612	
9% government bonds 1995	950	960	
Securities maturing in 1995	3,550	3,572	
Treasury bills 1996 I	4,718	4,709	20,111
6.00% Treasury notes 1996 I	2,400	2,402	19,128
9% government bonds 1996	1,900	1,968	25,700
Securities maturing in 1996	9,018	9,079	
Government securities, total	12,568	12,651	

<sup>1)</sup> Does not include the holdings of the Ministry of Finance under the location swap facility.

# 2.6. Issues Open for Sale in 1996

The series of domestic government securities open for sale at the beginning of 1996 are summarised in Table 2.6.1.

Table 2.6.1. Current issues open for sale. January 1996.

	Interest payable	Redemption
Government bonds:	•	
7% government bonds 2024	November 10	2024
8% government bonds 2006	March 15	2006
8% government bonds 2001	November 15	2001
6% government bonds 1999	December 10	1999
Treasury notes:		
7.00% Treasury notes 1998 I	February 15	1998
Treasury bills:		
Treasury bills 1996 IV	October 1	1996
Treasury bills 1996 III	July 1	1996
Treasury bills 1996 II		1996

#### Annex A

#### Yield Calculation for Danish Government Securities

#### Treasury Notes and Government Bonds

#### **Definitions and Conventions**

- No odd first or last coupon
- Price/vield method is based on ISMA conventions
- 1 month = 30 days (European), 1 year = 360 days
- Calculation of accrued interest: see example below

#### Calculation of Accrued Interest

Danish government bonds and Treasury notes traded outside due dates are settled according to normal practice in the Danish bond market. These rules also apply on issue.

This means - in most of a coupon period - that bonds are issued on a cumcoupon basis, i.e. the buyer of the bond receives full payment of interest on the forthcoming due date. The seller (the government) is compensated for this by receiving accrued interest from the purchaser of the bond from the last coupon date to settlement of the trade. This also goes for a situation where the bond series was not open on the previous coupon date.

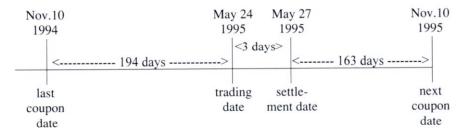
However, this rule does not apply when the bond enters the ex-coupon period 30 days before an interest payment date. For bonds sold in this period the seller receives the full coupon payment on the next interest payment date and the buyer is compensated (i.e. accrued interest is negative). In the period from 30 days before an interest payment date to the actual interest payment date, accrued interest is calculated backwards from the interest payment date to the settlement date.

#### Example:

Issue: 7% government bonds 2024 Interest payment date: November 10 Maturity date: November 10, 2024 First issue date: April 6, 1994

Coupon: 7 per cent

#### Bond sold on May 24, 1995



The accrued interest for a bond sold on May 24 and settled on May 27 is:  $(197/360) \times 7\% = 3.83\%$ .

Bond sold on October 24, 1995



The accrued interest for a bond sold on October 24 and settled on October 27 is:  $-(13/360) \times 7\% = -0.25\%$ .

#### **Yield Calculation**

The yield, or yield to maturity, is in principle found as the internal rate of return on the cash flow of the bond including the price paid, along with accrued interest. The specific calculation then depends on how the cash flow is calculated for different types of bonds.

The general formula is

(A.1) 
$$P + A = \sum_{t} C_{t} \times (1+i)^{-(t-t_{0})}$$

where i = Yield

P = Clean price paid on value date

A = Accrued interest

Ct = Payment due at time t

 $t-t_0$  = Time from value date to time t.

Since 1988 government bonds and Treasury notes have been bullet issues characterised by a cash flow of identical coupons and one final redemption payment.

## Zero-Coupon Treasury Bills

Treasury bills are zero-coupon securities issued in denominations of DKK 1 million. The official conversion from price to yield and vice versa takes place according to money-market practice, according to which the yield per day is calculated by dividing the capital gain up to the maturity date by the actual number of calendar days remaining. The annual yield is arrived at by multiplying the yield per day by 360:

(A.2) Yield = 
$$\frac{1 \text{ mill. - price}}{\text{price}} \times \frac{360}{\text{actual number of days}}$$

Conversion from yield to price:

(A.3) 
$$Price = \frac{1 \text{ mill.}}{1 + \frac{\text{yield} \times \text{actual number of days}}{360}$$



# Chapter 3. The Issue of Government Securities

# 3.1. The Tap Issue Technique

Danmarks Nationalbank acts as fiscal agent to the Ministry of Finance and all domestic government securities are sold to the market by Danmarks Nationalbank on behalf of the Ministry of Finance.

All government bonds and Treasury notes are issued on tap.<sup>1)</sup> In this system, the securities series are open for sale at all times within trading hours.<sup>2)</sup> Each series of government securities is thus issued over an extended period, sometimes several years. The amount issued on tap during a given period is not fixed in advance, but is determined on the basis of the desired sale (reflecting the borrowing requirement), the demand from the market and the general market conditions. All the tap-issued securities are fungible with the securities issued earlier in the same series.

The government securities are sold via the Copenhagen Stock Exchange where Danmarks Nationalbank participates as a trader. All members of the Copenhagen Stock Exchange can buy government bonds and Treasury notes from Danmarks Nationalbank in the trading systems of the Copenhagen Stock Exchange. The market has established market-making arrangements for the most traded government securities, under the auspices of the Danish Securities Dealers Association and the Copenhagen Stock Exchange. These arrangements are described in more detail in Chapter 4.

On issue, bonds and notes have the same settlement period and payment terms as for other trading on the Danish securities market. The first coupon after issue is normal, and the ex-coupon period of 30 days applies on issue as well as for all other trading on the market. Issue prices are net prices, and no commission is paid.

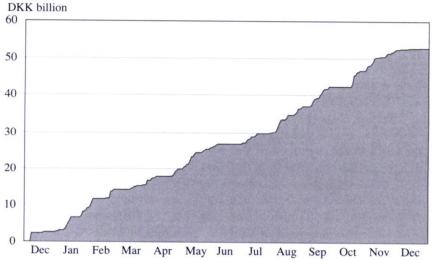
Danmarks Nationalbank continues to issue in a series until the series has reached the desired size, or - for Treasury notes, which are issued during a 1-year period - reached the scheduled time for closure. Changes in the statutory minimum coupon rate, cf. Box 2.2.1., may shorten the issue period. Issue thus takes place over an extended period of time, and

Treasury bills are sold at monthly auctions, cf. Section 2.4.

<sup>&</sup>lt;sup>2)</sup> Several securities series are open for tap issue at a time, cf. Sections 2.2. and 2.5.

usually each government bonds series is issued over a period of several years. The tap method gradually builds up the volume of a securities series. This is illustrated in Chart 3.1.1. which shows the issue of the current 10-year benchmark 8% government bonds 2006 from the opening on December 5, 1994 until December, 1995. Danmarks National-bank still issues in this series.

Chart 3.1.1. Outstanding volume in 8% government bonds 2006 from the opening on December 5, 1994 until year-end 1995.



Normally the size of a new series reaches the threshold of a liquid market relatively fast. Furthermore, investors and intermediaries know that the liquidity of the securities series is an important objective of the issuing policy. Therefore, new issues are most often traded at a yield very similar to that of older and more liquid issues in the same maturity segment.

### 3.2. The Daily Tap Issue

# The Use of The Copenhagen Stock Exchange

Danish government securities are issued via the electronic trading systems of the Copenhagen Stock Exchange. The systems of the Copenhagen Stock Exchange are described in more detail in Chapter 4.

Danmarks Nationalbank issues most of the government bonds and notes via the Match System<sup>1)</sup> since it is suitable for sale of large bond volumes, ensures all broker-dealers equal access to buy the required amount of government securities, and ensures immediate spreading of market information concerning the issue of government securities.

The Accept System can occasionally be used to issue small amounts of government securities. This took place on some occasions in 1995, when small quantities of 7% government bonds 2024 were issued in the Accept System.

Danmarks Nationalbank normally does not trade via telephone and will refer callers to the Match System. Government securities may, however, on rare occasions be sold via telephone<sup>2)</sup>, e.g. if there are technical problems with the Match System.

The Interest System, which is a trade-supporting system, and the Electro-Broker System, which is used by market makers, are not used by Danmarks Nationalbank.

# The Daily Sale

Issue of government bonds and Treasury notes will normally take place by Danmarks Nationalbank offering an amount for sale in the Match System. Typically DKK 100-200 million will be offered at a time. When the offer is placed in the system, broker-dealers will buy larger or smaller portions of the offered amount. Often, the securities offered are sold to several different buyers. Thereafter a new amount may be offered. Usually very substantial amounts are sold, and the average daily issue in 1995 was around DKK 580 million.

Government securities are normally not issued on days when prices are falling. Experience shows that on days with falling prices there will rarely be any real buyer interest in the bond market, and any significant issue is therefore not possible. Furthermore, the risk cannot be ignored that, due to the Nationalbank's central position in the financial markets, as well as the substantial financing requirement, the issue might contribute to creating or reinforcing negative market trends. Danmarks Nationalbank will therefore typically refrain from issuing government securities on days with low turnover and falling prices, although it has done so on a few occasions when it was considered necessary to stimulate sales.

The Match System is for bond trading used predominantly by Danmarks Nationalbank, as most broker-dealers usually prefer telephone trading or the other trading systems of the Copenhagen Stock Exchange.

With subsequent reporting to the Copenhagen Stock Exchange, cf. Section 4.3.

In order to avoid creating or amplifying negative trends in the bond market, Danmarks Nationalbank will usually not underbid itself in the market over a single day. For the offers placed in the Match System on a single day, each subsequent offer will thus be at the same or a marginally raised price. However, offers at a lower price cannot be excluded completely if there is a general downward shift in the market (e.g. as a consequence of falling bond markets abroad), which in reality creates a new market situation.

Danmarks Nationalbank will normally not underbid itself within a period of several days either. If securities have been issued at a particular price level on a given day, no issue will take place at lower prices on the days immediately thereafter, unless there is a general shift in the market level. The probability of a general shift in the market conditions and thus of the issue being resumed at the new lower price level obviously increases with the length of the period considered.

This issue-price practice can be summarised as follows: given moderate price fluctuations, the issue follows the market prices up, but pauses before following the market level down. This prevents the issue of government securities from unnecessarily amplifying downward bond-price trends and enables the bond market to find a new level.

There are often days with rising market prices where no issue takes place. This can either be because the desired sales volume for that period has been reached, or because despite rising prices there has been very low demand and turnover in the relevant bond series on the Copenhagen Stock Exchange. On such days any attempt to issue government securities might depress prices, without any significant sale, and is therefore omitted.

# 3.3. Procedure on Opening New Issues

The opening day of a new issue is in principle like any other tap issue day. However, Danmarks Nationalbank has sometimes seen very strong interest on the opening day. In order to ensure transparency and to give broker-dealers a firm basis for trading in a newly issued series, a fixed framework for the opening procedure was established in 1995.

Approximately one week before the opening day market participants are notified that a new government securities series will be opened. Details are given of the characteristics of the loan, i.e. coupon, maturity, and interest payment date, and of the opening date and time. The opening time is normally 11.00 a.m. It is also stated at what time further in-

This may happen on days when international price increases are mechanically passed over to Denmark. On such days Danish prices can rise without any real investor demand.

formation will be made available. Until now that has been on the morning of the opening day (normally 9.00 a.m.).

At that time, Danmarks Nationalbank announces the amount that will initially be offered in the Match System, as well as for how long that offer will remain in the system before (the rest of) the offer may be deleted - that period is normally half an hour. The maximum amount that will be sold on the opening day is also announced. The offer-price is entered to the Match System at the time of opening and is not published in advance.

By announcing the size of the initial offer, market participants are informed of the market depth, i.e. the amount they can bid for at the initial price. Three new series were opened in 1995<sup>1)</sup> and the initial amounts were DKK 2 billion twice and DKK 1.5 billion once. The large initial amounts enable market participants to buy relatively large volumes at one single price on the opening day.

The size of the initial amount offered, as well as the maximum amount to be sold, are decided just before their announcement on the opening day. The opening price is set immediately before the time of opening. These variables are fixed in the light of perception of investor interest, the market situation, and the borrowing requirement at the time of opening. Other factors may, however, also influence the decision.

The fixed framework for the opening of new series of government securities has generally been well accepted by market participants.

# 3.4. Timing of the Issue

The issue of government securities should for a whole year equal the central government's domestic borrowing requirement, cf. Chapter 1. However, this does not mean that on any given date the government's deficit from the beginning of the year until that date should be matched by the issue of government securities in that period. There is room for (positive and negative) deviation between the borrowing requirement and the actual funding over the course of the year.

Seasonal variations in the borrowing requirement are generally very pronounced, resulting in alternate months with deficits and surpluses of various sizes, cf. Chapter 1. The seasonal variations stem mainly from the timing of payment of government debt redemptions, value-added tax and other taxes.

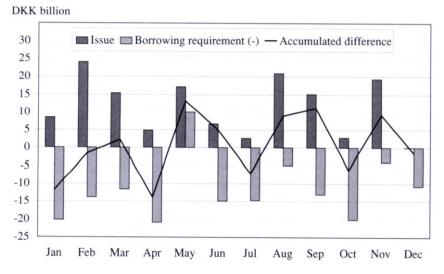
When planning the issue for a specific month, the basis is naturally the borrowing requirement for that month. However, the monthly issue may deviate at times from the monthly borrowing requirement as other

<sup>7.00%</sup> Treasury notes 1997 II on January 4, 8% government bonds on January 9 and 7.00% Treasury notes 1998 I on July 3.

aims of the issue policy take precedence. Firstly, it is a primary objective to sell the government securities at the lowest possible cost. This means that securities are issued at times when demand is strong. Secondly, it is considered important that government securities be issued on a continuous basis. This means that securities are issued even in months with no borrowing requirement. Experience shows that issue on a continuous basis supports the liquidity of the smaller series.

The monthly borrowing requirement and the monthly issue of government securities in 1995 are shown in Chart 3.5.1. As market conditions and other factors vary, the monthly pattern normally changes from year to year.

Chart 3.5.1. Monthly issue of government securities and domestic borrowing requirement in 1995.



# Chapter 4. The Danish Securities Market

#### 4.1. Bonds on the Danish Market

The Danish bond market is among the largest in Europe, with very large volumes of mortgage-credit bonds and government bonds. The market value of bonds and Treasury bills listed on the Copenhagen Stock Exchange was DKK 1,871 billion at the end of 1995. The market value of listed shares was DKK 386 billion.

The main reason for the composition of the Danish market - the large proportion of bonds in particular - is that Denmark has a long-standing tradition for financing residential and commercial construction as well as private housing by issuing mortgage-credit bonds. Mortgage-credit bonds account for the largest share of the Danish bond market, cf. Chart 4.1.1.

Foreign
11%
Government
36%

Mortgage
credit
48%
Others
5%

Chart 4.1.1. The Danish bond market at the end of 1995. Nominal value.

Source: The Copenhagen Stock Exchange.

Domestic corporate bond activity is negligible. Most of the short-term and medium-term funding of the corporate sector is mediated by the banks, while long-term financing of tangible assets is often provided via mortgage-credit institutions.

The listed foreign bonds are mainly securities issued by mortgagecredit institutions in Sweden, denominated in SEK. There was substantial activity in these bonds some years ago, but during most recent years the activity has been negligible.

In recent years the bulk of the net issue of domestic securities has been in government securities. In 1995 the outstanding volume of both government bonds and mortgage-credit bonds increased. Part of the issue activity in mortgage-credit bonds can be explained by loan conversions around the turn of the year.<sup>1)</sup>

In 1995 the average turnover per trading day on the Danish bond market was DKK 24 billion at nominal value (excluding repo trading). The average daily turnover in the repo market was DKK 52 billion.

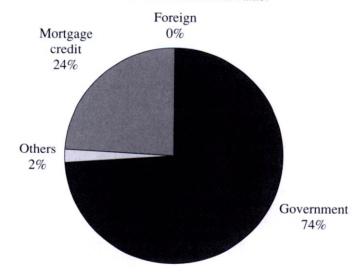


Chart 4.1.2. Bond market turnover in 1995. Nominal value.

Source: The Copenhagen Stock Exchange.

Government bonds have been the most traded segment of the market since 1990, cf. Chart 4.1.2. In 1995 the most traded issue was 7%

In Denmark the new mortgage-credit bonds issued in connection with loan conversions are often issued prior to the redemption of the old bonds.

government bonds 2004 (10-year benchmark from January to November) with an average daily turnover of DKK 5 billion. The three most traded government bonds (7% government bonds 2004, 8% government bonds 2006 and 9% government bonds 2000) accounted for 33 per cent of the total turnover in 1995. In 1995 the average daily turnover in the mortgage-credit benchmark (6% 2026) was DKK 1 billion.

The listed turnover figures are based on trades reported to the Copenhagen Stock Exchange. Danish government securities are, however, to a large extent also traded outside Denmark, primarily in London. Trading outside Denmark between non-residents is not reported to the Copenhagen Stock Exchange; this turnover is therefore not included in the figures mentioned above.

It should be mentioned that there are neither exchange restrictions nor taxes on Danish bonds purchased by foreign investors (including withholding tax and turnover tax).

#### Government Securities

The Danish central government has been a major bond-issuer since the mid-1970s, when public finances began to show a deficit. The government securities have been mainly short-term in the form of Treasury bills and Treasury notes, and medium-term in the form of government bonds with maturities of up to 10 years. A 30-year government bond was opened in 1994.

In recent years, government bonds and Treasury notes have been issued as bullet loans in a limited number of series. The series are generally very liquid. The market for government bonds, as well as their characteristics, are described in more detail in Chapters 1 to 3.

### Mortgage-Credit Bonds

The mortgage-credit system is dominated by specialised mortgage-credit institutions which offer mortgages on residential as well as agricultural, commercial and industrial properties. The institutions finance long mortgages, typically for 20 to 30 years, by issuing mortgage-credit bonds with corresponding maturities. The total market for mortgage-credit bonds comprises around 2,000 different series of substantially varying sizes.

The mortgage-credit market based on residential property and financed via the bond market currently comprises 6 institutions: Nykredit, Realkredit Danmark, BRFkredit, Totalkredit, Danske Kredit

and Unikredit. The first three are the oldest institutions; the latter three were established more recently and are owned by banks.

In addition to the 6 institutions mentioned above the non-residential mortgage-credit market also includes 3 other significant bond-issuing institutions: Danmarks Skibskreditfond (The Ship Credit Fund of Denmark), which grants loans against ship mortgages; Kreditforeningen af Kommuner i Danmark (The Credit Association of Local Authorities in Denmark), which mainly offers loans to municipalities; and Dansk Landbrugs Realkreditfond (The Mortgage-Credit Fund of Danish Agriculture), which issues bonds against secondary mortgages on agricultural property.

Several types of mortgage-credit bonds are issued, the most common being annuity bonds, but also serial bonds and index-linked bonds play a role. The bonds are issued in series normally kept open for 1 to 3 years, subject to the minimum coupon rate rule, cf. Chapter 2. Redemption payments are effected by drawing bonds for a nominal value corresponding to the payments due from the debtors. The mortgage-credit loans are typically callable at par value and the mortgage-credit bonds are called if the debtors redeem their loans. This may take place on coupon dates and at fairly short notice. Within most series all borrowers are jointly and severally liable for the payments due to the bond holders.

In 1994 the current 30-year bond (6% 2026) developed into a liquid benchmark as a consequence of loan conversions at that time. Issue in the 6% 2026 was discontinued in 1995 due to an increase in the minimum coupon rate. However, issue has been resumed in 1996. At the end of 1995, the outstanding amount was almost DKK 150 billion.

# 4.2. The Organisation of the Securities Market

#### Overview

The Danish securities market is organised as an integrated system comprising the Copenhagen Stock Exchange, the FUTOP Clearing Centre and the Danish Securities Centre. The institutions have integrated electronic systems provided by the Danish Securities Centre.

The Copenhagen Stock Exchange (Københavns Fondsbørs) is the only stock exchange in Denmark and therefore the place where listed securities are traded and to which trades are reported. The Copenhagen Stock Exchange covers trading in securities as well as in futures and options.

The FUTOP Clearing Centre (FUTOP) is the agency which registers, settles and guarantees trading in futures and options.

The Danish Securities Centre (Værdipapircentralen, VP) is a combined central securities depository and clearing centre. It also functions as facilities manager and systems integrator for the three institutions.

#### The Reform of the Securities Market

During the past few years a reform of the securities market has been under preparation. The resulting bills have now been passed by Parliament and the reform has taken effect from January 1, 1996. The reform has wide-ranging implications for the entire market and very directly affects the set-up of the Copenhagen Stock Exchange, VP and the organisation of market supervision.

The main elements of the reform are:

- Open access to the Danish securities system for foreign participants.
- Lifting of the legal monopolies of the Copenhagen Stock Exchange and VP; the Copenhagen Stock Exchange is transformed into a limited liability company.
- Implementation of the EU Investment Service and Capital Adequacy Directives.
- Clarification of the responsibility for market supervisory decisions through the formation of the Securities Market Council.

As a consequence of the reform, any credit institution or investment firm from an EU member country<sup>1)</sup> carrying a European Passport (licence from the financial supervisory authority of the company's home country) can now participate in the Danish securities market on the same terms as Danish financial institutions. The rules include subsidiaries of companies originating outside the EU. Branches of non-EU banks may enter the market by applying to the Danish Financial Supervisory Authority (Finanstilsynet).

As a consequence of the reform, any financial company carrying a European Passport can participate in Danish securities trading by becoming a so-called "remote member" of the Copenhagen Stock Exchange on the same terms as members with a physical presence.

At the same time, any financial company from an EU member country carrying a European Passport can apply to become a member of VP in order to participate in the Danish securities clearing and settlement system. A financial company with a European Passport may also apply for a cash settlement account with Danmarks Nationalbank.

Or a country with which the EU has an agreement on such matters.

The reform of the securities market has also led to the establishment of a Securities Market Council which is responsible for decisions concerning the market supervision of the Danish securities market. It should be mentioned that the reform has also given statute form to multilateral netting and bilateral netting.

The institutions of the Danish securities market are described in more detail in the sections below.

## 4.3. The Copenhagen Stock Exchange

Until 1996, only Danish professional securities trading companies - including some foreign companies resident in Denmark and Danmarks Nationalbank - could become members of and trade securities on the Copenhagen Stock Exchange. This has changed with the reform of the securities market, cf. Section 4.2., and no physical presence is now required.

At the beginning of 1996 a total of 25 companies (including branches of foreign companies) were entitled to trade as broker-dealers on the Copenhagen Stock Exchange: 19 banks, 5 stockbroking companies and Danmarks Nationalbank.

The Copenhagen Stock Exchange has no rules governing the size or structure of commissions, and prices and fees are set by competition. Large investors usually deal with broker-dealers on a net basis, reflecting professional price spreads. Round lots of liquid government issues and mortgage-credit issues would normally have a bid-offer spread of DKK 0.10 per 100 (10 ticks) or less vis-à-vis clients.

# The Trading Systems of the Copenhagen Stock Exchange

In 1987, the trading floor was abolished and an electronic system was introduced. This system enables continuous trading from 9.00 a.m. to 3.30 p.m. and is used by the members from their offices.

Trades can be executed in one of three trading systems: the *Match System*, the *Accept System*, or the *Electro-Broker System*. To support trading outside these electronic systems, a trade supporting system called the *Interest System* has been established. Information is published in the *Information System*. This information is fed automatically from the trading systems, but trades outside the systems must be reported to the *Reporting System*. The systems are described in more detail below.

The Match System is an automatic trading system with continuous matching. A match is made every time a bid or an offer is registered

which is better than or equals one or more offers or bids already registered in the system. At any point in time, only the best bid/offer and the identification of the relevant securities dealer can be seen on the screen in the Match System. It is possible to trade smaller sections of the existing bids/offers. The transactions are executed automatically. The bids and offers must be in round lots of DKK 5 million. All trades, as well as the best bid and offer in each paper, are reported to the Information System automatically.

The Accept System functions as an electronic "noticeboard" on which securities dealers can see all the bids and offers placed (prices as well as amounts) and the identity of the securities dealer making the bid/offer. A transaction is concluded when a dealer accepts one of the bids or offers posted in the system (the total amount of the bid/offer must be accepted). The bids and offers must be in round lots of at least DKK 10,000. All trades, as well as all current bids and offers, are automatically reported to the Information System.

The *Electro-Broker System* functions in the same way as the Accept System, but it is not possible to see the identity of the securities dealer making the bid/offer. The Electro-Broker System can only be used by securities dealers participating in a market-making agreement, cf. Section 4.4., and the participants can only trade in the securities in which they are market makers. Bids and offers must be of at least DKK 25 million. Only ultra-liquid securities can be traded in the Electro-Broker System. All trades are reported to the Information System automatically.

The so-called *Interest System*, which is a trade supporting system, has been established in order to allow the members of the Stock Exchange to exchange information electronically, and it is normally used to indicate the prices at which the members are willing to trade via telephone. It is also used for quoting market-making prices in the 10-year benchmark, cf. Section 4.4.

The *Information System* distributes information on bids, offers and deals made via the electronic systems, as well as deals reported to the system. The information is distributed on-line to the participants and to non-members linked to this system.

Finally, the *Reporting System* is a system to register deals made outside the trading systems (telephone trading). All broker-dealers are obliged to report transactions in listed securities within 90 seconds during trading hours. Trades made outside normal trading hours must be reported before the trading systems open on the following trading day.

Normal settlement of trading in bonds and notes takes place three business days after the transaction. Other settlement periods than standard may be used, should the parties to a trade so wish. For each trading day, the Copenhagen Stock Exchange publishes an official quotation list

with information on quoted prices, turnover and other relevant information concerning the market on the preceding day.

## 4.4. Market-Making

#### Government Securities

There are two market-making arrangements for Danish government securities: the Voluntary Market-Making agreement under the auspices of the Copenhagen Stock Exchange, and the Quote on Request agreement under the auspices of the Danish Securities Dealers Association.

Market-making under the Voluntary Market-Making agreement includes only the 10-year benchmark bond, currently 8% government bonds 2006. At the start of 1996 18 securities dealers participated in the agreement, with amounts varying between DKK 10 and 50 million. Broker-dealers participating in this agreement are obliged to quote two-way prices with a maximum spread of DKK 0.10 per 100 (10 ticks) in the Interest System of the Copenhagen Stock Exchange. All members of the Copenhagen Stock Exchange can join the Voluntary Market-Making agreement.

The Quote on Request agreement covers all liquid government securities (as well as some mortgage-credit bonds, cf. the section below), except the 10-year benchmark bond already covered by the Voluntary Market-Making agreement. Participants can freely choose the bonds in which they wish to participate.

Securities dealers participating in the Quote on Request agreement shall - on request - quote two-way prices with a maximum spread of 10 ticks to other participants for amounts of between DKK 10 and 50 million. At the beginning of 1996 the 18 securities dealers participating in the Voluntary Market-Making agreement also participated in the Quote on Request agreement for government bonds. The Quote on Request agreement can be joined by members of the Danish Securities Dealers Association who are also members of the Copenhagen Stock Exchange.

#### Mortgage-Credit Bonds

The Quote on Request agreement described above also covers a selection of mortgage-credit bonds: the 6% 2016, 6% 2026, 7% 2016, 7% 2026, 8% 2016, and 8% 2026 series. This agreement has the same rules and characteristics as the Quote on Request agreement for government bonds.

Bonds with identical characteristics but issued by different mortgage-credit institutions (see Section 4.1.) are traded as a single instrument under the market-making agreement, and the seller may choose a mortgage-credit bond from any of the six mortgage-credit institutions.

At the beginning of 1996 12 securities dealers participated in the Quote on Request agreement for mortgage-credit bonds in lots varying between DKK 10 and 25 million.

## 4.5. FUTOP and Derivatives

The primary function of the FUTOP Clearing Centre is to guarantee the performance of clearing members by registering options and futures contracts until expiry. The members represent all major banks, savings banks and stockbroking companies. The Copenhagen Stock Exchange is the official trading place for futures and options on securities listed on the Copenhagen Stock Exchange, including futures and options on government bonds. Contracts entered into outside the Stock Exchange must be reported to the FUTOP Clearing Centre in order to be covered by its guarantee.

FUTOP currently has futures on 5- and 10-year bonds, 6% 2026 mortgage-credit bonds, 3-month CIBOR and KFX (a share index of the Copenhagen Stock Exchange) and options on the 10-year benchmark government bond, KFX and a selection of liquid shares.

The value of the respective rights and commitments of the parties is settled in cash. At present there is no physical delivery of securities, but FUTOP is seeking to establish this facility. Futures are marked to market daily; occasionally more than once a day. Clearing members are obliged to deposit margins for their own account as well as for their clients. Margin may be posted in cash during the trading day or by pledging securities on a day-to-day basis. All margin accounts are held with Danmarks Nationalbank. Contracts will not be registered in the event of insufficient margin. For a futures contract the initial margin must be posted by buyer and seller alike. Likewise, the options writer is required to post the premium as well as the initial margin.

Danish options and futures contracts are non-terminable, but may be closed-out (liquidated) via the member with whom the original contract was concluded. Prices of listed options and futures are stated in the official list published by the Copenhagen Stock Exchange. At present all options contracts are of the European type. The contract unit is DKK 100,000, but the futures are always traded in lots of 10. The bond options are written for 1 futures each.

Two market-making agreements exist. Under the auspices of the FUTOP Clearing Centre a Specialised Market-Maker agreement for all the listed contracts has been arranged in the Accept System of the Copenhagen Stock Exchange. The other market-making agreement is a Quote on Request agreement under the auspices of the Danish Securities Dealers Association. This agreement only covers futures based on the 10-year government benchmark bond and the mortgage-credit benchmark bond.

In 1995 63 per cent of the total turnover in the Danish futures and options market (nominal value) was in instruments based on the 5- and 10-year government benchmark bonds, with futures by far the most popular instrument. The most traded instrument was the future based on the 10-year government benchmark bond, followed by the 3-month CIBOR future.

Compared to other futures markets in Europe, the turnover on the Danish futures and options market is small relative to the market for the underlying bonds. The turnover in futures and options on government bonds amounted to 11 per cent of the turnover in the underlying instruments in 1995. The efficient trading arrangements on the cash market are one of the reasons for the relatively low turnover on the futures market. Another is a well-functioning OTC market in forward contracts and options.

#### 4.6. The Danish Securities Centre and Settlement

The Danish Securities Centre (Værdipapircentralen, VP) is a combined central securities depository and clearing centre. VP is responsible for all Danish clearing and settlement of securities trades, for registration of all issues on the Copenhagen Stock Exchange and for registration of ownership and other rights to the securities listed on the Copenhagen Stock Exchange. VP has around 230 members (banks, savings banks, stockbroking companies, mortgage-credit institutions, institutional investors and Danmarks Nationalbank) of which around 100 participate directly in the clearing process.

Since 1983, all listed domestic Danish bonds have been registered in dematerialised form in the VP system. In 1988 Danish shares, investment certificates, etc. were dematerialised. From 1989, registration of securities denominated in foreign currencies and listed on the Copenhagen Stock Exchange has been possible (with settlement in foreign currencies).

The securities are registered in units of equal size (DKK 1,000 for most government securities) on VP accounts. Only VP's members can

keep VP accounts, and each member keeps a number of VP accounts, each of which is normally earmarked for a specific investor, in addition to a VP account for its own holdings. Each VP account contains information specifying the holdings, ownership and other rights, and details a bank account to which VP transfers payments of interest, dividend, etc. on the holdings with VP. The owner of the securities may be registered in his own name or in the name of a nominee. The latter registration implies that the name of the actual owner of the securities is known only to the nominee.

The information registered by VP is safeguarded by strict secrecy and safety measures as the VP computer system is the sole registration of ownership and other legal rights to bonds and shares.

Normal settlement of trading takes place three business days after the trading day, but other periods may be chosen. VP currently settles securities once a day. VP uses a netting procedure in the settlement of trades, and traders may simultaneously buy and sell the securities with normal settlement.

Payments are cleared through Danmarks Nationalbank and settled via authorised institutions' accounts with Danmarks Nationalbank. As from 1996, any financial enterprise from an EU member country carrying a European Passport (licence from the financial supervisory authority of the company's home country) may apply for a settlement account with Danmarks Nationalbank.

The settlement system ensures delivery-versus-payment for all securities transactions among participants in the clearing and settlement process.

In 1995 VP began redesigning the VP System. The changes are to be implemented around year-end 1996, and - among other things - allow for the implementation of multiple daily settlement.

#### Cross-Border Settlement

Danish government securities are eligible for clearing and settlement via Euroclear and CEDEL and it is also possible to deposit bond holdings in these systems as well as in VP.

To simplify international trading and cross-border settlement of Danish securities VP has established a direct link with Euroclear which has made it possible to make same-day transfers of securities from VP to Euroclear. The present link has some technical limitations, resulting in the loss of one disposal day on moving securities from Euroclear to VP. These limitations will be eliminated by the implementation of the redesigned VP System.

Until the technical problems are eliminated, Danmarks Nationalbank on behalf of the Ministry of Finance offers a temporary location swap facility for government securities which enables movement between VP and Euroclear to take place without the loss of disposal days<sup>1)</sup>. At the beginning of 1996 the location swap facility comprises all important government securities.

# 4.7. The Money Market

In order to give an integrated picture of the Danish market, it should be mentioned that Denmark has an efficient and liquid money market. Participants in the Danish money market are, besides Danmarks Nationalbank, Danish banks, Danish branches of foreign banks and two money-market brokers.

The money market has evolved strongly in the past few years and there is now efficient and liquid trading in a range of instruments. The main instruments are repos, FRAs and FX swaps.

As an element of the monetary-policy instruments it is possible for Danish banks, including Danish branches of foreign banks, to enter into repurchase agreements (sale and repurchase agreements) with Danmarks Nationalbank.<sup>2)</sup> All liquid government securities may be pledged in the repos. Danmarks Nationalbank's repo facility has led to the development of an organised market in repos, and this market is today very significant. In addition to repos there is also a market for deposits.

There is also active organised market trading in FRAs and FX swaps.

Technically, when a location swap is executed Danmarks Nationalbank simultaneously enters into two spot transactions on behalf of the Ministry of Finance. For example: 1) Danmarks Nationalbank sells securities from a Euroclear account to the counterpart, and 2) Danmarks Nationalbank buys securities from the same counterpart with delivery in VP. Both trades are against payment.

See Danmarks Nationalbank's Report and Accounts as well as the quarterly Monetary Review for a further description of the Danish monetary-policy instruments.

Appendix

Table 1. Central Government Debt 1985-1995.

DK	K million	1985	1986	1987
A. I.	Debt Domestic debt denominated in DKK <sup>1)</sup>			00.42, 00.70
	<ol> <li>Fixed-rate bonds</li> <li>Floating-rate bonds</li> <li>Lottery bonds</li> </ol>	302,749 27,125	282,451 39,935	243,212 56,935
	4. Compulsory savings 5. Treasury notes 6. Treasury bills	1,200 1,404 28,760	1,200 1,497 27,500	1,200 1,464 43,675
	7. Government securities held by the Danish State	-41	-30	-21
Don	nestic debt denominated in DKK, total	361,197	352,553	346,465
II.	Domestic debt denominated in ECU  1. Fixed-rate bonds  2. Government securities held by the Danish State	-	-	-
Don	nestic debt, total	361,197	352,553	346,465
III.	Foreign debt  1. In USD  2. In CHF  3. In DEM  4. In XEU  5. In JPY  6. In other currencies  7. Government bonds held by the Danish State <sup>2)</sup>	42,056 10,513 15,778 2,588 11,775 10,220 -545	55,313 12,160 21,131 5,874 9,874 15,561 -2,463	44,637 16,572 26,799 10,191 13,781 15,657 -1,516
	ign debt, total	92,385	117,450	126,121
	estic and foreign debt, total	453,582	470,003	472,586
Dom	estic and foreign debt, per cent of GDP	73.7	70.5	67.5
B. C.	Government deposits with the central bank  The Social Pension Fund	-20,752	-51,448	-57,960
	<ol> <li>Government securities</li> <li>Other securities</li> </ol>	-24,133 -65,278	-25,543 -69,491	-27,667 -73,091
The S	Social Pension Fund, total	-89,411	-95,034	-100,758
Net g	government debt (A-B-C)	343,419	323,521	313,868
Vet g	government debt, per cent of GDP	55.8	48.5	44.8

Note: + = liabilities, - = assets.

Does not include the holdings of the Ministry of Finance in the location swap facility.

Acquired value. From end of 1993 adjusted to exchange-rate value.

1988	1989	1990	1991	1992	1993	1994	1995
	•						
215,492	221,592	229,221	252,481	316,690	357,346	409,565	466,608
82,785	88,410	85,010	85,010	57,147	41,241	30,345	20,722
1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
1,425	1,375	864	392	-	-		-
54,085	64,550	68,850	74,050	71,150	94,200	111,705	102,697
54,005	-	21,350	49,250	55,485	58,339	56,238	58,385
-18	-11	-5	-1	0	=	-	-
354,969	377,116	406,490	462,382	501,672	552,326	609,053	649,612
				9,827	9,824	9,698	9,244
-	-	-	-	9,027	-	-970	-1,138
354,969	377,116	406,490	462,382	511,499	562,150	617,781	657,719
334,707	377,110	.00,17					
32,983	27,624	15,556	17,103	37,802	50,889	24,912	6,425
20,452	17,919	21,033	15,785	13,952	20,914	18,393	13,836
29,374	30,034	36,700	28,464	23,758	47,223	42,772	49,476
14,480	16,970	18,103	18,025	14,942	9,364	5,576	6,778
12,718	10,156	3,597	1,866	3,159	5,612	10,419	9,329
14,326	13,328	24,112	11,096	11,019	31,610	29,494	25,319
-1,569	-1,574	-1,126	-1,374	-1,151	-1,338	-1,784	-5,516
122,764	114,457	117,975	90,965	103,482	164,274	129,782	105,647
477,733	491,573	524,465	553,347	614,981	726,424	747,563	763,366
65.3	64.1	65.6	66.8	72.2	83.0	80.2	78.2
-39,855	-35,254	-45,206	-11,649	-30,927	-88,781	-55,263	-30,824
-27,009	-30,212	-36,193	-38,872	-43,611	-45,270	-50,143	-68,899
-79,215	-81,164	-82,254	-86,836	-88,583	-93,105	-96,689	-82,507
-106,224	-111,376	-118,447	-125,708	-132,194	-138,375	-146,832	-151,406
331,654	344,943	360,812	415,990	451,860	499,268	545,468	581,136
45.3	45.0	45.2	50.2	53.1	57.1	58.5	59.6

## Table 2.

## Domestic Government Securities Issued in 19951).

- Issueu ii 1775 .	
No. 264, 7% government bonds 2024 (7 pct. stående	e lån 2024)
Issued in 1995, DKK million	9,378
Interest payable	November 10
Stock exchange code	DK000991813-8
Issue commenced	April 6, 1994
Redemption date	November 10, 2024
No. 265, 6% government bonds 1999 (6 pct. stående	lån 1999)
Issued in 1995, DKK million	. 109
Interest payable	December 10
Stock exchange code	DK000991821-1
Issue commenced	April 14 1994
Redemption date	December 10, 1999
No. 266, Treasury bills 1995 II (Skatkammerbevis 1	995 II)
Issued in 1995, DKK million	
Interest payable	-
Stock exchange code	DK000980536-8
Issue commenced	July 1 1004
Redemption date	April 3 1005
No. 268, Treasury bills 1995 III (Skatkammerbevis 1	
Issued in 1995, DKK million	
Interest payable	-
Stock exchange code	DK000980544-2
Issue commenced	October 3 1994
Redemption date	July 3 1995
	•
No. 269, 8% government bonds 2006 (8 pct. stående	lån 2006)
Issued in 1995, DKK million	50,165
Interest payable	March 15
Stock exchange code	DK000991864-1
Issue commenced	December 5, 1994
Redemption date	March 15, 2006
No. 270, Treasury bills 1995 IV (Skatkammerbevis 1	995 IV)
Issued in 1995, DKK million	20.879
Interest payable	-
Stock exchange code	DK000980552-5
Issue commenced	January 2, 1995
Redemption date	October 2 1995
	2, 1773

No. 271, 7% Treasury notes 1997 II (7,00 pct. statsga	eldsbevis 1997 II)
Issued in 1995, DKK-million	35,682
Interest payable	August 15
Stock exchange code	DK000991880-7
Issue commenced	January 4, 1995
Redemption date	August 15, 1997
No. 272, 8% government bonds 2001 (8 pct. stående	ån 2001)
Issued in 1995, DKK million	36,135
Interest payable	November 15
Stock exchange code	DK000991872-4
Issue commenced	January 9, 1995
Redemption date	March 15, 2001
No. 273, Treasury bills 1996 I (Skatkammerbevis 199	96 I)
Issued in 1995, DKK million	24,829
Interest payable	-
Stock exchange code	DK000980560-8
Issue commenced	April 3, 1995
Redemption date	January 2, 1996
No. 274, Treasury bills 1996 II (Skatkammerbevis 1	996 II)
Issued in 1995, DKK million	23,153
Interest payable	-
Stock exchange code	DK000980579-8
Issue commenced	July 3, 1995
Redemption date	April 1, 1996
No. 275, $7\%$ Treasury notes 1998 I (7,00 pct. statsga	
Issued in 1995, DKK million	. 11,400
Interest payable	. February 15
Stock exchange code	. DK000991899-7
Issue commenced	. July 3, 1995
Redemption date	. February 15, 1998
No. 276, Treasury bills 1996 III (Skatkammerbevis	1996 III)
Issued in 1995, DKK million	. 15,121
Interest payable	
Stock exchange code	. DK000980587-1
Issue commenced	. October 2, 1995
	Inly 1 1006

Does not include the holdings of the Ministry of Finance in the location swap facility.

Table 3.

Domestic Central Government Debt. End of 1995.

Stock exchange	C				Nomina	
exchange Coupe code %		on Name	Issue Period <sup>2)</sup>	Redemption date	amount <sup>1)</sup> (DKK million)	
	nds, i	fixed interest rate				
Bullet loans						
DK000991422-8		Stående lån 1996	Mar.24,88-Jul.5,88	Nov.15, 1996	4,200.0	
DK000991503-5		Stående lån 1996	Jul.1,88-Jun.29,90	Nov.15, 1996	25,700.0	
DK000991554-8	9	Stående lån 1998	Jan.2,89-Jun. 29,90 and Jan.2,92-Mar.31,9	Nov.15, 1998	59,400.0	
DK000991619-9	9	Stående lån 2000	Jan.2,90-Dec.30,92	Nov.15, 2000	50 150 0	
DK000991716-3	8	Stående lån 2003	Jan.2,92-Dec.30,93	May 15, 2003	59,150.0	
DK000991783-3	7	Stående lån 2004	May 25,93-Dec.5,94	Dec.15, 2004	69,000.0 74,450.0	
DK000991813-8		Stående lån 2024	Apr.6,94-	Nov.10,2024	14,915.0	
DK000991821-1	6	Stående lån 1999	Apr.14,94-Dec.30,94 and Jan.2,96-	Dec.10,1999	41,350.0	
DK000991864-1	8	Stående lån 2006	Dec.5,94-	Mar.15,2006	52,760.0	
DK000991872-4	8	Stående lån 2001	Jan.9,95-	Nov.15,2001	36,135.0	
	nds, fi	ixed interest rate				
Serial loans						
DK000990302-3	4.5		Dec.10.,52-Sep.12,58	Oct.15, 1997	26.3	
DK000990329-6	5	S 2007 <sup>3)</sup>	Oct.20,53-Sep.12,58	Sep.15, 2007	66.1	
DK000990272-8	4	S 2017 <sup>3)</sup>	Nov.29,55-Sep.12,58	Jun.15, 2017	115.8	
DK000990493-0		S 2001	Oct.6,80-May 9,83	Feb.15, 2001	16,065.0	
DK000990736-2	10	S 1999	May 10,83-Jul.12,85	Jul.15, 1999	4,693.0	
DK000990744-6	10	S 2004	May 10,83-Aug.30,85	Oct.15, 2004	8,532.0	
DK000991015-0	10	S 2001	Jul.15,85-Aug.30,85	Jul.15, 2001	3.0	
Government bor	ds, fi	xed interest rate				
Perpetuals						
DK000990159-7	3.5	Dansk Statslån 1886 <sup>3)</sup> Uamortisabelt	Dec.11,1886		16.2	
	5	Dansk Islandsk Fond 1918	Jun.1,1918	-	46.2	
		Uamortisabelt		-	1.0	
Government bon Bullet loans	ds, flo	oating interest rate				
OK000980064-1	Var.	Stående lån 1996	Jan.15,86-Dec.30,86	Ian 15 1006	20020	
OK000980080-7		Stående lån 1997	Jan.2,87-Jan.6,88	Jan. 15, 1996	3,862.0	
OK000980102-9		Stående lån 1998	Jan.4,88-Dec.30,88	Jan.15, 1997	6,462.0	
OK000980129-2		Stående lån 1999	Jan.2,89-Dec.28,90	Jan. 15, 1998	6,052.0	
			Jun. 2,07-DCC. 20,90	Nov.20, 1999	4,346.0	

Table 3- continued

Stock exchange code	Coupon %	Name	Issue Period <sup>2)</sup>	Redemption date	Nominal amount <sup>1)</sup> (DKK million)
Tuescumy notes					
Treasury notes DK000991791-6	6.00	Statsgældsbevis 1996 I	Jul.1,93-Jun.30,94	Feb.10, 1996	19,128.0
DK000991791-0 DK000991805-4	5.25	Statsgældsbevis 1996 II	Jan.3,94-Jun.30,94	Aug.10,1996	18,170.0
DK000991856-7	6.25	Statsgældsbevis 1997 I	Jul.1,94-Dec.30,94	Feb.10,1997	18,317.0
DK000991880-7		Statsgældsbevis 1997 II	Jan.4,95-Dec.29,95	Aug.15,1997	35,682.0
DK000991800-7 DK000991899-7		Statsgældsbevis 1998 I	Jul.3,95-	Feb.15,1998	11,400.0
Treasury bills					
DK000980560-8	0	Skatkammerbevis 1996 I	Apr.3,95-Oct.2,95	Jan.2, 1996	20,111.0
DK000980579-8	0	Skatkammerbevis 1996 II	Jul.3,95-	Apr.1, 1996	23,153.0
DK000980587-1		Skatkammerbevis 1996 III	Oct.2,95-	Jul.1, 1996	15,121.0
Lottery bonds					
DK000990019-3	3.5	Præmieobligationslån 194	8/98 Jun.20,48	Jun.20, 1998	100.0
DK000990027-6	4	Præmieobligationslån 195		Oct.1, 1999	100.0
DK000990035-9	3.5	Præmieobligationslån 195	9/98 Dec.1,58	Dec.1, 1998	100.0
DK000990043-3		Præmieobligationslån 196		Sep.22, 2010	100.0
DK000990051-6	7	Præmieobligationslån 196	9/2009 Oct.1,69	Dec.31, 2009	100.0
	8	Præmieobligationslån 197	7/2002:		
DK000990078-9	)	I	Apr.14,77	Feb.15, 2002	100.0
DK000990086-2	2	II	Jun.3,77	May 15, 2002	100.0
DK000990094-6		III	Jun.24,77	Jun.15, 2002	100.0
DK000990108-4	1	IV	Jul.28,77	Jul.15, 2002	100.0
DK000990116-7	7	V	Aug.30,77	Aug.15, 2002	100.0
DK000990124-1	1 10	Præmieobligationslån 198	30/2005 Oct.28,80	Jul.1, 2005	200.0
Domestic centra	al gove	rnment debt denominated	in DKK		649,612.4
Domestic debt	denomi	nated in XEU			
DK000991740-3		Stående lån XEU			
D11000//1/40-	0.5	1.3 billion 2002	Apr. 24,92	Apr. 24, 2002	9,244.
Held by the Dan	ish Stat		* 100 × 100	•	-1,137.
Total					8,106.
Domestic centr	al gove	rnment debt			657,719.

Does not include the holdings of the Ministry of Finance in the location swap facility.

The issue period refers to the period the series has been open for issue. Series still open for issue at the beginning of 1996 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.

May be redeemed by the Danish State at three months' notice.

Table 4.

Monthly Distribution of Central Government Payments in 1996.

Estimate based on the Finance Act for 1996.

Gross deficit excluding redemption of foreign debt (cash basis)	9,396	2,365	8,979	21,263
Treasury notes	0	19,528	0	0
Redemption of domestic debt: Government bonds	3,862	2,678	0	0
Net deficit (cash basis)	5,534	-19,841	8,978	21,263
Outgoing payments	33,128 -27,594	34,086 -53,927	32,155 -23,177	33,065 -11,802
DKK million	Jan.96	Feb.96	Mar.96	Apr.96

-16,478	16,407	13,485	-1,374	12,927	23,409	2,644	9,661	102,684
0	0	0	18,170	0	0	0	0	37,698
0	5	1,174	0	6	961	31,800	0	40,486
-16,478	16,402	12,311	-19,544	12,921	22,448	-29,156	9,661	24,500
32,833 -49,311	29,101 -12,699	32,513 -20,202	-51,259	-14,970	-15,699	-75,214	-27,899	-383,753
			31.715	27,891	38,147	46,058	37,560	408,253
May 95	Jun.95	Jul.95	Aug.95	Sep.95	Oct.95	Nov.95	Dec.95	1995