Primary and secondary markets for German public sector debt instruments: institutional framework, trading systems and their relevance for Germany as a financial centre

Financial market integration in Europe is intensifying the competition among both public sector issuers and financial centres for the favour of domestic and foreign investors. The market in Germany for public sector debt instruments, especially those issued by the Federal Government, is the leading euro-area market in terms of size and liquidity; furthermore, Germany's Federal Government is one of the key players in the government bond market and the benchmark issuer in the medium and long-term segment.

The primary market is firmly tied to Germany physically through the Federal Government's activities as an issuer. The secondary markets, by contrast, are open across borders and thus subject to far greater competition, which is determined by the efficiency of national market infrastructures; these markets are therefore not so dependent on a given location. Various competing trading systems have established a presence alongside the classic system of telephone dealing. Exchange trading of government bonds, by contrast, now plays only a minor role.

Government debt management tasks and authorities in Germany

The primary task of government debt management authorities is to cover the borrowing stipulated in public sector budgets on market terms, on time and cost-effectively, and to manage the total outstanding debt. Government debt management authorities thereby decide on the product range and are also responsible for defining the creditor target groups, the marketability, the type of interest rate, the type of placement and the currency of issue. They also decide on the introduction of new instruments, such as foreign currency bonds or inflation-indexed bonds, and on the use of financial derivatives.[1]

German Finance Agency

Germany's Federal Ministry of Finance is responsible for managing the German Federal Government's debt. Since June 2001, most of the government debt management activities on the market have been assumed by the private sector "Bundesrepublik Deutschland – Finanzagentur GmbH" (the "German Finance Agency", which was established in September 2000). The Bundesbank is involved in the issuance of government paper by conducting auctions of tradable Federal securities on behalf of the German Finance Agency and for the account of the Federal Government, participating in sales of Federal tap issues and carrying out market management operations for Federal securities on German stock exchanges.

The primary market for public sector debt instruments

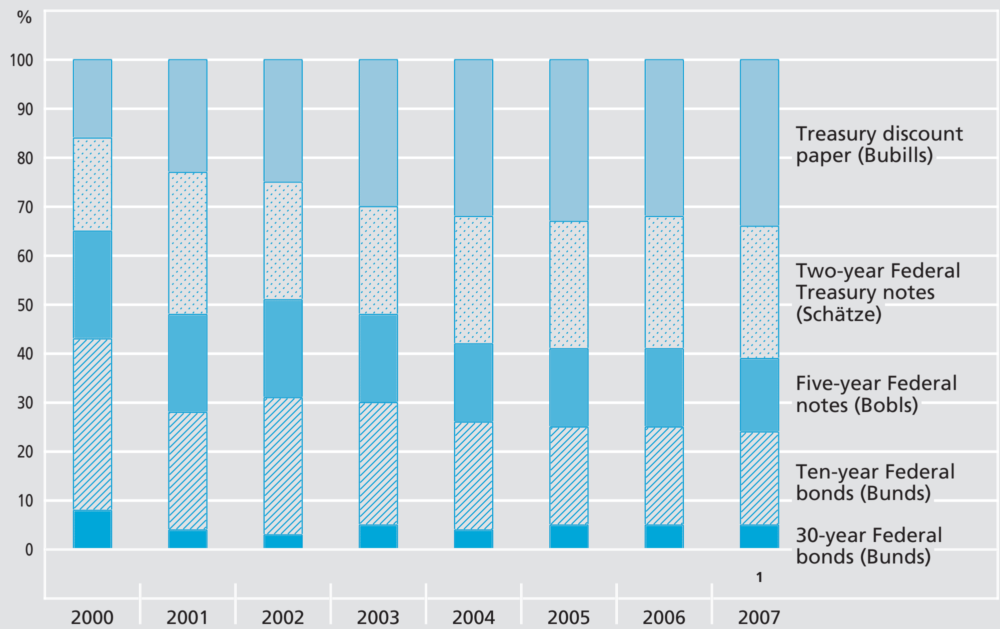
At the end of December 2006, the public sector debt instruments in circulation had a total nominal worth of around €1,135 billion. Of these instruments, some 81% (approximately €917 billion worth) were issued by the Federal Government and its special funds, around 19% (approximately €216 billion worth) by the Federal states and less than 0.05% (around €0.4 billion worth) by local governments.[2] This article will examine only the primary and secondary markets for securities issued by the Federal Government.[3]

Federal Government's issuing structure

The Federal Government's prominent position in the capital market is predicated on its first-class credit rating – which must be guaranteed by a reliable budgetary policy for which Parliament is responsible – as well as an issuing structure that meets the requirements of the market, an efficient primary market and the existence of liquid and transparent secondary markets. Federal Government securities encompass a broad range of maturities with no-credit-risk investment opportunities.[4] For some years now, the majority of its issues have been in the short to medium-term range; however, bonds with original matur-

1 For an overview of the market for government bonds, see Deutsche Bundesbank, Current trends and structural changes in the public bond market, Monthly Report, October 2006, pp 29-44.
2 The Federal Government floats one-off issues (Federal bonds (Bunds), five-year Federal notes (Bobls), Federal Treasury notes (Schätze) and Treasury discount paper (Bubills)) and tap issues (Federal Treasury financing paper and Federal savings notes); the state governments issue old-style Treasury notes, state government bonds and new-style state Treasury notes. For some years now, the Federal states have taken large-volume joint issues ("Länderjumbos") to the market to amass sufficient market liquidity through scale effects. These state issues are generally placed by a bank syndicate. Municipalities, too, issue a smaller volume of securities.
3 Borrower's note loans issued by the Federal Government are omitted here because these are not securities but rather normal loans for which only a document of proof is issued; this document does not in itself confer any rights. By the same token, the social security funds' (non-marketable) debt is not covered in this article.
4 See Deutsche Bundesbank, Structural changes in the German capital market in the run-up to European monetary union, Monthly Report, April 1998, p 59.

Issue structure of Federal securities



Source: Bundesrepublik Deutschland – Finanzagentur GmbH (German Finance Agency). — **1** As announced for 2007.

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ities of 10 and 30 years still dominate among instruments outstanding.

Innovations in debt management

In the past few years, the Federal Government has expanded its range of debt instruments.[5] For instance, in May 2005 it issued its first US dollar-denominated foreign currency bond, totalling US$5 billion. In March 2006, an inflation-indexed bond was issued for the first time; the initial volume of €5.5 billion was subsequently topped up to €11 billion in two stages.[6] Moreover, there are plans to create a complete yield curve based on the yields of the "Bund linker" outstanding as a counterpart to the nominal Federal Government paper through regular new issues at one to two-year intervals. Several strategic goals can be pursued in issuing inflation-indexed bonds. Creating an additional liquid market segment increases flexibility in covering funding needs. Diversifying the product range also opens the doors to a new investor base, especially abroad, whose growing appetite for first-class inflation-indexed bonds had hitherto been satisfied by other countries.[7]

5 See also Deutsche Bundesbank, Rising issuance of inflation-indexed government bonds, Monthly Report, October 2006, pp 40-41.
6 The initial issue and the first reopening of the ten-year bond were conducted via a bank syndicate and mostly for institutional investors such as insurance enterprises and mutual funds; the second reopening (in April 2007) was conducted in a tender procedure through the Bund Issues Auction Group (*Bietergruppe Bundesemissionen*).
7 The majority of the initial issue of the "Bund linker" was purchased by European investors. A regional breakdown of investors produces the following result: Germany 16%, France 20%, Netherlands 8%, Italy 12%, United Kingdom 11%, Spain 7%, Ireland 7%, rest of Europe 12%, Asia 4%. See the German Finance Agency, press release of 22 June 2006.

Maturities and volumes outstanding of Federal securities*

Type of security	Maturity	Range of purchasers	Listed	Volumes outstanding as at 30 April 2007 in € billion
Treasury discount paper (Bubills)	6 months	Unrestricted	No	36
Federal Treasury notes (Schätze)	2 years	Unrestricted	Yes	117
Five-year Federal notes (Bobls)	5 years	Unrestricted	Yes	174
Federal bonds (Bunds)	10 and 30 years	Unrestricted	Yes	571
Federal Treasury financing paper	1 and 2 years	Individuals and domestic non-profit-making, charitable or church organisations only	No	3
Federal savings notes	6 and 7 years	Unrestricted with the exception of credit institutions	No	10

* Excluding US dollar-denominated bonds (5 years, US$5 billion) and inflation-indexed bonds (10 years, €11 billion).

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Moreover, since July 2002, the German Finance Agency has been able – through the use of interest rate swaps[8] – to control the duration and interest rate fixation[9] of the debt portfolio in order to fulfil the requirements of the reference portfolio.[10]

This enables the issuing strategy to be decoupled from maturity management. It is in the interest of the Federal Government to issue bonds in the highly liquid longer-term market segment in order to maintain its benchmark status there.

In doing so, it also heeds investors' demands. Irrespective of the issuing calendar and investors' demands, the Federal Government has an idea of the desired duration and interest rate fixation of the debt portfolio, which is reflected in the way in which a reference portfolio is structured. By using interest rate swaps, the German Finance Agency can transform the actual interest rate fixation period and duration of the debt portfolio into the variables pre-defined by the reference

8 See also Deutsche Bundesbank, The role of interest rate swaps, Monthly Report, October 2006, p 42.
9 A bond's interest rate fixation is the length of time for which the coupon payments are fixed and is thus a measure of the issuer's refinancing risk. The duration shown in the chart on p 49 is the weighted average maturity of all payment flows from a bond. It is a key determinant of a bond's interest rate sensitivity.
10 The German Finance Agency measures its success – in the form of cost savings and additional revenue – using two portfolios: a "reference portfolio" and the current debt portfolio. The reference portfolio reproduces the borrowing principles applied by the Federal Ministry of Finance prior to the establishment of the German Finance Agency without using the new instruments now available. The reference portfolio is based on the debt structure as at 31 December 2001. The current debt portfolio also includes the use of interest rate swaps, repo transactions and securities lending.

portfolio without having to change the maturity structure of the Federal securities.

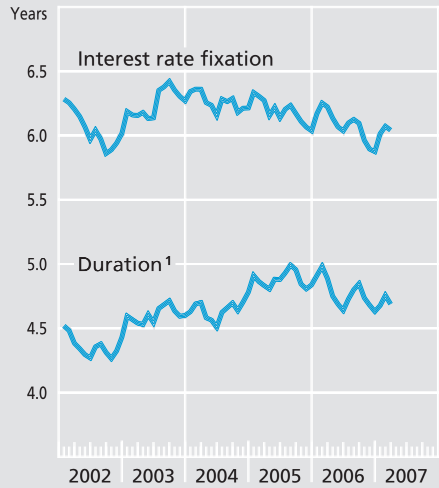
Issuance procedures for Federal securities

The successful issuance of Federal securities requires not only market-based terms but also effective issuance procedures. The Federal Government uses a variety of placement procedures for its individual Federal securities depending on whether the target group in the primary market is made up of institutional investors or individuals. Prior to the start of an issuance year, the Federal Government issues an overview for the year in which it announces the planned new issues and reopenings. In addition, it publishes a quarterly issuance calendar, which contains more detailed information such as the auction dates and precise maturity dates of the issues. In this way the Federal Government accommodates the capital market's interest in transparency and the ability to plan in advance.[11]

Tender procedure

Federal bonds (Bunds), five-year Federal notes (Bobls), Federal Treasury notes (Schätze) and Treasury discount paper (Bubills) are issued through a tender procedure. This is the Federal Government's key channel for obtaining funding.[12] Only members of the Bund Issues Auction Group (*Bietergruppe Bundesemissionen*) are eligible to participate directly in the Federal Government's auctions. The Auction Group currently comprises 33 credit institutions, securities trading banks and securities trading firms. At the end of each year, the German Finance Agency publishes a ranking list of bidders' maturity-weighted shares in the allotted issue amounts. This ranking list is important insofar as the German Finance Agency – for further transactions such as swaps or the awarding of mandates to issue bonds in the syndicate procedure – gives preference to higher-ranking members of the Auction Group. Interested financial institutions may apply for membership at any time.[13] Unlike in other countries, this is not a primary dealer system with a small group of

Duration and interest rate fixation of the Federal Government's debt portfolio



Source: Bundesrepublik Deutschland – Finanzagentur GmbH (German Finance Agency). — **1** The duration is the weighted average maturity of all payment flows from a bond. It is a key determinant of a bond's interest rate sensitivity.

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11 See German Federal Ministry of Finance, Bericht des Bundesministeriums der Finanzen über die Kreditaufnahme des Bundes im Jahr 2004, Bonn 2005, p 9 ff.
12 Up until the end of 1997, Bunds were issued through a combined syndicate and tender procedure through the Federal Bond Syndicate under the lead management of the Bundesbank, whereas only the tender procedure was used for Bobls, Schätze and Bubills.
13 Members are expected, however, to have a certain minimum placing power, ie at least 0.05% of the total maturity-weighted amounts allotted in the auctions in a calendar year. In line with the risk assumed with the acquisition of an instrument, Bubills are weighted with a factor of 1, while Schätze, Bobls, ten-year Bunds and 30-year Bunds are weighted with the factors 4, 8, 15 and 25 respectively. Those members which fail to reach the required minimum share of the total amount allotted are excluded from the Auction Group.

banks which assume predefined obligations, especially in the secondary market.

Bund Bidding System

Since April 2005, the Federal Government's auctions have been conducted on the web-based auction platform "Bund Bidding System" (BBS) developed by the Bundesbank in cooperation with the German Finance Agency.[14] In compliance with strict security requirements, BBS enables the Federal Government's auctions to be conducted quickly, easily and in a stable manner. BBS is open to both domestic and foreign bidders. The access requirements are identical and the application is available in German and English.

Market management

In each auction of Federal securities, a portion of the issue is withheld for market management purposes. The total volume of an issue is therefore composed of the amount allotted to the members of the Auction Group and the market management portion. This market management portion is initially held by the Federal Government itself. Its amount is set when the tender is allotted according to the current liquidity requirement and the existing tender bid structure. The market management portion is subsequently placed in the market by the German Finance Agency via electronic trading platforms and also by the Bundesbank in floor trading on Germany's seven stock exchanges. This channelling-in of the market management portion needs to be distinguished from those market activities of the German Finance Agency and the Bundesbank which are designed to avoid short-term price fluctuations in the secondary market through smoothing purchases or sales on the stock exchanges. Their trading activities give the German Finance Agency and the Bundesbank a permanent market presence and enable them to make an important contribution to securing liquidity in the market for Federal securities. On average over the past eight years, around 20% of the relevant trading on all German stock exchanges was accounted for by the Bundesbank's market management activities, of which about 60% took place on the Frankfurt Stock Exchange. In absolute terms, however, the Bundesbank's market management activities on the stock exchanges have declined significantly in favour of similar operations by the German Finance Agency using electronic trading.

Open market and direct sales of tap issues

Federal tap issues (Federal savings notes and Federal Treasury financing paper) are offered for sale on market-based terms both through credit institutions and directly by the German Finance Agency.[15] Individuals are the main target group. Retail business, however, makes up only a small share of the Federal Government's borrowing, amounting to only around 2% in 2006. A distinct growth of the retail business segment in the medium term is envisaged, however.

14 BBS replaced the "Automated Bidding System" (ABS) which operated more slowly owing to its e-mail-based communication with bidders, was available only in German and was not accessible from other countries.
15 The Federal Securities Administration (*Bundeswertpapierverwaltung*), which had previously performed this task, merged with the German Finance Agency on 1 August 2006.

Secondary markets for public sector debt instruments and futures markets

The secondary market plays a key role in the competitiveness of public sector debt instruments. The existence of an efficient secondary trading system is a major precondition for the successful placement of Federal securities in the primary market. The vast majority of investors will provide issuers with capital only if it is ensured that subsequent portfolio adjustments can be made at any time at low cost. The futures market, and especially futures trading, also play a key complementary role for secondary market trading in public sector debt instruments. Their highly liquid nature as well as their near-perfect correlation with spot price movements means that the risks of the securities holdings can be reallocated at low transaction costs. By buying or selling futures contracts as appropriate, investors can adjust the risk-return position of their securities portfolio at any time without having to execute any securities transactions.

According to a recent study, the Federal Republic of Germany's securities issues – with a daily average trading volume of €25 billion (single-counting[16]) in the secondary market – are the most important segment of the European bond market.[17]

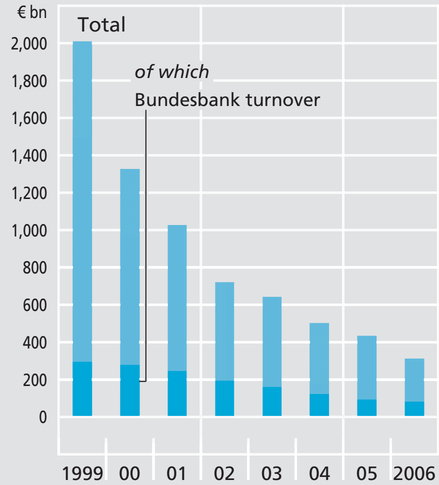
Importance of the secondary market for Federal securities

Secondary trading in Federal securities has a key signalling function for the financial and goods markets.

– In the euro area, the Federal Government's medium to long-term bonds serve as benchmarks; they are regularly taken into account for price quotations and for guaranteeing the prices of fixed-income securities with comparable maturities issued by other parties.[18]

Turnover in bonds issued by the Federal Government, Federal Railways and Federal Postal Service on domestic exchanges

Principle of double-counting[1]



1 In double-counting, both the buy side and the sell side of a securities transaction are counted.

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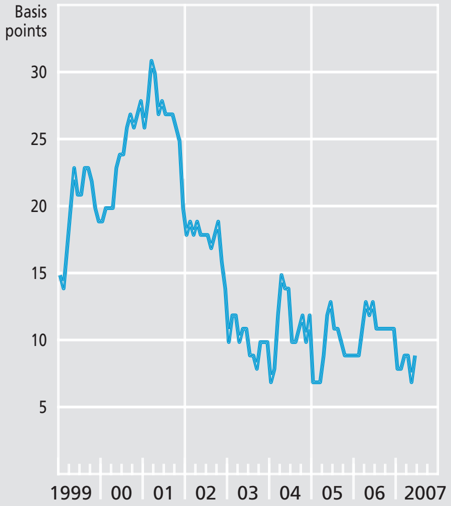
– Since the terms for borrowing and investing in the credit market in Europe are cur-

16 Single-counting means that only one side (the buy side) of a securities transaction is counted. In double-counting, both the buy side and the sell side of a securities transaction are counted.
17 See Bearing Point, The Electronic Bond Market – New Perspectives for Electronic Fixed Income Trading, May 2007, p 8.
18 In the one to three-year maturity range, however, Italian and French government bonds serve as benchmarks. The significance of Federal bonds is reflected inter alia in the Bloomberg/EFFAS Government Bond Index (August 2006), which gives Germany a 26.06% weighting in the composition of the index for the seven to ten-year segment, followed by France at 19.79%. In the five to seven-year segment, the weighting is 24.39% (France: 18.73%); in the three to five-year segment 28.75% (France: 22.53%); and in the one to three-year segment 17.0% (Italy: 20.15%, France 18.63%).

Yield advantage of euro-area government bonds over German government bonds*

Monthly averages



Sources: Bloomberg and Bundesbank calculations. — * Ten-year maturity range; euro-area capital market: GDP-weighted average of yields on euro-area partners' government bonds outstanding.

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rently determined to a large extent by the level of interest on Federal bonds, the conditions in the secondary market are ultimately also relevant to real economic decisions concerning production and investment.

– The highly liquid secondary market, where new information is rapidly translated into market yields, reduces the yield mark-up demanded by market participants for friction in price formation and the trading process (the "liquidity premium") and thus helps the Federal Government to obtain funding at favourable terms.

– Federal Government bonds are important hedging instruments.

Spot trading on stock exchanges

Federal securities are traded both on stock exchanges and over-the-counter (OTC) both in Germany and abroad.[19] Exchange trading takes places exclusively on German stock exchanges. They are organised as auction markets in which market participants' buy and sell orders are entered into a central order book (auxiliary ledger) and matched on the market. The volume of exchange trading in Federal debt instruments – compared with OTC transactions – is relatively small, however.

In exchange trading, the Bundesbank is the most important partner for institutional investors and banks.[20] In 2006, the stock exchange turnover in public sector bonds amounted to €311.6 billion: a total of €81.6 billion (of which the Frankfurt Stock Exchange accounted for €32.4 billion) was attributable to the Bundesbank's market management activities on German stock exchanges. Although public sector debt and thus the amount of Federal securities outstanding has grown considerably in the past few years, the turnover in public sector bonds on stock exchanges has dropped below the level of turnover in OTC trade.

OTC spot trading

The majority of transactions in public sector debt instruments are conducted over-the-counter between institutional market partici-

19 Except for Federal Treasury financing paper and Federal savings notes, all securities can be traded in the secondary market both on stock exchanges and over-the-counter.
20 Trades with a volume of more than €10 million are rare on German stock exchanges. This threshold value is probably attributable to the Bundesbank's market management activities; the Bundesbank generally sets tradable prices for orders of no more than €10 million per bond on the Frankfurt Stock Exchange.

pants. According to Bundesbank calculations, the OTC secondary trade volume made up around 98% of all secondary trading in Federal securities in 2006. Unlike auction-based exchange trading, OTC secondary trading in public sector debt instruments is a decentralised inter-dealer market without fixed trading hours.

Telephone dealing

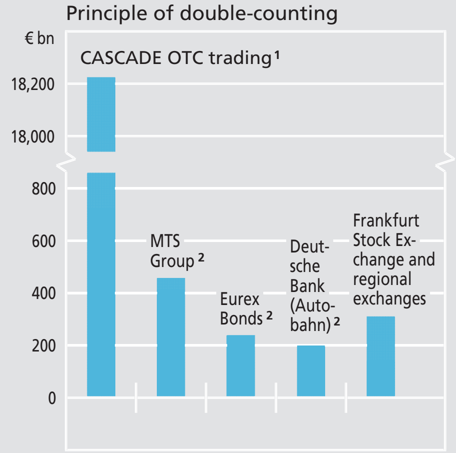
For decades, OTC bond trading was conducted exclusively over the telephone. This involved negotiating and executing deals in European government bonds either bilaterally or through voice brokers. Only over the past few years have electronic trading systems begun to prevail in both client business and the interbank markets. According to a recent study, telephone dealing accounts for 50% of the OTC trading volume in European government bonds.[21] The long period of reluctance to engage in electronic fixed income bond trading with an open order book can be explained partly by the fact that, although electronic trading increases transparency – given sufficient liquidity – it also reduces profit margins. The traded government bonds are mainly standardised products listed on stock exchanges; the trading of large volumes of such bonds (block transactions) through normal exchange trading or a transparent OTC electronic platform would entail undesirable information and price effects.[22] In addition, bilateral telephone dealing enables contracts to be individually tailored.

Electronic trading systems

Electronic trading systems (MTFs)[23] are becoming increasingly important alongside telephone trading. Highly transparent pricing is one of the defining features of electronic systems; counterparties' anonymity is guaranteed until the transaction is concluded. Liquidity is ensured through the market making activities of major investment banks agreed pursuant to private law. With the aid of standard information systems, market participants know what prices are being quoted by the individual market makers at all times. Electronic trading platforms now also allow large-volume orders to be executed in a market-smoothing manner through dealing with these orders in stages. Electronic trading platforms enable the exploitation of major economies of scale and cost advantages;

Turnover in trade in Federal securities over-the-counter and on exchanges in 2006

Principle of double-counting



Sources: MTS, Deutsche Börse, Eurex Bonds and Bundesbank calculations. – **1** CASCADE settlement instructions entered directly in over-the-counter (OTC) trading. CASCADE: Central Application for Settlement, Clearing and Depositary Expansion. – **2** Electronic trading platforms.

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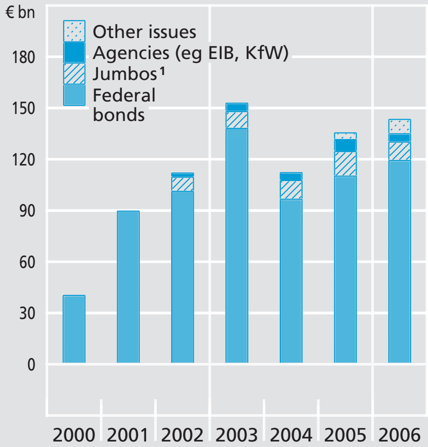
21 See Bearing Point, The Electronic Bond Market – New Perspectives for Electronic Fixed Income Trading, May 2007, p 10.
22 See R A Schwartz (1991), Reshaping the Equity Markets. A Guide for the 1990s, p 308.
23 Multilateral trading facilities.

Trading volume on Eurex Bonds* by type of security

Principle of single-counting



Source: Eurex Bonds. — * Excluding basis trades: the purchase (sale) of a basis denotes the spot purchase (sale) of securities and simultaneous sale (purchase) of the matching number of futures contracts. — **1** German Jumbo Pfandbriefe, state debt securities and "Slimbos" (liquid bearer debt securities with a maturity of one to two years).

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brokerage fees are saved in interbank trading and settlement fees reduced as volumes rise.

Eurex Bonds

Eurex Bonds GmbH, the MTS Group and the (Deutsche Bank's) Autobahn trading platform are some of the key electronic platforms on which bonds, including German government bonds, are traded.[24] The German-Swiss financial futures exchange, Eurex (together with 11 European bond trading firms as further partners) has been operating its own electronic trading platform for bonds (Eurex Bonds GmbH) since October 2000.[25] Eurex Bonds also enables institutional investors to conduct integrated spot and futures market trading in the form of "basis trades".[26] The trading volumes on Eurex Bonds in all types of securities (single-counting) reached a total of around €151 billion in 2006, of which just under €120 billion was accounted for by trading in Federal securities.

Dealers have the option of placing what are known as "iceberg orders" in which predefined tranches of a complete order are gradually presented in the system for public view. This enables block orders to be performed in an automated and market-smoothing manner. Counterparties are completely anonymous. Participants obtain an insight into the market regarding prices and volumes because the ten best bid/ask rates with aggregated volumes are visible in the central order book at all times. (The above-mentioned "iceberg orders" are an exception.) Since mid-2003, it has been possible to enter into the system trades which have not been channelled through the central order book but have instead been concluded bilaterally outside the platform ("pre-arranged trades"). These trades are settled via the clearing house and thus sheltered from risk. Such transactions account for around 50% of Eurex Bonds transactions. Eurex Clearing AG acts as the central counterparty here. Trading on Eurex Bonds

24 See Securities Industry of Financial Markets Association (SIFMA), The 2006 Review of Electronic Transaction Systems, December 2006, for an overview of electronic bond trading systems.
25 In May 2007, 33 international participants were active in Eurex Bonds, including the Bundesbank and the German Finance Agency.
26 The purchase (sale) of a basis denotes the spot purchase (sale) of securities and simultaneous sale (purchase) of the matching number of futures contracts.

has thus far been strongly focused on German instruments.[27]

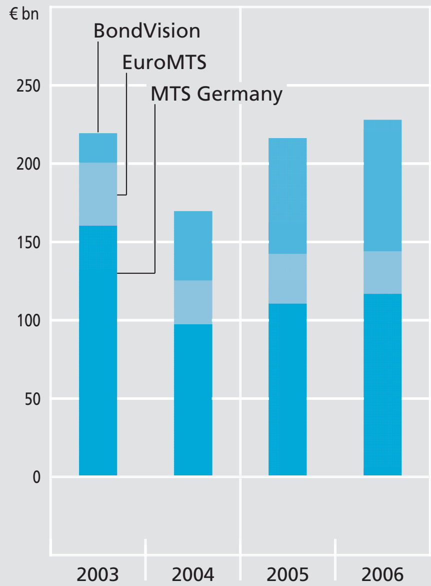
MTS Group

The electronic trading system MTS SpA (Mercato Telematico dei Titoli di Stato) was initially established for Italian government bonds in 1988 and then gradually extended to cover government bonds from other countries, including Federal bonds. MTS has grown into a cross-border electronic platform for trading in fixed-income bonds in Europe. The MTS Group consists of EuroMTS as a "wholesale trade market" for significant European government bonds and national MTS markets which jointly share a single technical platform. In Germany, MTS also operates the internet-based BondVision trading platform, on which especially institutional investors, including hedge funds, investment funds, commercial banks and also central banks operate.

MTS likewise offers the option of breaking down large trading orders through "iceberg orders" in which only a fraction of the whole order is visible in the order book. However, MTS lacks some of the applications offered by Eurex Bonds, such as integrated basis trading. The German Finance Agency also trades Treasury discount paper (Bubills) and inflation-indexed bonds via MTS. The volume of Federal securities traded via the MTS Group has tended to rise. In 2006, it amounted to €227.9 billion, of which €117.1 billion was traded via MTS Germany, €27.1 billion via EuroMTS and €83.7 billion via BondVision (single-counting). The MTS Group's preponderance compared with Eurex Bonds is probably attributable, among other things, to the considerably larger group of participants.

Trading volume in Federal securities on the MTS Group platform

Principle of single-counting



Source: MTS.

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Trading in Federal securities accounted for 7.7% of the total volume of all securities traded via the MTS Group in 2006 (€2,948.4 billion).

Autobahn

Since 1996, Deutsche Bank has been operating an electronic bond trading system called "Autobahn". This system allows institutional investors, banks and central banks to view the tradable prices of more than 7,000 bonds in real time. Moreover, customers can use Autobahn as a single-dealer system to trade

27 The Eurex Bonds product range includes German government bonds and Treasury discount paper (Bubills), agency bonds, Jumbo Pfandbriefe and Federal state government bonds as well as, since the end of 2004, European covered bonds and corporate bonds. Since June 2005, Austrian and Dutch government bonds have also been eligible for trading on Eurex Bonds alongside instruments from Belgium, Italy, Portugal, Spain, Greece, Ireland and Finland. Trading is, however, focused strongly on German government bonds.

bonds at prices that are set exclusively by Deutsche Bank. The range of tradable bonds (in some 25 different currencies) includes European government bonds, US Treasury Bonds, Pfandbriefe and Eurobonds. The volume of annual trading in Federal securities via Autobahn is estimated to be around €100 billion (single-counting).

Futures markets

Eurex is one of the key futures exchanges for bond futures.[28] The capital market futures on German bonds traded via Eurex are all based on fixed-income securities issued by the Federal Government. Futures on Federal securities are traded exclusively via Eurex.[29] There are currently four types of bond futures contracts (Euro Bund Future, Euro Bobl Future, Euro Schatz Future and Euro BUXL Future) which differ from one another with regard to the maturity of the underlying Federal security and cover the most important maturity windows of the Bund yield curve. In 2006, around 654 million Euro Bund Future, Euro Bobl Future, Euro Schatz Future and Euro BUXL Future contracts were traded via Eurex at a value of over €73 trillion; the Euro Bund Future alone accounted for around 49% of the contracts traded and around 51% of the trading volume.[30] The existence of these extremely liquid futures contracts is, in turn, a decisive factor in the prime importance of Federal securities in the spot market: Federal securities are key basis instruments in futures trading and are used to place margin payments on the futures exchanges. The Euro Bund Future which is traded via Eurex serves as a benchmark for the European futures market.

Repo markets

Repo trading has grown sharply in the past few years.[31] At the end of 2006, the total volume of repos outstanding in Europe was just under €6.4 trillion. Around 24% of the securities in the European repo market are German-issued debt instruments.[32] Although no information on the percentage of Federal securities in this figure is available, these instruments are likely to play a key role in the repo market owing to their high credit rating and liquidity.

Like other types of financial markets, the repo market is also experiencing an increase in the importance of electronic trading platforms. Currently, one-quarter of the total volume of trading in the European repo market is conducted via electronic trading platforms, known as alternative trading systems (ATS).[33] This trend is attributable to a series of advantages held by electronic repo trading platforms, such as market transparency regarding prices and reduced settlement costs since the

28 Measured in terms of traded futures contracts, Eurex is the world's largest futures exchange (information for 2006 in millions of contracts): Eurex (1,526), CME (1,403), CBoT (805), CBOE (674), Liffe (497) and Euronext Paris (86). See Eurex, Monthly Statistics Derivatives Market, January 2007, p 100.
29 Options on futures, which are likewise traded via Eurex, are of lesser importance and will therefore not be discussed in this article.
30 See Eurex, Monthly Statistics Derivatives Market, January 2007, p 85 ff.
31 A repurchase agreement, or repo, is defined as the sale (purchase) of securities in conjunction with the simultaneous obligation to repurchase (resell) the same securities at a given time. Economically speaking, a repo is a loan backed by securities.
32 See International Capital Market Association, European Repo Market Survey Number 12 – conducted December 2006, February 2007, pp 5-6.
33 At the end of December 2006, 23.3% of all repos were traded via ATS, 56.8% via direct transactions between counterparties and 19.8% through brokers. See International Capital Market Association, European Repo Market Survey Number 12 – conducted December 2006, February 2007, pp 10-11.

clearing process is conducted electronically. Moreover, some platforms – such as Eurex Repo – also offer automated straight-through processing.

The primary and secondary markets in international competition

Primary market

The primary market for Federal securities is relatively well placed to compete internationally. The instruments issued by the Federal Government cover a broad spectrum of maturities and products. The large bond volumes can be placed on the capital market without friction. The Bund Issues Auction Group and the Bund Bidding System provided by the Bundesbank enable the Federal Government to auction at competitive financing costs. Its regular presence on the market in all maturity segments through its market management operations is equally important. By introducing an inflation-indexed bond and a US dollar-denominated bond, the German capital market is tending to become a more attractive option – especially to foreign investors.

Secondary markets

The market for Federal securities is one of the largest and most liquid markets for government bonds in Europe. Although exchange trading of public sector debt instruments has become less important in terms of volume, it still has an important price signalling function.

The lion's share of trading in Federal Government securities is conducted over-the-counter by means of telephone dealing. This OTC trading – even when it involves foreign counterparties – is conducted primarily at or through German financial centres. Another advantage enjoyed by Germany as a trading location is that these transactions are also mostly settled and cleared in the country via Deutsche Börse.

Germany's competitiveness as a financial centre is becoming increasingly dependent on the efficiency of the electronic trading systems in the secondary market. As a financial centre, Germany appears to be relatively well equipped to face this challenge. Federal securities can be traded on various competing platforms. Although this leads to a certain fragmentation of the secondary market, it also contributes to open market access and enhanced competition.

The spot market for Federal securities is closely interlinked with the futures and repo markets. The integration of the spot and futures markets is facilitating the existence of a highly liquid market for government bonds in Germany. The trade in futures contracts and options on interest rate products in the euro area has grown sharply in the past few years; German government bonds are virtually the only type used as underlying securities.[34]

Germany as a financial centre has an integrated, highly efficient and internationally well networked market infrastructure and a broad spectrum of products in the spot and futures markets for public sector debt instruments. This means that the conditions for maintaining a leading position in international competition are relatively good.

34 See ECB, The Euro Bonds and Derivatives Markets, 14 June 2007, pp 31-32.